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WOODS HOLE OCEANOGRAPHIC INSTITUTION

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DATA FILE ON AMINO ACID DISTRIBUTION IN CALCIFIED AND UNCALCIFIED TISSUES OF SHELL-FORMING ORGANISMS

Egon T. Degens and Derek W. Spencer

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by

Egon T. Degens and Derek W. Spencer

June 1966

TECHNICAL REPORT

Submitted to the National Aeronautics and Space Administration under Contract NSR-22-014-001 and to the American Chemical Society under Contract PRF 1943-A2.

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Approved for Distribution Vaughan T. Bowen

Dr. Vaughan T. Bowen, Acting Chairman
Department of Chemistry and Geology

DATA FILE ON

"Amino Acid Distribution in Calcified and Uncalcified Tissues of Shell-Forming Organisms"

by

Egon T. Degens and Derek W. Spencer

INTRODUCTION

Largely for reason of limited space, scientific journals can only accept brief articles. Thus full accounts on analytical techniques, data files, and other details are frequently omitted, and pertinent information may be lost. Although this information is only of peripheral interest to the general reader, to the fellow scientist it is of vital significance.

In order to serve both the specialist and the general reader, we have prepared a series of manuscripts dealing exclusively with either background information or the actual interpretation and discussion of the data.

The present report is aimed chiefly at the specialist interested in calcification processes in biological systems, in molluscan ecology and phylogeny, and in amino acid analyses. It incorporates information on: (a) type, locality, and environment of sample material, (b) analytical techniques, (c) utilization of a digital computer and (d) quantitative amino acid analysis in the form of data sheets, i.e. computer printouts. A discussion of the data will follow in three separate articles which will be published elsewhere:

Carey, F. G., D. W. Spencer and E. T. Degens, "Amino Acids and Amino Sugars in Calcified Tissues of Portunid Crabs"

Degens, E. T., D. W. Spencer and R. H. Parker, "Paleobiochemistry of Molluscan Shell Proteins"

Ghiselin, M. T., E. T. Degens, D. W. Spencer, and R. H. Parker, "Significance of Shell Protein Variation to Environment and Molluscan Phylogeny"

The work was supported by grants from the National Aeronautics and Space Administration (NSR-22-014-001) and the American Chemical Society (PRF-1943-A2). The assistance of Miss Nancy Lockwood with the computer programming is gratefully acknowledged.

SCOPE OF STUDIES

Work on mineralization phenomena in biological systems points in the direction that the organic matrix in shell carbonates provides a set of highly specific templates which act as nucleation sites and appear to exercise control over mode and orientation of the carbonate phase[1-4]. Furthermore, there is indication that the amino acid composition of the shell proteinaceous matrix is species characteristic[4-11]. Inasmuch as a wide variety of amino acid spectra are obtained throughout shell-forming organisms, comparative biochemical studies become feasible and may throw some light on aspects of environment and phylogeny.

As a start, we investigated a series of molluscs and a few other shell-secreting invertebrates. The selection of the specimens was done purely on

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biological grounds so as to cover a wide phylogentic range from ancestral ("primitive") to derived ("highly evolved") forms. Moreover, we tried to incorporate a certain number of marine specimens coming from habitats characterized by water temperatures ranging from -2° to +40° C, salinities from 10 to 80°/oo, and water depth from 1/2 meter to about 100 meters.

The principal objective of our study was to show the significance of the shell-protein variation to environment and molluscan phylogeny. In addition we determined the amino acid composition of the mantle, the periostracum, and the ligament in a number of specimens to obtain more insight into factors governing the calcification of the shell organic matrix. For comparison we further studied mineralized tissues of crustaceans (Portunid crabs), echinoderms, bryozoa, brachiopods, and siliceous sponges.

SAMPLE MATERIAL

The specimens included in the present study fall into three principal categories: (1) living material collected shortly before analysis, (2) ethanol-preserved organisms, and (3) specimens obtained from various collections. It should be pointed out that most of our samples actually belong to the first two groups and largely represent forms which were collected over the last three years as part of the Woods Hole Marine Biology Laboratory Ecology Program (Dr. Ghiselin and Dr. Parker). The Museum samples of our collection are marked with an asterisk (Table 1); all others can be considered as fresh forms, because there is actually no difference in the amino acid spectra of ethanol-preserved organisms and those obtained from the same living shell material.

The samples in Table 1 (pp. 5-12) are arranged according to established biological classification schemes, and within each class in alphabetical order. Environmental information, as accurate as possible, concerning water temperature, salinity and depth is included. One should, however, bear in mind that for

obvious reasons only ranges rather than absolute figures can be ascertained. We are presently set up to analyze for the O^{18}/O^{16} and C^{13}/C^{12} ratio in shell carbonates. The oxygen isotopes in marine carbonates will indicate the precise temperature for the carbonate formation and eliminate the noise level.

Inasmuch as most of the shells were analyzed for their aragonite and calcite content by X-ray analysis, the aragonite/calcite ratios are included.

ANALYTICAL TECHNIQUES

1. Decalcification Procedure

The great excess of calcium carbonate over shell organic matter and the serious interference of Ca^{+2} in the final amino acid analysis make it necessary to decalcify the shell material prior to ion-exchange chromatography. This can be done by various means:

a) the use of decalcification agents such as ethylene diamine tetra-acetic acid (EDTA),

b) the dissolution of $CaCO_3$ in cold HCl in the presence of 10% trichloro-acetic acid (TCA)[6], and

c) the removal of Ca^{+2} from the carbonate hydrolysis liquor by either ion-exchange resins[5], Cu-complexed Chelex resin[12], or hydrofluoric acid.

We adopted the trichloracetic acid method for two reasons. First, it is rapid and parallel runs on the same shell material indicated no disadvantages compared with the slow EDTA decalcification procedure. Second, another laboratory presently engaged in similar studies developed and routinely employs this technique (Drs. Hare and Abelson, Carnegie Institution, Washington, D. C.).

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SPECIES	LOCALITY	TEMP. °C.	SALINITY ‰	DEPTH Meters	% ARAG.	% CALCITE (Mg=magnesium calcite
		GASTROPODA				
ACHATINELLA LORATA NOBILIS (Pfeiffer)	Hawaii	21-25(23)	34-35	1-3(2)	100	---
ACMAEA PUSTULATA (Helbing)	Dominican Republic	23-30(26)	36-37	1-2	78	22
AKERA SOLUTA (Gmelin)	Zanzibar	21-30(25)	35-36	1-3(2)	100	---
APLYSIA WILLCOXI (Heilprin)	Florida	20-30(25)	34-35	1-2	100	---
ARCHITECTONICA NOBILIS (Roding)	Middle Atlantic Coast	9-24(17)	33-35	2-10(6)	100	---
ASTRAEA CAELATA (Gmelin)	Florida	20-30(25)	36-37	1-4(3)	100	---
BULLA STRIATA (Bruguiere)	Dominican Republic	23-30(26)	36-37	1-2	100	---
CAVOLINA TRIDENTATA (Forskal)	Tropical Atlantic	23-28(26)	36-37	1-2	50	50(Mg)
COLUS TROPHIUS (Dall)	San Francisco, Cal.	2.5	35	1901	100	---
CREPIDULA FORNICATA (Linne)	Woods Hole	-1-24(12)	31-33	6	100	---
CREPIDULA PLANA (Say)	Woods Hole	-1-24(12)	31-33	3	100	---
CYPRAEA ZEBRA (Linne)	Florida	20-30(25)	36-37	1-4(3)	100	---
DOLABELLA SCAPULA (Martini)	Philippines	21-30(25)	34-35	1-2	100	---
EPITONIUM ANGULATUM (Say)	Texas	8-28(18)	36	2-5(4)	16	84
FISSURELLA BARBADENSIS (Gmelin)	Puerto Rico	24-30(27)	34-36	1	98	2(Mg)
FISSURELLA BARBADENSIS (Gmelin)	Cuba	23-30(26)	36	1	98	2(Mg)
GASTROPODA INDEFINABLE	Cape San Lucas, Mexico	2	36	2817	---	---
* HALIOTIS CRACHFORDI (Leach)	San Diego, Cal.	12-18(16)	34	1-2	30	70

SPECIES	LOCALITY	TEMP. °C.	SALINITY ‰	DEPTH Meters	% ARAG.	% CALCITE (Mg=magnesium calcite)
* HELISOMA TRIVALVIS	Indiana	-20-40(20)	0	0	100	---
HYDATINA PHYSIS (Linne)	Philippines	21-30(25)	34-35	1-3	100	---
JANTHINA JANTHINA (Linne)	Florida	20-30(25)	35-36	1-2	26	74
LITTORINA LITTOREA (Linne)	Woods Hole	-1-24(12)	31-33	4	10	90
LUNATIA TRISERIATA (Say)	Woods Hole	-1-24(12)	31-33	5	100	---
MELANELLA MARTINI (Adams)	W. Australia	20-26(23)	35-36	1-5(3)	100	---
* MUREX BREVIFRONS (Lamarck)	Puerto Rico	21-30(25)	36	3-5(4)	100	---
NERITA PLEXA (Chemnitz)	Mauritius	22-30(26)	35-36	1	42	58
NERITA PLEXA (Chemnitz)	Mauritius	22-30(26)	35-36	0	100	---
NASSARIUS TRIVITTATUS (Say)	Woods Hole	-1-24(12)	31-33	4	100	---
OXYNOE VIRIDIS (Pease)	Tahiti	22-30(26)	36	1-3(2)	100	---
* PLANORBIS, SP. (Recent)	Hungary	---	0	0	100	---
* PLANORBIS, SP. (Tertiary)	Germany	---	---	---	100	---
* POLINICES DUPLICATUS (Say)	Provincetown, Mass.	-1-20(10)	31-33	1-4(2)	100	---
* POLINICES DUPLICATUS (Say)	Freeport, Texas	8-28(10)	35-36	1-4	100	---
* POLINICES DUPLICATUS (Say)	Galveston, Texas	8-27(17)	38-36(32)	1-4	100	---
* POLINICES DUPLICATUS (Say)	Treasure Is., Florida	20-30(25)	35-36	1-5	100	---
* POLINICES DUPLICATUS (Say)	Bird Shoals, N. C.	9-24(17)	34-35	1-5	100	---
SIPHONARIA ALTERNATA	Bermuda	20-28(24)	36-37	1	100	---

SPECIES	LOCALITY	TEMP. °C.	SALINITY %	DEPTH Meters	% ARAG.	% CALCITE (Mg=magnesium calcite)
SUCCINEA OVALIS (Say)	Michigan	20-30	0	0	100	---
TURITELLA TEREBRA (Linne)	Philippines	21-30(26)	34-35	2-5(3)	100	---
UMBRACULUM INDICUM (Lamarck)	Indonesia	22-30(26)	35-36	1-4(2)	100	---
UMBRACULUM INDICUM (Lamarck)	Hawaii	21-25(23)	34-35	1-4	100	---
UROSALPINX CINEREA (Say)	Woods Hole	-1-24(12)	31-33	4	100	---
VIVIPARUS GEORGIANUS (Leà)	Florida	16-26(21)	0	0	100	---

SPECIES	LOCALITY	TEMP. °C.	SALINITY %	DEPTH Meters	% ARAG.	% CALCITE (Mg=magnesium calcite)
		PELECYPODA				
AEQUIPECTEN IRRADIANS (Lamarck)	Woods Hole	-1-24(12)	31-33	4	2	98
ANADARA TRANSVERSA (Say)	Campeche, Mexico	19-33(25)	36-38	24-28	100	---
ANADARA TRANSVERSA (Say)	Breton Sound, la.	12-23(18)	27-32	2	100	---
ANADARA TRANSVERSA (Say)	Gulf of Mexico, Texas	15-24(20)	36	21	100	---
ANADARA TRANSVERSA (Say)	Breton-Gosier Pass. La.	14-21(18)	29-33	5	100	---
ANADARA TRANSVERSA (Say)	Woods Hole	-1-24(12)	31-33	4	100	---
ARCTICA ISLANDICA (Linne)	Georges Bank, Mass.	3-18(11)	32-34		100	---
* CORBICULA CONSOBRINA	Nile River, Egypt	20-32(26)	0-12(1)	1-3	100	---
CRASSOSTREA VIRGINICA (Gmelin)	MBL Tank	1-22(11)	31-32	1	---	100
LAEVICARDIUM MORTONI (Conrad)	Woods Hole	-1-24(12)	31-33	3	100	---
LIMOPSIS COMPRESSUS (Dall)	Salina Cruz, Mexico	11	36	1030	100	---
LYONSIA HYALINA (Conrad)	Long Island, New York	1-23(11)	32-34	3-5	98	2
MACOMA TENTA (Say)	Woods Hole	-1-24(12)	31-33	3	100	---
MALLETIA, SP. "M"	Bermuda-Woods Hole Transect	2.3	36	4970	100	---
MERCENARIA MERCENARIA (Linne)	Woods Hole	1-22(11)	31-32	1	100	---
MULINIA LATERALIS (Say)	Salem, Mass.	-1-20(10)	29-31	1-2	100	---
MULINIA LATERALIS (Say)	Woods Hole	-1-23(11)	31-33	4	100	---
MULINIA LATERALIS (Say)	New York Harbor	0-23(12)	27-30	10-15	100	---

SPECIES	LOCALITY	TEMP. °C.	SALINITY %	DEPTH Meters	% ARAG.	% CALCITE (Mg=magnesium calcite)
MULINIA LATERALIS (Say)	Great South Bay, N. Y.	0-25(12)	24-30	2.5	100	---
MULINIA LATERALIS (Say)	Sapelo Island, Ga.	10-30(20)	34-36	3	100	---
MULINIA LATERALIS (Say)	Lake Worth, Florida	10-26(18)	34-36	3	100	---
MULINIA LATERALIS (Say)	Chandoleur Is., La.	10-28(19)	34-32	8	100	---
MULINIA LATERALIS (Say)	Barataria Bay, La.	8-24(16)	10-24	3	100	---
MULINIA LATERALIS (Say)	Mesquite Bay, Texas	7-32(20)	3-39	1	100	---
MULINIA LATERALIS (Say)	Laguna Madre, Texas	10-40(25)	40-60	1	100	---
MULINIA LATERALIS (Say)	Laguna Madre, Texas	10-38(24)	40-80	2	100	---
MULINIA LATERALIS (Say)	Campeche, Mexico	20-34(27)	36-38	1	100	---
MULINIA LATERALIS (Say)	Woods Hole 159	-1-24(12)	31-33	3	100	---
MULINIA LATERALIS (Say)	Woods Hole 901	-1-24(12)	31-33	4	100	---
MULINIA LATERALIS (Say)	Woods Hole 902	-1-24(12)	31-33	4	100	---
MYTILUS EDULIS (Linne)	Woods Hole (Large)	-1-24(12)	31-33	1	25	75
MYTILUS EDULIS (Linne)	Woods Hole (Small)	-1-24(12)	31-33	1	25	75
NEOTRIGONIA MARGARITACEA (Lamarck)	Melbourne, Australia	15-21(18)	34-35	1-3	100	---
NUCULA PROXIMA (Say)	Woods Hole	-1-24(12)	31-33	4	100	---
NUCULA TRUNCULA (Dall)	Buzzards Bay, Mass.	0-20(10)	32	7	100	---
PERIPLOMA LEANUM (Conrad)	Martha's Vineyard	-1-23(12)	31-33	1-3	100	---
PETRICOLA PHOLADIFORMIS (Lamarck)	West Falmouth (Buzzards Bay)	-1-24(12)	31-32	1-3	100	---

SPECIES	LOCALITY	TEMP. °C.	SALINITY %	DEPTH Meters	% ARAG.	% CALCITE (Mg=magnesium calcite)
PITAR CORDATA (Schwengle)	Off Port Isabel, Texas	18-23(21)	36	50	100	---
PITAR MORRHUANA (Linsley)	Woods Hole (189)	-1-23(12)	31-32	3	100	---
PITAR MORRHUANA (Linsley)	Woods Hole (165)	-1-23(12)	31-32	4	100	---
PITAR MORRHUANA (Linsley)	Buzzards Bay, Mass.	0-20(10)	32	16	100	---
SAXIDOMUS NUTTALLI (Conrad)	Gulf of Georgia, Brit. Col.,Canada	8-18(13)	32-34	1-3	100	---
SOLEMYA VELUM (Say)	Woods Hole	-1-23(12)	31-33	3	100	---
TAGELUS DIVISUS (Spengler)	Bermuda	20-28(24)	36-38	5	100	---
TAGELUS DIVISUS (Spengler)	Orient Point, Long Isl.	1-24(12)	31-33	5	100	---
TAGELUS DIVISUS (Spengler)	Nantucket, Mass.	-1-22(11)	31-33	3	100	---
YOLDIA LIMATULA (Say)	Woods Hole	-1-23(12)	31-33	4	100	---

SPECIES	LOCALITY	TEMP. °C.	SALINITY %	DEPTH Meters	% ARAG.	% CALCITE (Mg=magnesium calcite)
		MISCELLANEOUS				
THALASSIOSIRA - Diatom	Long Island Sound	1-24(12)	31-34	1	---	---
CLIONA CELATA - Sponge	Woods Hole	-1-23(12)	31-33	2-4	---	---
* UNDEFINABLE ORDER - Silicious Sponge	Blake Plateau	5-7	35-36	500	---	---
* SIPHONOCHALINA PAPYRACEA - Sponge	Florida	?	?	?	---	---
ARBACIA PUNCTULATA - Echinoid (Lamarck)	Woods Hole	1-23(11)	31-33	1	---	100
ECHINORACHNIUS PARMA - Echinoid (Lamarck)	Woods Hole	1-23(11)	31-33	1	---	100
* LINGULA ANATINA - Brachiopod (Lamarck)	Enoshima, Japan	6-20(13)	32-34	1-5	100	---
TEREBRATULINA SEPTEMPTRIONALIS - Brachiopod	Off Trescott, Maine	-1-18(9)	31-32	1	---	100
BUGULA SIMPLEX - Bryozoa	Woods Hole	-1-23(12)	31-33	1-3	---	100
PARASMITTINA TRISPINOSA - Bryozoa (Johnston)	Woods Hole	-1-23(12)	31-33	1-3	100	---
TUBULIPORA, SP. - Bryozoa	Woods Hole	-1-23(12)	31-33	1-3	---	100
CHAETOPLEURA APICULATA - Amphineura (Say)	Woods Hole	-1-23(12)	31-33	3-4	?	?
* NEOPILINA GALATHEAE - Monoplacophora (Lemche)	Cape San Lucas, Mexico	2.5	35	3570	?	?
* ARGONAUTA HIANS SOLANDER Cephalopoda - Egg Case	Tropical Atlantic	20-30(25)	35-36	1-3	7	93
LOLIGO PEALEI - Cephalopoda (Leseur)(Pen)	Woods Hole	1-22(10)	31-33	1-6	?	?
NAUTILUS POMPILIUS - Shell, Cephalopoda (Linne)	S. W. Pacific Ocean	22-30(26)	35-36		100	---
SEPIA OFFICIONALIS - Cuttlebone, Cephalopoda (Linne)	North Sea	1-20(10)	31-34	3-10	?	?
SPIRULA SPIRULA - Cephalopoda (Linne)	St. Kitts Is., B.W.I.	21-30(26)	35-36	10-50	100	---

SPECIES	LOCALITY	TEMP. °C.	SALINITY %	DEPTH Meters	% ARAG.	% CALCITE (Mg=magnesium calcite)
DENTALIUM ENTALE (Henderson)	New England Shelf	7-9(8)	34	137	100	---
CALLINECTES SAPIDUS	Woods Hole	15-25	~35	1	?	?
CARCINUS MAENAS	Woods Hole	15-25	~35	1	?	?
OVALIPES OCCELATUS	Woods Hole	15-25	~35	1	?	?

In the following, a brief outline of the TCA decalcification procedure is presented.

After selection of the fresh shell specimen, the shell is opened and thoroughly freed from organic soft parts such as the muscle and mantle material, as well as cleaned from extraneous periostracum and ligament. This is done by means of razor blades, because even a brief treatment with Chlorox or NaOH was found to remove or alter the shell organic matrix to a certain extent. Consequently, the shell had to be broken up into small pieces to insure that all interfering proteinaceous substances were completely scraped off. In general 200 mg of sample material yielded sufficient organic matter for analysis; but in certain instances, e.g. in the case of the highly specialized Murex, up to 10 grams of shell material were required for a good amino acid run.

Subsequent to the cleaning operation, the coarsely powered shell fragments were treated with a 10 per cent trichloroacetic acid solution to which HCl was added in quantities stochiometrically necessary to dissolve all calcium carbonate. The reaction was finished in a few minutes and the suspended organic flakes were centrifuged at 10,000 rpm for 10 minutes at +4° C. The organic residue left after the supernatant had been removed was washed twice with a dilute TCA solution. After this treatment, the sample was ready for hydrolysis.

2. Amino Acid Analysis

The organic remains after being transferred to an hydrolysis tube were hydrolyzed with 6 N HCl for 22 hours at 110°C. in vacuo. In general, a set of ten samples was decalcified and hydrolyzed, because our Rotary Evapo-Mix (Buchler Instruments, Fort Lee, New Jersey) holds this number of outlets for the evaporation and removal of both the hydrolysis liquor and the two subsequent washings with distilled water. This three-step vacuum evaporation will take less than 15 minutes at a water bath temperature of 60°C. Subsequent to this

operation, the dry sample is picked up with 1 ml. of a pH 2.2 citrate buffer and is then ready for the amino acid analysis.

Although care had been applied to secure a quantitative recovery of the total proteinaceous matrix from the shell, in cases where little organic material was present relative to the bulk of the carbonates, a small loss during the decalcification of the shell carbonate may have occurred. This applies certainly to the rest of the samples having a greater percentage of shell organic matter; here, however, the loss of a "tiny organic flake" is of less significance.

The mantle, periostracum, and other tissues were prepared for analysis by direct hydrolysis for 22 hours, and after going through the procedure outlined above, the dry hydrolyzate was adjusted with a pH 2.2 citrate buffer to 1 ml. In most instances 1 to 5 mg of sample material were hydrolyzed.

It should be pointed out that all specimens studied were air-dry. This was done to avoid any alteration due to excessive heating. In evaluating the quantitative data for the total organic matter in the accompanying data sheets, this feature has to be taken into account. A determination of the amount of water left in the samples and the element analysis for carbon, hydrogen, and especially nitrogen are desirable to (1) adjust the reported figures on total organic matter and (2) to check on the percent recovery, particularly in samples where little organic matter is present. A carbon-hydrogen-nitrogen train is presently in operation. In view of the fact that the total organic matter in the shell carbonates ranges from 0.01 to about 5% of the total $CaCO_3$, a general survey of the C/H/N relationships in shell forming organisms might have a reward on its own.

The wide variation in amino acid composition of the shell organic matter within the molluscs suggested a multi-component protein-peptide system. This viewpoint on the "Heterogeneity of the Shell Proteinaceous Matrix" was confirmed

by factor analysis and preliminary solubility tests on Mercenaria. The calcified tissues of Mercenaria were subjected to enzymatic and chemical degradation. For example, some components appeared to be soluble in alkaline solutions (carbonate buffer), and others in dissociation reagents like 90% formic acid. It should be emphasized that most of the reactions were rather slow and required up to three weeks time for completion. Least effective was the enzymatic treatment (trypsin), but other enzymes are presently tested. The solutions were subsequently fractionated by means of gel-filtration (Sephadex) and the individual fractions were collected and hydrolyzed for 22 hours with 6 N HCl. This investigation is still in its preliminary stage but the amino acid data on various fractions of Mercenaria obtained by the degradation studies are included in this report.

We are presently determining by means of moving boundary electrophoresis (Perkin-Elmer Model 238) and other analytical techniques certain properties of the individual peptide fraction such as molecular weight or iso-electric point. In addition to Mercenaria five other specimens are included in this study, namely, Mytilus, Haliotis, Nautilus, Laevicardium, and Succinia.

3. Ion-exchange Chromatography

A high-pressure system (800 psi) for the automatic analysis of amino acids is illustrated in Figures 1 and 2. It is based on the general procedure developed by Stein and Moore[13] and Spackman et al.[14] However in comparison to previous techniques it has the advantage of being more sensitive, faster, and fully automatic. A similar system has been designed by Hare and Abelson[6] and Hare[15]. The principal features of this accelerated technique are briefly described.

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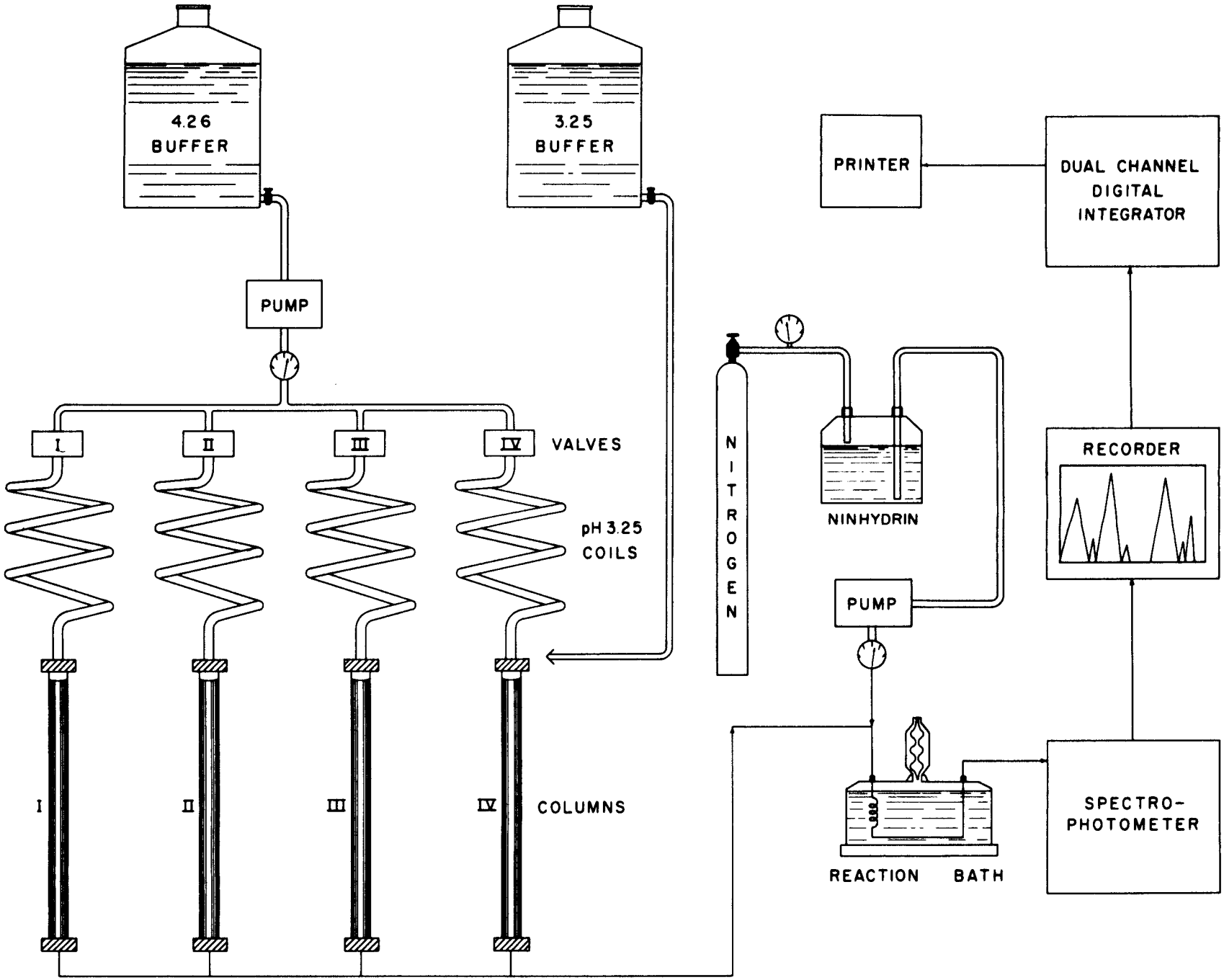

Fig. 1. Outline (Schematic) of Ion-Exchange System

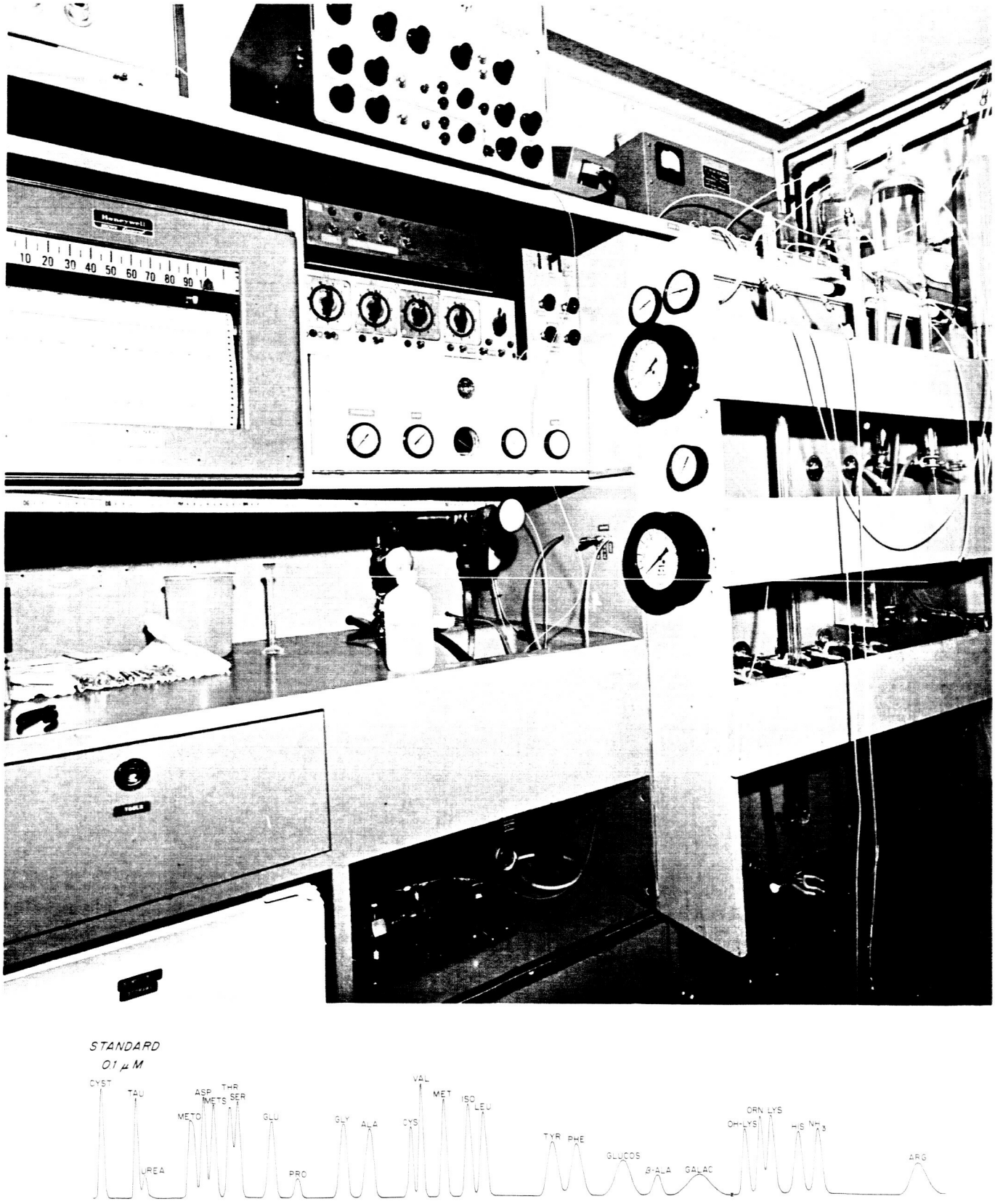

Fig. 2. Automatic Amino Acid Analyzer and Representative Ion-Exchange Chromatogram

A pH 4.26 citrate buffer reservoir is connected via a Beckman Accu-Flow pump (Spinco Division, Palo Alto, California) to four high pressure solenoid valves (Skinner, New Britain, Connecticut). The valves in turn are controlled by four separate timers which can be operated both manually and automatically (Eagle, Signal, Moline, Illinois). A high pressure nylon coil, acting as a reservoir for the pH 3.25 citrate buffer, has a length of 30 ft and an I. D. of 3/16", which is about equal to a capacity of 80 ml. The coil serves a dual purpose; it acts as a buffer reservoir and simultaneously it eliminates the stroke effect of the pump upon the resin. The ion-exchange columns following the coils are 6 ft. long and have an I. D. of 1/4" (Polypenco Nylaflow Pressure Tubing). It should be noted that columns having a smaller I. D. of 3/16" or 1/8" work satisfactorily and give higher sensitivities; their principal shortcomings are, however, frequent repacking, i.e. after 6 to 8 runs, and less perfect separation for some of the amino compounds.

The column effluent has to pass through 180 feet of 1/26" teflon spaghetti tubing placed in a boiling water bath; prior to the reaction bath, ninhydrin is pumped into the system at half the flow rate of the buffer system. The stained solution is measured at 570 and 440 mμ by an LKB Multichannel Absorptiometer (Stockholm, Sweden) and events are recorded on a Honeywell Recorder (Philadelphia, Pennsylvania). A Dual-Channel Digital Integrator and Printer (Infotronics, Houston, Texas) allows a simultaneous integration and digital readout of the area under each peak.

For the basic amino acids the procedure is essentially the same. It differs only in the buffer system, i.e. 10 ml of a pH 4.25 citrate buffer is followed by a pH 5.28 citrate buffer, and in the length of the ion exchange column which is 1 ft. The two buffer system allows a perfect separation of galactoseamine, glucoseamine, OH-lysine, tryptophane, ornithine, and lysine.

To reduce the stroke effects of the basic pump on the resin, 30 ft. of 3/16" nylon coil are attached between ion-exchange column and pump outlet.

All digitized peak areas from both the acidic+neutral and basic runs are finally programmed and fed into a GE 225 computer (see pages 21-27). Although the highest sensitivity of this ion-exchange system is in the neighborhood of 10^{-11} molar for the common amino acids, concentrations smaller than 10^{-9} molar cannot be integrated and digitized automatically, because the signal from such a small peak is not strong enough to trigger the integration. Thus should concentration fall below 10^{-9} molar, the areas have to be integrated manually; the calculation of the final data, however, is also programmed. The reproducibility of the system is better than 1% at the 10^{-8} molar level.

Resins tested for their high pressure performance include (1) Chromobeads, Type B (Technicon Chemical Company, Chauncey, New York), (2) Beckman Custom Research Resin, Type AA-15 and AA-27, (3) Aminex-SB Spherical Resin (Bio-Rad Laboratories, Los Angeles, California), and (4) Dowex 50 x 8 resin. The Chromobeads are now routinely used because they show the least pressure effects. The water jacket temperature in case of the acidic+neutral columns is set at 56° C. and in case of the basic column at 52° C.

The system as outlined has a four-sample-a-day capacity. The routine schedule is four basic runs during daytime (8^{30} to 16^{00}) and the corresponding acid+neutral runs at night (16^{30} - 8^{00}). The instrument requires a two-hours attendance for loading and regeneration of the four-set columns. The total cost of the auto-analyzer is $7,600 for the ion-exchange part plus $8,300 for the Dual-Channel Digital Integrator.

At present,we are building an improved system with a 12 samples-a-day capacity for continuous unattended operation in order to match the increased demand of amino acid analysis in the Department of Chemistry and Biology at the

Woods Hole Oceanographic Institution. This instrument differs technically from the previous one in the following features:

a. The LKB Absorptiometer will be replaced by three Gilford (Model 300) Micro-Sample Spectrophotometers which will be set at 404 mμ for the acid+neutral runs and at 570 mμ for the basic runs.

b. The analytical signals are stored on magnetic tape rather than being integrated directly, and are played back later at 16 times the recording speed of the amino acid analyzer.

Apart from tripling the output, these features will improve the sensitivity of the instrument (10^{-12} molar; 10 mm flow cell) and allow an automated readout of the individual peaks at concentrations as low as 10^{-10} molar. In case the amino acid concentrations should fall below this level, a computer program is set up to determine the areas and absolute amino acid values directly from the magnetic tapes.

A novel approach to eliminate the difficulties of pumping small volumes of buffer through the columns with commercially available pumps has recently been made by Hare[15]. He replaces the customary buffer and ninhydrin pumps by a regulated nitrogen pressure to force the solvents through the columns and reaction coils. We intend to incorporate this suggestion in our new design. The total cost of the improved instrument with a 12 sample-a-day output will be around $24,000.

TREATMENT OF DATA

The treatment of data falls naturally into two categories.

1. Computation of the residues per thousand of each amino acid from the sample area output of the chromatograph.

2. Statistical studies on the residues per thousand data.

The computation of the residues per thousand, together with various other measures of the amino acids, was accomplished by a computer program called "AMINO ACIDS" written by Miss N. Lockwood. A description of this program and a graphical outline (Figure 3) are included in this report. The statistical studies, involving the techniques of factor analysis, multiple regression and canonical correlation, are currently underway and will be the subject of a later report. The computer programs utilized in this phase of the study may be found in two reports by Spencer[16,17].

DESCRIPTION OF "AMINO ACID" PROGRAM

1. Scope

The purpose of the program is to compute the amount of amino acids contained in a sample from the digitized areas produced by the chromatograph. Written in FORTRAN II for the GE 225 computer, the program requires as input:

a) The areas of standard amino acids

b) Molecular weights of amino acids

c) Weights of nitrogen equivalent to amino acids

d) Number of micromoles of standard

e) Factor for computation of the micromoles per gram from the number of micromoles.

f) Areas of the sample amino acids

The output consists of a printout of:

a) Number of micromoles of amino acids

b) Micromoles of amino acids per gram of sample

c) Number of amino acid residues per thousand

---

16) Spencer, D. W., Unpublished manuscript, Woods Hole Oceanographic Institution (1966), in press.

17). Ibid., Woods Hole Oceanographic Institution (1966), in press.

FLOW DIAGRAM FOR *AMINO ACID* PROGRAM

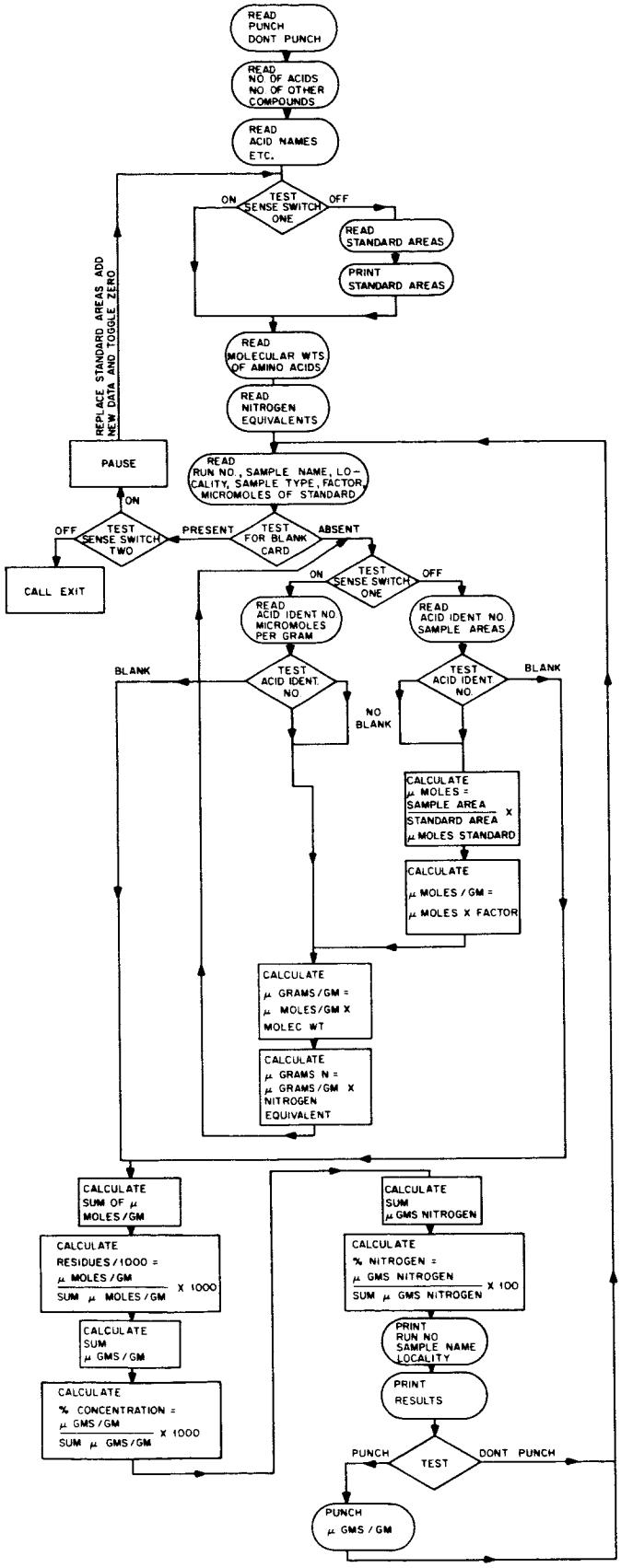

Fig. 3. Flow Diagram for AMINO ACID Program

d) Micrograms of amino acids per gram of sample

e) Amino acids as weight percent of total protein

f) Micrograms of nitrogen per gram of sample for each amino acid

The following options are provided:

1) Micromoles per gram may be used as input instead of the sample areas.

2) Several jobs, each with a different standard, may be run without reloading the program.

3) The micrograms per gram of each amino acid may be obtained as punched as well as printed output.

A flow diagram of the computation scheme is given in Figure 3.

2. Operation of Program

Parameter cards required:

Card 1. Columns 1-10 PUNCH - if micrograms per gram are required as punched output

DONT PUNCH - if micrograms per gram are not to be punched

Card 2. Columns 1-5 NOACID - number of acids (no decimal point, must be right-justified)

NOSALT - number of compounds other than amino acids (begin counting at 50, eg. if there are four compounds this value will be 53. No decimal, must be right-justified)

Card 3 - A set of cards with the names of the amino acids punched one to a card in columns 1-21. The order of the cards must correspond to the ordinal number of the individual amino acids that appears on the data cards. The number of acids may not exceed 49 and the number of compounds other than amino acids may not exceed 11 without a change in the dimension statement of the program.

Card 4 - A set of cards with the standard areas, in the same order as the acid names, punched, ten per card, in columns 1-8, 9-16, 17-24, 25-32, 33-40, 41-48, 49-56, 57-64, 65-72, 73-80. Each number must be right-justified and no decimal point is needed. Use as many cards as required. If micromoles per gram are used as input the standard area cards must be omitted.

Card 5 - A set of cards with the molecular weights of the amino acids punched, ten per card, in the same columns as the standard areas and in the same order as the acid names. The numbers need not be right-justified but a decimal point must be included. Use as many cards as required.

Card 6 - A set of cards with the weight of nitrogen equivalent to one mole of each acid punched in the same format as the molecular weights.

Data cards:

Card 1.	Columns 1-15	run number (begin in column 1)
	16-45	sample name (begin in column 16)
	46-75	locality (begin in column 46)
Card 2.	Columns 1-30	sample type (begin in column 1)
	31-40	factor (must have decimal)
	41-45	micromoles of standard (must have decimal)

Card 3 - a) If areas are used as input:

A set of cards with the acid identification number in columns 1-5 (no decimal point, must be right-justified), and the area in columns 6-15 (no decimal point, must be right-justified)

b) If micromoles per gram are used as input:

A set of cards with the acid identification number in columns 1-5 (no decimal point, must be right-justified), and the

micromoles per gram punched in columns 6-15 (must have a decimal point)

Remember that the identification numbers of compounds other than amino acids start at 50. Use as many cards as required.

The card deck required to run the program is illustrated in Figure 4. Note that each set of data cards is followed by a blank card and two blank cards will return control to the monitor.

3. Operation of Options

1. Sense switch 1 down. Reads in micromoles per gram (remember to omit the standard area cards).
   up. Reads in sample areas.
2. Sense switch 2 down. Data for more than one standard may be read in. The program prints out "CHANGE STANDARD AREAS...TOGGLE ZERO TO CONTINUE". Remove cards in the deck preceding the standard areas. Replace the standard areas with the new set and replace the old data cards with the new data cards.
   up. Only one standard may be read in.
3. For punched output of micrograms per gram put "PUNCH" on the first parameter card. Othewise put "DONT PUNCH".

4. Output

Examples of the output appear in the data tables of this report. Where micromoles per gram have been used as input the columns headed "Area" and "Micromoles" appear blank and a dummy number is printed as the factor.

During the hydrolysis of the proteins, cysteic acid and taurine may be produced from cystine and methionine sulfoxides and methionine sulphone may be

DECK MAKE-UP FOR EXECUTION OF AMINO ACID PROGRAM

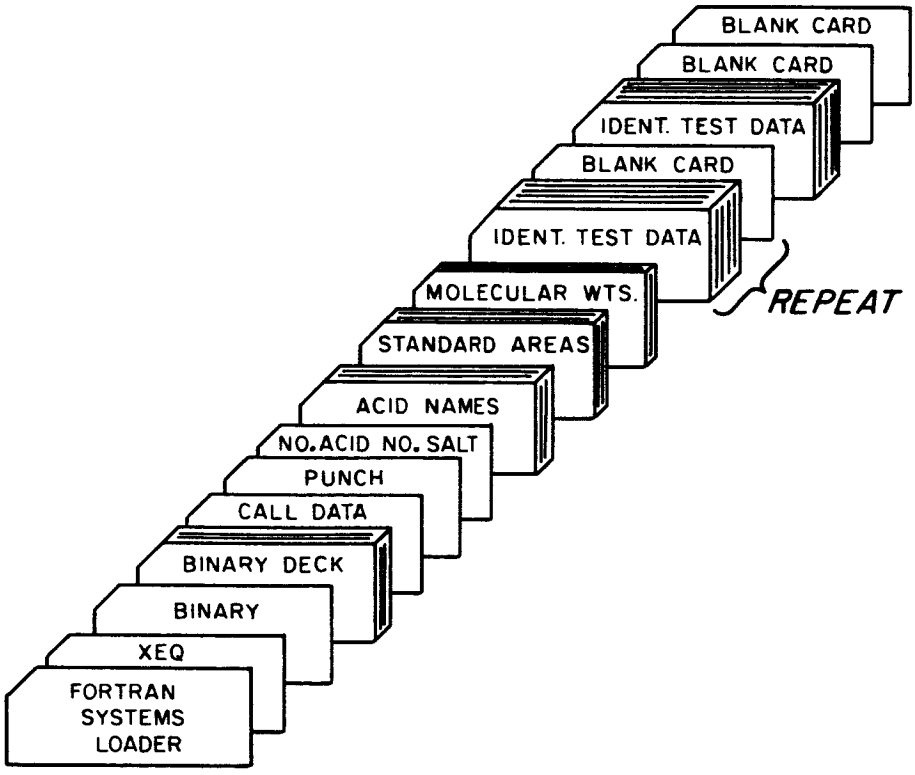

Fig. 4. Deck Make-up for Execution of AMINO ACID Program

produced from methionine. The contents of these products are reported in micromoles per gram but for the later columns they are set to zero and their equivalent added to the parent acids by the following statements, where all units are micromoles per gram:

Cystine = Cystine + Cysteic acid x (121.15/169.16) + Taurine x (121.15/125.15)

Methionine = Methionine + Methionine sulfoxides x (149.22/165.22) + Methionine sulphone x (149.22/181.22)

FORTRAN LIST

```
C       AMINO ACID PROGRAM FOR E. DEGENS BY N. LOCKWOOD   OCTOBER,1965
C       REVISED NOVEMBER,1965
C      REVISED MARCH, 1966 TO ALLOW PUNCHING OUT COLUMN[I,5]
C      REVISED MARCH, 1966, TO ALLOW INPUT OF MICROMOLES PER GRAM
C      REVISED APRIL,1966 TO ALLOW READING IN MORE THAN ONE STANDARD
C      NOACID IS THE NUMBER OF ACIDS
C      NOSALT IS THE NUMBER OF BASES
C      IACID IS THE NAME OF THE SUBSTANCE
C      AREAS IS THE AREA OF THE STANDARD SAMPLE
C      GMMOLE IS THE MOLECULAR WEIGHT OF THE SUBSTANCE
C      XNITRO IS THE MOLECULAR WEIGHT OF THE NITROGEN IN THE SUBSTANCE
C      COLUMN[I,2] = MICROMOLES OF THE TEST SUBSTANCE
C      COLUMN[I,3] = MICROMOLES PER GRAM OF THE TEST SUBSTANCE
C      COLUMN[I,4] = RESIDUES PER 1000 TOTAL RESIDUES OF THE TEST SAMPLE
C      COLUMN[I,5] = MICROGRAMS PER GRAM OF THE TEST SUBSTANCE
C      COLUMN[I,6] = PERCENT CONCENTRATION OF THE TEST SUBSTANCE
C      COLUMN[I,7] = MICROGRAMS OF NITROGEN IN THE TEST SUBSTANCE
C      COLUMN[I,8] = PERCENT OF NITROGEN IN THE TEST SUBSTANCE
C      IRUNNO = RUN NUMBER
C      ISAMP = SAMPLE
C      LOCAL = LOCALITY
C      ITYPE = TYPE
C      SPLSIZ = SIZE OF STANDARD IN MICROMOLES
C      ISW1 =1 PUNCH
C           = 2 DONT PUNCH
C      SENSE SWITCH 1 DOWN - INPUT OF MICROMOLES PER GRAM
C      SENSE SWITCH 1 UP  - INPUT OF AREAS
C      SENSE SWITCH 2 DOWN - ALLOWS READING IN OF DATA FOR MORE THAN ONE
C                            STANDARD
C      SENSE SWITCH 2 UP   - ONLY DATA FOR ONE STANDARD MAY BE READ
C      QOLUMN[I] = PHONY COLUMN SET UP TO REPLACE CERTAIN VALUES IN
C                  COLUMN[I,3] IN ORDER TO COMPUTE THE FOLLOWING COLUMNS
C
      DIMENSION GMMOLE[60 ],XNITRO[60 ],AREAS[60 ],COLUMN[60 ,8],
     1RAREA[60 ],SUM[8],IACID[60 ,7],ISAMP[10],LOCAL[10],ITYPE[10]
     2,IRUNNO[5],XCOL[50],QOLUMN[60]
  176 READ 100, IPUN
      IF [IPUN-163109] 170,171,170
  171 ISW1=1
      GO TO 172
  170 IF [IPUN-64589] 174,173,174
  173 ISW1=2
      GO TO 172
  174 PRINT 175
  175 FORMAT [57H1CARD CONTAINING *PUNCH* OR *DONT PUNCH* HAS BEEN OMITT
     1ED,//,66H PLACE THIS CARD IN FRONT OF DATA DECK AND TOGGLE ZERO TO
     2 CONTINUE,/,1H1]
      PAUSE
      GO TO 176
  172 READ 130, NOACID,NOSALT
```

```
  130 FORMAT [2I5]
      DO 10 I=1,NOACID
   10 READ 100, [IACID[I,J],J=1,7]
  100 FORMAT [7A3]
      DO 111 I=50,NOSALT
  111 READ 100, [IACID[I,J],J=1,7]
      IBASE=NOSALT+2
  192 IF [SENSE SWITCH 1] 70,80
   80 READ 101, [AREAS[I],I=1,NOACID],[AREAS[I],I=50,IBASE]
      PRINT 900, [I,AREAS[I],I=1,NOACID],[I,AREAS[I],I=50,IBASE]
  900 FORMAT [58H1THE STANDARD AREAS USED IN THE FOLLOWING CALCULATIONS
     1ARE,///,5X,11HACID NUMBER,5X,4HAREA,//,[9X,I2,8X,F8.0]]
   70 READ 101, [GMMOLE[I],I=1,NOACID],[GMMOLE[I],I=50,NOSALT]
      READ 101, [XNITRO[I],I=1,NOACID],[XNITRO[I],I=50,NOSALT]
  101 FORMAT [10F6.0]
   18 DO 24 K=1,NOACID
      RAREA[K]=0.
      DO 24 J=2,8
   24 COLUMN[K,J]=0.0
      DO 25 K=50,NOSALT
      RAREA[K]=0.
      DO 25 J=2,8
   25 COLUMN[K,J]=0.0
      DO 11 I=1,8
   11 SUM[I]=0.0
      READ 102, [IRUNNO[I],I=1,5],[ISAMP[I],I=1,10],[LOCAL[I],I=1,10],
     1[ITYPE[I],I=1,10],FACTOR,SPLSIZ
  102 FORMAT [5[5A3],/,10A3,F10.3,F5.3]
      IF [IRUNNO[1]-199726] 33,90,33
C
C     K=ACID NUMBER    DAREA=RAREA[K]=AREA OF THAT ACID
C
   33 IF [SENSE SWITCH 1] 71,333
   71 READ 103, K,COLU
      IF [K] 12,12,77
   77 COLUMN[K,3]=COLU
      IF [K-50] 76,75,75
   75 IF [K-NOSALT] 73,73,74
   74 LM=K-3
      COLUMN[LM,3]=COLUMN[K,3]
      K=LM
      GO TO 73
  333 READ 103, K,DAREA
  103 FORMAT [I5,F10.0]
      IF [K] 12,12,27
   27 RAREA[K]=DAREA
      IF [K-50] 31,20,20
   20 IF [K-NOSALT] 51,51,52
   51 COLUMN[K,2]=RAREA[K]*SPLSIZ/AREAS[K]
      GO TO 53
```

```
52 LM=K-3
   COLUMN[LM,2]=RAREA[K ]*SPLSIZ/AREAS[K]
   AREAS[LM]=AREAS[K]
   RAREA[LM]=RAREA[K]
   K=LM
53 IF [AREAS[K]] 54,55,54
55 COLUMN[K,2]=0.
54 COLUMN[K,3]=COLUMN[K,2]*FACTOR
73 COLUMN[K,5]=COLUMN[K,3]*GMMOLE[K]
   COLUMN[K,7]=COLUMN[K,3]*XNITRO[K]
   GO TO 33
31 IF [AREAS[K]] 35,37,35
37 COLUMN[K,2]=0.
   GO TO 39
35 COLUMN[K,2]=RAREA[K]*SPLSIZ/AREAS[K]
39 SUM[2]=SUM[2]+COLUMN[K,2]
   COLUMN[K,3]=COLUMN[K,2]*FACTOR
76 SUM[3]=SUM[3]+COLUMN[K,3]
   GO TO 33
12 QOLUMN[1]=0.
   QOLUMN[2]=0.
   QOLUMN[3]=0.
   QOLUMN[4]=COLUMN[4,3]
   QOLUMN[5]=COLUMN[5,3]
   QOLUMN[6]=0.
   DO 901 I=7,12
901 QOLUMN[I]=COLUMN[I,3]
   QOLUMN[13]=COLUMN[13,3]+COLUMN[1,3]*121.15/169.16+COLUMN[2,3]*121.
  115/125.15
   QOLUMN[14]=COLUMN[14,3]
   QOLUMN[15]=COLUMN[15,3]+COLUMN[3,3]*149.22/165.22+COLUMN[6,3]*149.
  122/181.22
   DO 902 I=16,NOACID
902 QOLUMN[I]=COLUMN[I,3]
   DO 903 I=50,NOSALT
903 QOLUMN[I]=COLUMN[I,3]
   YSUM=0.
   DO 904 I=1,NOACID
904 YSUM=YSUM+QOLUMN[I]
   DO 14 I=1,NOACID
   COLUMN[I,4]=QOLUMN[I]*1000./YSUM
   SUM[4]=SUM[4]+COLUMN[I,4]
   COLUMN[I,5]=QOLUMN[I]*GMMOLE[I]
 14 SUM[5]=SUM[5]+COLUMN[I,5]
   DO 15 I=1,NOACID
   COLUMN[I,6]=COLUMN[I,5]*100./SUM[5]
   SUM[6]=SUM[6]+COLUMN[I,6]
   COLUMN[I,7]=QOLUMN[I]*XNITRO[I]
 15 SUM[7]=SUM[7]+COLUMN[I,7]
   DO 16 I=1,NOACID
```

```
      COLUMN[I,8]=COLUMN[I,7]*100./SUM[7]
   16 SUM[8]=SUM[5]+COLUMN[I,8]
      XSUM=SUM[7]
      DO 60 I=50,NOSALT
   60 XSUM=XSUM+COLUMN[I,7]
      PRINT 104, [IRUNNU[I],I=1,5],[ISAMP[I],I=1,10],[LOCAL[I],I=1,10],
     1[ITYPE[I],I=1,10],FACTOR
  104 FORMAT [114HRUN NUMBER,2X,5A3,/,7H SAMPLE,6X,10A3,/,9H LOCALITY,4X
     1,10A3,/,5H TYPE,6X,10A3,/,7H FACTOR,6X,F10.3,////]
      PRINT 105
  105 FORMAT[9X,4HACID,12X,4HAREA,6X,58HMICROMOLES   MICROMOLES   RESIDU
     1ES    MICROGRAMS   PERCENT,11X,68HNITROGEN,/,49X,68HPER GRAM    PER
     2 1000      PER GRAM    CONCEN-     MICROGRAMS  PERCENT,/,59X,12HTOT
     3AL RESID.,15X,7HTRATION,///]
      IF [SENSE SWITCH 1] 81,82
   81 DO 84 I=1,NOACID
   84 PRINT 501,[IACID[I,J],J=1,7],[COLUMN[I,J],J=3,8]
  501 FORMAT [1X,7A3,26X,F9.4,5X,F6.2,5X,F10.4,4X,F5.2,5X,F9.2,5X,F5.2]
      PRINT 502, [SUM[I],I=3,8]
  502 FORMAT [/,7H TOTALS,41X,F9.4,4X,F7.2,3X,F12.4,3X,F6.2,3X,F11.2,
     14X,F6.2,////]
      DO 85 I=50,NOSALT
   85 PRINT 503, [IACID[I,J],J=1,7],COLUMN[I,3],COLUMN[I,5],COLUMN[I,7]
  503 FORMAT [1X,7A3,26X,F9.4,16X,F10.4,14X,F9.2]
      GO TO 86
   82 DO 17 I=1,NOACID
      K=XFIXF[AREA[I]]
   17 PRINT 106, [IACID[I,J],J=1,7],K,[COLUMN[I,J],J=2,8]
  106 FORMAT [1X,7A3,18,6X,F7.4,5X,F9.4,5X,F6.2,5X,F10.4,4X,F5.2,5X,F9.2
     1,5X,F5.2]
      PRINT 107, [SUM[I],I=2,8]
  107 FORMAT [/,7H TOTALS,27X,F9.4,5X,F9.4,4X,F7.2,3X,F12.4,3X,F6.2,3X,
     1F11.2,4X,F6.2,////]
      DO 30 I=50,NOSALT
      K=XFIXF[AREA[I]]
   30 PRINT 108,[IACID[I,J],J=1,7],K,[COLUMN[I,J],J=2,3],COLUMN[I,5],COL
     1UMN[I,7]
  108 FORMAT [1X,7A3,18,6X,F7.4,5X,F9.4,16X,F10.4,14X,F9.2]
   86 PRINT 109, XSUM
  109 FORMAT [/,54X,27HTOTAL NITROGEN - MICROGRAMS,13X,F12.2]
      GO TO [178,181],ISW1
  178 DO 160 K=1,NOACID
  160 XCOL[K]=COLUMN[K,5]
      J=NOACID+1
      XCOL[J]=SUM[5]
      DO 161 K=51,NOSALT
      J=J+1
  161 XCOL[J]=COLUMN[K,5]
      XCOL[J+1]=COLUMN[50,5]
      LIM=NOSALT+NOACID-48
```

```
      DO 162 I=1,7
      M=5*I
      KM=M-4
      IF (M-LIM) 162,162,164
  164 M=LIM
  162 PUNCH 163, (IRUNNO(J),J=1,4),I,(XCOL(K),K=KM,M)
  163 FORMAT (3A5,A2,I1,5E13.6,3X)
      GO TO 18
   90 IF (SENSE SWITCH 2) 191,190
  191 PRINT 193
  193 FORMAT (50H1CHANGE STANDARD AREAS.....TOGGLE ZERO TO CONTINUE/1H1)
      PAUSE
      GO TO 192
  190 CALL EXIT
      END
```

RUN NUMBER 1282A/1279B
SAMPLE ACMAEA PUSTULATA
LOCALITY PUERTO SOSUA, SANTO DOMINGO
TYPE SHELL
FACTOR 3.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	14970	0.0626	0.2084	0.	0.	0.	0.	0.
TAURINE	4016	0.0155	0.0516	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	10700	0.0452	0.1507	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	109300	0.3747	1.2478	147.97	166.0757	16.33	17.47	13.84
METHIONINE SULFONE	1600	0.0066	0.0220	0.	0.	0.	0.	0.
THREONINE	43660	0.1558	0.5189	61.53	61.8080	6.08	7.26	5.75
SERINE	52350	0.2155	0.7175	85.09	75.4059	7.41	10.05	7.96
GLUTAMIC ACID	77040	0.2851	0.9493	112.57	139.6677	13.73	13.29	10.53
PROLINE	8978	0.1599	0.5324	63.14	61.3003	6.03	7.45	5.90
GLYCINE	72420	0.2655	0.8842	104.85	66.3750	6.52	12.38	9.80
ALANINE	70960	0.2578	0.8586	101.82	76.4959	7.52	12.02	9.52
CYSTINE (HALF)	0	0.	0.	23.63	24.1368	2.37	2.79	2.21
VALINE	44330	0.1547	0.5152	61.10	60.3614	5.93	7.21	5.71
METHIONINE	4145	0.0150	0.0500	24.21	30.4597	2.99	2.86	2.26
ISOLEUCINE	34170	0.1200	0.3996	47.39	52.4195	5.15	5.59	4.43
LEUCINE	65470	0.2336	0.7778	92.24	102.0308	10.03	10.89	8.62
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	7976	0.0265	0.0883	10.47	16.0014	1.57	1.24	0.98
PHENYLALANINE	14391	0.0515	0.1715	20.33	28.3229	2.78	2.40	1.90
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	10874	0.0651	0.2167	25.70	31.6792	3.11	6.07	4.81
HISTIDINE	3306	0.0254	0.0845	10.02	13.1094	1.29	3.55	2.81
ARGININE	2537	0.0201	0.0668	7.93	11.6437	1.14	3.74	2.96
TOTALS		2.5561	8.5118	1000.00	1017.2934	100.00	126.26	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	2634	0.0181	0.0603		10.7972		0.84	
GALACTOSAMINE	936	0.0070	0.0235		4.2052		0.33	
AMMONIA	60000	0.4828	1.6077		27.3313		22.51	

TOTAL NITROGEN - MICROGRAMS 149.94

RUN NUMBER 1090A/1167B
SAMPLE ACHATINELLA LORATA NOBILIS
LOCALITY HAWAIIAN ISLANDS
TYPE SHELL
FACTOR 7.663

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	200	0.0009	0.0065	0.	0.	0.	0.	0.
TAURINE	200	0.0008	0.0063	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	300	0.0013	0.0103	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	98710	0.3911	2.9968	47.39	398.8755	5.80	41.96	4.44
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	33890	0.1351	1.0355	16.37	123.3435	1.79	14.50	1.53
SERINE	51740	0.2079	1.5929	25.19	167.3981	2.43	22.30	2.36
GLUTAMIC ACID	59010	0.2432	1.8639	29.47	274.2354	3.99	26.09	2.76
PROLINE	21900	0.4101	3.1426	49.69	361.8086	5.26	44.00	4.65
GLYCINE	310512	3.3935	26.0037	411.17	1952.0963	28.39	364.05	38.49
ALANINE	60940	0.2449	1.8765	29.67	167.1788	2.43	26.27	2.78
CYSTINE (HALF)	4245	0.0308	0.2357	3.90	29.8524	0.43	3.45	0.36
VALINE	169500	0.6434	4.9301	77.95	577.5656	8.40	69.02	7.30
METHIONINE	3667	0.0148	0.1132	1.94	18.2796	0.27	1.72	0.18
ISOLEUCINE	138500	0.5293	4.0562	64.14	532.0888	7.74	56.79	6.00
LEUCINE	230500	0.9055	6.9388	109.72	910.2338	13.24	97.14	10.27
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	21120	0.0883	0.6767	10.70	122.6155	1.78	9.47	1.00
PHENYLALANINE	148500	0.6081	4.6597	73.68	769.7332	11.19	65.24	6.90
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	520	0.0025	0.0192	0.30	3.1206	0.05	0.54	0.06
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	57290	0.3225	2.4712	39.07	361.2591	5.25	69.19	7.32
HISTIDINE	300	0.0016	0.0125	0.20	1.9343	0.03	0.52	0.06
ARGININE	13470	0.0781	0.5984	9.46	104.2411	1.52	33.51	3.54
TOTALS		8.2537	63.2467	1000.00	6875.8600	100.00	945.76	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	9170	0.0423	0.3242		58.0849		4.54	
GALACTOSAMINE	3600	0.0192	0.1471		26.3535		2.06	
AMMONIA	127600	0.4365	3.3445		56.8570		46.82	

TOTAL NITROGEN - MICROGRAMS 999.18

RUN NUMBER 1432A/1421B
SAMPLE AKERA SOLUTA
LOCALITY ZANZIBAR, AFRICA
TYPE SHELL
FACTOR 3.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	6852	0.0287	0.0954	0.	0.	0.	0.	0.
TAURINE	413	0.0016	0.0053	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1820	0.0077	0.0256	0.	0.	0.	0.	0.
OH - PROLINE	891	0.0445	0.1484	9.07	19.4533	0.99	2.08	0.83
ASPARTIC ACID	179600	0.6157	2.0503	125.35	272.8929	13.85	28.70	11.49
METHIONINE SULFONE	3663	0.0151	0.0503	0.	0.	0.	0.	0.
THREONINE	52680	0.1880	0.6261	38.28	74.5773	3.78	8.76	3.51
SERINE	138600	0.5705	1.8997	116.14	199.6420	10.13	26.60	10.64
GLUTAMIC ACID	160900	0.5954	1.9826	121.21	291.6996	14.80	27.76	11.11
PROLINE	18800	0.3348	1.1149	68.16	128.3633	6.51	15.61	6.25
GLYCINE	157300	0.5767	1.9205	117.41	144.1699	7.32	26.89	10.76
ALANINE	135800	0.4935	1.6432	100.46	146.3944	7.43	23.01	9.21
CYSTINE (HALF)	0	0.	0.	4.49	8.8989	0.45	1.03	0.41
VALINE	96950	0.3364	1.1269	68.89	132.0109	6.70	15.78	6.31
METHIONINE	10820	0.0392	0.1304	11.92	29.0964	1.48	2.73	1.09
ISOLEUCINE	59070	0.2074	0.6908	42.23	90.6181	4.60	9.67	3.87
LEUCINE	111500	0.3978	1.3246	80.98	173.7655	8.82	18.54	7.42
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	24020	0.0799	0.2660	16.26	48.1888	2.45	3.72	1.49
PHENYLALANINE	47670	0.1706	0.5679	34.72	93.8191	4.76	7.95	3.18
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	16890	0.1011	0.3366	20.58	49.2057	2.50	9.42	3.77
HISTIDINE	613	0.0047	0.0157	0.96	2.4307	0.12	0.66	0.26
ARGININE	14199	0.1123	0.3741	22.87	65.1670	3.31	20.95	8.38
TOTALS		4.9235	16.3952	1000.00	1970.3939	100.00	249.85	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	42960	0.2952	0.9829	176.1009	13.76	
GALACTOSAMINE	12139	0.0914	0.3044	54.5374	4.26	
AMMONIA	137055	0.8271	2.7543	46.8237	38.56	

TOTAL NITROGEN - MICROGRAMS 306.44

RUN NUMBER 1006A/1003B
SAMPLE AKERA SOLUTA
LOCALITY ZANZIBAR, AFRICA
TYPE PERIOSTRACUM NO. 444
FACTOR 833.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	0	0.	0.	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1535	0.0074	6.1736	0.	0.	0.	0.	0.
OH - PROLINE	2500	0.1264	105.2982	18.62	13807.7537	1.97	1474.17	1.64
ASPARTIC ACID	242300	1.0021	835.0532	147.65	111145.5780	15.84	11690.74	13.00
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	55220	0.2271	189.2514	33.46	22543.6290	3.21	2649.52	2.95
SERINE	187100	0.7606	633.8051	112.07	66606.5728	9.49	8873.27	9.87
GLUTAMIC ACID	213300	0.8832	736.0219	130.14	108290.9019	15.43	10304.31	11.46
PROLINE	16190	0.3023	251.9442	44.55	29006.3374	4.13	3527.22	3.92
GLYCINE	123700	0.5047	420.5750	74.36	31572.5616	4.50	5888.05	6.55
ALANINE	167700	0.6870	572.5090	101.23	51004.8244	7.27	8015.13	8.92
CYSTINE (HALF)	1500	0.0121	10.1091	1.79	1224.4189	0.17	141.53	0.16
VALINE	122400	0.4935	411.2887	72.72	48182.4684	6.87	5758.04	6.41
METHIONINE	9831	0.0404	33.6931	6.94	5859.6854	0.84	549.76	0.61
ISOLEUCINE	95270	0.3835	319.6202	56.51	41927.7823	5.98	4474.68	4.98
LEUCINE	153800	0.6132	511.0293	90.36	67036.8262	9.55	7154.41	7.96
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	19170	0.0804	67.0230	11.85	12143.9004	1.73	938.32	1.04
PHENYLALANINE	64230	0.2713	226.0815	39.97	37346.3964	5.32	3165.14	3.52
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	27160	0.1288	107.3683	18.98	15696.1753	2.24	3006.31	3.34
HISTIDINE	0	0.	0.	0.	0.	0.	0.	0.
ARGININE	44910	0.2632	219.3719	38.79	38216.7828	5.45	12284.83	13.67
TOTALS		6.7875	5656.2166	1000.00	701612.5908	100.00	89895.44	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	55040	0.2792	232.6476	41683.4783	3257.07
GALACTOSAMINE	6000	0.0347	28.9351	5184.2964	405.09
AMMONIA	201800	0.7785	648.7237	11028.3036	9082.13

TOTAL NITROGEN - MICROGRAMS 102639.73

RUN NUMBER 1005A/1002B
SAMPLE AKERA SOLUTA
LOCALITY ZANZIBAR, AFRICA
TYPE MANTLE NO. 444
FACTOR 1333.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	0	0.	0.	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	1200	0.0607	80.8491	41.84	10601.7461	4.61	1131.89	3.59
ASPARTIC ACID	40131	0.1660	221.2350	114.50	29446.3784	12.82	3097.29	9.82
METHIONINE SULFONE	1000	0.0044	5.8917	0.	0.	0.	0.	0.
THREONINE	12740	0.0524	69.8434	36.15	8319.7444	3.62	977.81	3.10
SERINE	21810	0.0887	118.1818	61.17	12419.7284	5.41	1654.55	5.25
GLUTAMIC ACID	46960	0.1945	259.2036	134.15	38136.6320	16.60	3628.85	11.50
PROLINE	4416	0.0825	109.9258	56.89	12655.7604	5.51	1538.96	4.88
GLYCINE	74770	0.3051	406.6439	210.46	30526.7545	13.29	5693.01	18.05
ALANINE	27290	0.1118	149.0273	77.13	13276.8443	5.78	2086.38	6.61
CYSTINE (HALF)	500	0.0040	5.3902	2.79	652.8628	0.28	75.46	0.24
VALINE	15660	0.0672	89.5475	46.35	10490.4896	4.57	1253.66	3.97
METHIONINE	3507	0.0144	19.2261	12.46	3592.8398	1.56	337.08	1.07
ISOLEUCINE	12920	0.0515	68.6150	35.51	9000.9131	3.92	960.61	3.05
LEUCINE	24090	0.0961	128.0382	66.27	16796.0455	7.31	1792.53	5.68
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	4915	0.0206	27.4877	14.23	4980.4977	2.17	384.83	1.22
PHENYLALANINE	6795	0.0287	38.2643	19.80	6320.8762	2.75	535.70	1.70
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	840	0.0040	5.3601	2.77	869.3508	0.38	150.08	0.48
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5705	0.0271	36.0757	18.67	5273.9117	2.30	1010.12	3.20
HISTIDINE	500	0.0027	3.5689	1.85	553.7571	0.24	149.90	0.48
ARGININE	11620	0.0681	90.7940	46.99	15817.2264	6.89	5084.47	16.12
TOTALS		1.4502	1933.1694	1000.00	229732.3572	100.00	31543.19	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	700	0.0036	4.7329	848.0017	66.26
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	72810	0.2165	288.5987	4906.1772	4040.38

TOTAL NITROGEN - MICROGRAMS 35649.83

RUN NUMBER 1314A/1309B
SAMPLE APLYSIA WILLCOXI
LOCALITY CLEARWATER, FLORIDA
TYPE SHELL
FACTOR 10.200

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1212	0.0051	0.0517	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	75950	0.2604	2.6558	128.27	353.4838	13.74	37.18	10.18
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	31900	0.1138	1.1612	56.09	138.3271	5.38	16.26	4.45
SERINE	44560	0.1834	1.8708	90.36	196.6029	7.64	26.19	7.17
GLUTAMIC ACID	69210	0.2561	2.6122	126.16	384.3302	14.93	36.57	10.02
PROLINE	5561	0.0990	1.0102	48.79	116.3032	4.52	14.14	3.87
GLYCINE	59240	0.2172	2.2154	107.00	166.3094	6.46	31.02	8.50
ALANINE	45560	0.1656	1.6886	81.56	150.4404	5.85	23.64	6.48
CYSTINE (HALF)	0	0.	0.	1.79	4.4841	0.17	0.52	0.14
VALINE	44060	0.1538	1.5686	75.76	183.7648	7.14	21.96	6.02
METHIONINE	8483	0.0307	0.3132	15.13	46.7385	1.82	4.39	1.20
ISOLEUCINE	26720	0.0938	0.9571	46.23	125.5569	4.88	13.40	3.67
LEUCINE	48350	0.1725	1.7594	84.98	230.8029	8.97	24.63	6.75
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	5400	0.0180	0.1831	8.85	33.1835	1.29	2.56	0.70
PHENYLALANINE	12430	0.0445	0.4536	21.91	74.9330	2.91	6.35	1.74
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	9899	0.0592	0.6042	29.18	88.3350	3.43	16.92	4.63
HISTIDINE	951	0.0073	0.0744	3.60	11.5509	0.45	3.13	0.86
ARGININE	19082	0.1510	1.5398	74.37	268.2564	10.42	86.23	23.62
TOTALS		2.0313	20.7196	1000.00	2573.4030	100.00	365.09	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	13060	0.0897	0.9152		163.9821	12.81
GALACTOSAMINE	360	0.0027	0.0277		4.9542	0.39
AMMONIA	100500	0.6065	6.1865		105.1702	86.61

TOTAL NITROGEN - MICROGRAMS 464.90

RUN NUMBER 1403A/1437B
SAMPLE APLYSIA WILLCOXI
LOCALITY CLEARWATER, FLORIDA
TYPE PERIOSTRACUM
FACTOR 714.260

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4145	0.0173	12.3801	0.	0.	0.	0.	0.
TAURINE	955	0.0037	2.6342	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	328700	1.1266	804.6812	162.83	107129.6826	17.68	11268.34	14.95
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	101200	0.3612	257.9769	52.19	30730.2119	5.07	3611.68	4.79
SERINE	201700	0.8302	593.0038	119.96	62318.7703	10.29	8302.05	11.01
GLUTAMIC ACID	263300	0.9743	695.9109	140.78	102389.3721	16.90	9742.75	12.93
PROLINE	14400	0.2565	183.1813	37.06	21089.6671	3.48	2564.54	3.40
GLYCINE	172700	0.6332	452.2682	91.49	33951.7748	5.60	6331.76	8.40
ALANINE	169200	0.6148	439.1576	88.84	39124.5519	6.46	6148.21	8.16
CYSTINE (HALF)	0	0.	0.	2.31	1382.7629	0.23	159.83	0.21
VALINE	139900	0.4883	348.7880	70.56	40860.5182	6.74	4883.03	6.48
METHIONINE	8735	0.0316	22.5855	4.57	3370.2037	0.56	316.20	0.42
ISOLEUCINE	93560	0.3266	234.6902	47.48	30786.6614	5.08	3285.66	4.36
LEUCINE	179800	0.6415	458.1789	92.69	60103.9071	9.92	6414.50	8.51
DOPA	2100	0.0075	5.3667	1.09	1058.2563	0.17	75.13	0.10
TYROSINE	24340	0.0809	57.8074	11.69	10474.1226	1.73	809.30	1.07
PHENYLALANINE	59160	0.2117	151.1871	30.59	24974.6031	4.12	2116.62	2.81
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	27490	0.1645	117.5078	23.77	17178.4685	2.84	3290.22	4.37
HISTIDINE	828	0.0064	4.5389	0.92	704.2619	0.12	190.64	0.25
ARGININE	18530	0.1466	104.7121	21.18	18241.8934	3.01	5863.88	7.78
TOTALS		6.9255	4946.7569	1000.00	605869.6846	100.00	75374.33	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	146360	1.0056	718.2845	28695.0303	10055.98
GALACTOSAMINE	7855	0.0591	42.2490	7569.7563	591.49
AMMONIA	206300	1.2462	890.1558	15132.6490	12462.18

TOTAL NITROGEN - MICROGRAMS 98483.99

RUN NUMBER 1206A/1205B
SAMPLE ARCHITECTONICA NOBILIS
LOCALITY MIDDLE ATLANTIC COAST
TYPE SHELL
FACTOR 1.111

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1020	-0.0049	0.0055	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	20870	0.0894	0.0993	132.22	13.2197	14.77	1.39	11.85
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	8318	0.0386	0.0428	57.04	5.1035	5.70	0.60	5.11
SERINE	12950	0.0593	0.0658	87.64	6.9182	7.73	0.92	7.86
GLUTAMIC ACID	16720	0.0772	0.0857	114.12	12.6123	14.09	1.20	10.23
PROLINE	2300	0.0605	0.0672	89.50	7.7398	8.65	0.94	8.02
GLYCINE	23640	0.1078	0.1197	159.40	8.9886	10.04	1.68	14.29
ALANINE	13170	0.0550	0.0611	81.31	5.4417	6.08	0.86	7.29
CYSTINE [HALF]	916	0.0069	0.0077	15.49	1.4097	1.58	0.16	1.39
VALINE	6654	0.0274	0.0304	40.46	3.5603	3.98	0.43	3.63
METHIONINE	2934	0.0126	0.0140	18.67	2.0925	2.34	0.20	1.67
ISOLEUCINE	5496	0.0241	0.0268	35.70	3.5178	3.93	0.38	3.20
LEUCINE	11440	0.0512	0.0568	75.67	7.4565	8.33	0.80	6.78
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	2185	0.0095	0.0105	14.03	1.9090	2.13	0.15	1.26
PHENYLALANINE	3060	0.0130	0.0145	19.24	2.3872	2.67	0.20	1.72
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	372	0.0018	0.0020	2.66	0.3240	0.36	0.06	0.48
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	3894	0.0175	0.0194	25.87	2.8412	3.17	0.54	4.64
HISTIDINE	665	0.0040	0.0044	5.86	0.6830	0.76	0.18	1.58
ARGININE	2633	0.0170	0.0189	25.12	3.2878	3.67	1.06	9.01
TOTALS		0.6775	0.7527	1000.00	89.4928	100.00	11.73	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	2479	0.0134	0.0149		2.6681		0.21	
GALACTOSAMINE	1200	0.0067	0.0074		1.3245		0.10	
AMMONIA	214900	0.5866	0.6517		11.0791		9.12	

TOTAL NITROGEN - MICROGRAMS 21.17

RUN NUMBER 1207A/1215B
SAMPLE ASTRAEA CAELATA
LOCALITY PELICAN SHOALS, FLORIDA
TYPE SHELL
FACTOR 5.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	13880	0.0671	0.3355	0.	0.	0.	0.	0.
TAURINE	900	0.0041	0.0205	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	800	0.0039	0.0196	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	264200	1.1317	5.6586	146.82	753.1596	17.06	79.22	12.06
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	33600	0.1558	0.7789	20.21	92.7777	2.10	10.90	1.66
SERINE	194800	0.8913	4.4566	115.64	468.3489	10.61	62.39	9.49
GLUTAMIC ACID	106600	0.4919	2.4596	63.82	361.8841	8.20	34.43	5.24
PROLINE	10840	0.2852	1.4259	37.00	164.1685	3.72	19.96	3.04
GLYCINE	285500	1.3016	6.5079	168.86	488.5454	11.07	91.11	13.86
ALANINE	397200	1.6561	8.2905	215.12	738.6046	16.73	116.07	17.66
CYSTINE (HALF)	2592	0.0197	0.0983	9.30	43.4064	0.98	5.02	0.76
VALINE	65240	0.2682	1.3410	34.80	157.0990	3.56	18.77	2.86
METHIONINE	10310	0.0444	0.2218	6.21	35.7354	0.81	3.35	0.51
ISOLEUCINE	26320	0.1156	0.5780	15.00	75.8159	1.72	8.09	1.23
LEUCINE	54850	0.2453	1.2265	31.82	160.8950	3.65	17.17	2.61
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	20930	0.0908	0.4542	11.79	82.2983	1.86	6.36	0.97
PHENYLALANINE	62280	0.2647	1.3237	34.35	218.6617	4.95	18.53	2.82
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	800	0.0039	0.0193	0.50	3.1356	0.07	0.54	0.08
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	41170	0.1850	0.9248	23.99	135.1896	3.06	25.89	3.94
HISTIDINE	1165	0.0069	0.0347	0.90	5.3846	0.12	1.46	0.22
ARGININE	76320	0.4924	2.4619	63.88	428.8938	9.72	137.87	20.98
TOTALS		7.7276	38.6378	1000.00	4414.0043	100.00	657.15	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	23250	0.1257	0.6285		112.6170		8.80	
GALACTOSAMINE	1183	0.0066	0.0328		5.8763		0.46	
AMMONIA	190600	0.5203	2.6013		44.2227		36.42	

TOTAL NITROGEN - MICROGRAMS 702.83

RUN NUMBER 1321A/1316B
SAMPLE BULLA STRIATA
LOCALITY VIEJA, DOM. REPUBLIC
TYPE SHELL
FACTOR 2.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1401	0.0059	0.0146	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	212	0.0009	0.0022	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	9821	0.0337	0.0842	171.01	11.2031	18.70	1.18	14.83
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	2611	0.0093	0.0233	47.33	2.7750	4.63	0.33	4.10
SERINE	5860	0.0241	0.0603	122.51	6.3370	10.58	0.84	10.63
GLUTAMIC ACID	5612	0.0208	0.0519	105.48	7.6382	12.75	0.73	9.15
PROLINE	672	0.0120	0.0299	60.79	3.4447	5.75	0.42	5.27
GLYCINE	5486	0.0201	0.0503	102.16	3.7748	6.30	0.70	8.86
ALANINE	3992	0.0145	0.0363	73.68	3.2308	5.39	0.51	6.39
CYSTINE (HALF)	0	0.	0.	21.31	1.2704	2.12	0.15	1.85
VALINE	3818	0.0133	0.0333	67.69	3.9030	6.52	0.47	5.87
METHIONINE	406	0.0015	0.0037	11.58	0.8503	1.42	0.08	1.00
ISOLEUCINE	2148	0.0075	0.0189	38.32	2.4739	4.13	0.26	3.32
LEUCINE	4276	0.0153	0.0381	77.48	5.0029	8.35	0.53	6.72
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	718	0.0024	0.0060	12.13	1.0814	1.81	0.08	1.05
PHENYLALANINE	384	0.0014	0.0034	6.98	0.5674	0.95	0.05	0.61
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	1406	0.0084	0.0210	42.74	3.0752	5.13	0.59	7.41
HISTIDINE	159	0.0012	0.0031	6.20	0.4733	0.79	0.13	1.61
ARGININE	812	0.0064	0.0161	32.63	2.7978	4.67	0.90	11.32
TOTALS		0.1986	0.4966	1000.00	59.8992	100.00	7.95	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	265	0.0018	0.0046	0.8155	0.06
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	44939	0.2712	0.6780	11.5263	9.49

TOTAL NITROGEN - MICROGRAMS 17.50

RUN NUMBER 1164A/1165B
SAMPLE COLUS TROPHIUS
LOCALITY SAN FRANCISCO, CALIFORNIA
TYPE SHELL
FACTOR 6.250

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2066	0.0100	0.0624	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	9663	0.0414	0.2587	152.23	34.4331	17.57	3.62	14.42
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	3614	0.0168	0.1047	61.62	12.4739	6.37	1.47	5.84
SERINE	5248	0.0240	0.1501	88.31	15.7719	8.05	2.10	8.36
GLUTAMIC ACID	7040	0.0325	0.2030	119.48	29.8741	15.24	2.84	11.32
PROLINE	1000	0.0263	0.1644	96.76	18.9309	9.66	2.30	9.16
GLYCINE	12010	0.0548	0.3422	201.37	25.6893	13.11	4.79	19.07
ALANINE	3943	0.0165	0.1029	60.54	9.1652	4.68	1.44	5.73
CYSTINE (HALF)	0	0.	0.	26.31	5.4150	2.76	0.63	2.49
VALINE	3583	0.0147	0.0921	54.17	10.7849	5.50	1.29	5.13
METHIONINE	161	0.0007	0.0043	2.55	0.6460	0.33	0.06	0.24
ISOLEUCINE	2328	0.0102	0.0639	37.60	8.3824	4.28	0.89	3.56
LEUCINE	3411	0.0153	0.0953	56.10	12.5071	6.38	1.33	5.31
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	90	0.0004	0.0024	1.44	0.4424	0.23	0.03	0.14
PHENYLALANINE	900	0.0038	0.0239	14.07	3.9498	2.02	0.33	1.33
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	800	0.0036	0.0225	13.22	3.2837	1.68	0.63	2.50
HISTIDINE	0	0.	0.	0.	0.	0.	0.	0.
ARGININE	600	0.0039	0.0242	14.24	4.2148	2.15	1.35	5.39
TOTALS		0.2747	1.7171	1000.00	195.9643	100.00	25.12	100.00

UREA	0	0.	0.		0.		0.
GLUCOSAMINE	0	0.	0.		0.		0.
GALACTOSAMINE	0	0.	0.		0.		0.
AMMONIA	63840	0.1743	1.0891		18.5151		15.25

TOTAL NITROGEN - MICROGRAMS 40.37

RUN NUMBER 1123A/1161B
SAMPLE CAVOLINA TRIDENTATA
LOCALITY ATLANTIC TROPICS
TYPE SHELL
FACTOR 8.928

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	933	0.0045	0.0403	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	2503	0.0123	0.1096	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	12770	0.0547	0.4884	119.38	65.0024	13.47	6.84	11.36
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	4965	0.0230	0.2055	50.23	24.4798	5.07	2.88	4.78
SERINE	8561	0.0392	0.3497	85.49	36.7527	7.62	4.90	8.13
GLUTAMIC ACID	9600	0.0443	0.3955	96.68	58.1926	12.06	5.54	9.20
PROLINE	2900	0.0763	0.6812	166.50	78.4229	16.25	9.54	15.84
GLYCINE	14510	0.0661	0.5906	144.36	44.3354	9.19	8.27	13.73
ALANINE	8313	0.0347	0.3098	75.73	27.6023	5.72	4.34	7.20
CYSTINE (HALF)	342	0.0026	0.0231	12.71	6.2970	1.31	0.73	1.21
VALINE	6582	0.0271	0.2416	59.05	28.3010	5.87	3.38	5.62
METHIONINE	350	0.0015	0.0134	27.48	16.7726	3.48	1.57	2.61
ISOLEUCINE	3489	0.0153	0.1368	33.44	17.9457	3.72	1.92	3.18
LEUCINE	5418	0.0242	0.2163	52.88	28.3785	5.88	3.03	5.03
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1800	0.0078	0.0697	17.05	12.6380	2.62	0.98	1.62
PHENYLALANINE	2200	0.0094	0.0835	20.41	13.7921	2.86	1.17	1.94
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	2800	0.0126	0.1123	27.45	16.4174	3.40	3.14	5.22
HISTIDINE	750	0.0045	0.0399	9.75	6.1898	1.28	1.68	2.78
ARGININE	100	0.0006	0.0058	1.41	1.0034	0.21	0.32	0.54
TOTALS		0.4607	4.1130	1000.00	482.5235	100.00	60.21	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	3931	0.0213	0.1898		33.9992		2.66	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	19900	0.0543	0.4850		8.2444		6.79	

TOTAL NITROGEN - MICROGRAMS 69.65

RUN NUMBER 1007A/1004B
SAMPLE COLUS TROPHIUS
LOCALITY SAN FRANCISCO, CALIFORNIA
TYPE MANTLE NO. 145
FACTOR 1250.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	0	0.	0.	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	200	0.0010	1.2066	0.	0.	0.	0.	0.
OH - PROLINE	2000	0.1011	126.3584	22.33	16569.3707	2.41	1769.02	1.80
ASPARTIC ACID	111400	0.4607	575.8892	101.79	76650.8475	11.15	8062.45	8.22
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	59180	0.2434	304.2361	53.77	36240.6003	5.27	4259.30	4.34
SERINE	77580	0.3154	394.2073	69.68	41427.2468	6.03	5518.90	5.63
GLUTAMIC ACID	130500	0.5404	675.4658	119.39	99381.2886	14.45	9456.52	9.64
PROLINE	16680	0.3115	389.3557	68.82	44826.5265	6.52	5450.98	5.56
GLYCINE	173100	0.7062	882.8029	156.04	66272.0162	9.64	12359.24	12.60
ALANINE	92510	0.3790	473.7300	83.73	42204.6081	6.14	6632.22	6.76
CYSTINE (HALF)	3330	0.0270	33.7242	5.96	4084.6777	0.59	472.14	0.48
VALINE	61360	0.2474	309.2742	54.66	36231.4717	5.27	4329.84	4.42
METHIONINE	24720	0.1017	127.0820	22.65	19125.7911	2.78	1794.40	1.83
ISOLEUCINE	41500	0.1653	206.6733	36.53	27111.4043	3.94	2893.43	2.95
LEUCINE	82800	0.3301	412.6794	72.94	54135.2869	7.87	5777.51	5.89
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1700	0.0071	8.9155	1.58	1615.3923	0.23	124.82	0.13
PHENYLALANINE	32130	0.1357	169.6410	29.98	28022.9920	4.08	2374.97	2.42
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	1903	0.0091	11.3870	2.01	1846.8620	0.27	318.84	0.33
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	23110	0.1096	137.0375	24.22	20033.5086	2.91	3837.05	3.91
HISTIDINE	8276	0.0443	55.4083	9.79	8597.1518	1.25	2327.15	2.37
ARGININE	49500	0.2902	362.6905	64.11	63184.3125	9.19	20310.67	20.71
TOTALS		4.5262	5657.7649	1000.00	687561.3506	100.00	98069.45	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	3451	0.0175	21.8805	3920.3377	306.33
GALACTOSAMINE	1441	0.0083	10.4239	1867.6502	145.93
AMMONIA	147300	0.4380	547.5022	9307.5379	7665.03

TOTAL NITROGEN - MICROGRAMS 106186.74

RUN NUMBER 961A/975B
SAMPLE CREPIDULA FORNICATA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3300	0.0136	0.1357	0.	0.	0.	0.	0.
TAURINE	2260	0.0096	0.0960	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	3471	0.0148	0.1480	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	30380	0.1208	1.2082	139.18	160.8104	15.35	16.91	11.83
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	18840	0.0722	0.7216	83.12	85.9525	8.20	10.10	7.06
SERINE	16770	0.0668	0.6681	76.96	70.2135	6.70	9.35	6.54
GLUTAMIC ACID	20670	0.0844	0.8444	97.27	124.2311	11.86	11.82	8.26
PROLINE	1731	0.0309	0.3094	35.64	35.6193	3.40	4.33	3.03
GLYCINE	28670	0.1174	1.1736	135.19	88.0989	8.41	16.43	11.49
ALANINE	16890	0.0715	0.7146	82.32	63.6653	6.08	10.00	6.99
CYSTINE [HALF]	697	0.0056	0.0556	28.30	29.7595	2.84	3.44	2.40
VALINE	15700	0.0624	0.6244	71.92	73.1460	6.98	8.74	6.11
METHIONINE	0	0.	0.	15.40	19.9439	1.90	1.87	1.31
ISOLEUCINE	11330	0.0451	0.4510	51.96	59.1668	5.65	6.31	4.41
LEUCINE	15860	0.0634	0.6336	72.99	83.1208	7.93	8.87	6.20
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	700	0.0030	0.0297	3.42	5.3754	0.51	0.42	0.29
PHENYLALANINE	3675	0.0158	0.1581	18.21	26.1163	2.49	2.21	1.55
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	8316	0.0355	0.3549	40.89	51.8872	4.95	9.94	6.95
HISTIDINE	1000	0.0050	0.0497	5.72	7.7079	0.74	2.09	1.46
ARGININE	6000	0.0360	0.3604	41.52	62.7897	5.99	20.18	14.11
TOTALS		0.8737	8.7369	1000.00	1047.6046	100.00	143.03	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	1982	0.0091	0.0910	16.2972	1.27
GALACTOSAMINE	600	0.0030	0.0298	5.3444	0.42
AMMONIA	94670	0.2985	2.9850	50.7454	41.79

TOTAL NITROGEN - MICROGRAMS 186.51

RUN NUMBER 973A/9648
SAMPLE CREPIDULA PLANA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 8.333

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2437	0.0100	0.0835	0.	0.	0.	0.	0.
TAURINE	300	0.0013	0.0106	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	4364	0.0186	0.1550	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	17730	0.0705	0.5876	136.43	78.2054	15.36	8.23	12.55
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	9138	0.0350	0.2916	67.72	34.7400	6.82	4.08	6.23
SERINE	12310	0.0490	0.4087	94.89	42.9484	8.44	5.72	8.73
GLUTAMIC ACID	13970	0.0571	0.4755	110.42	69.9661	13.74	6.66	10.16
PROLINE	1500	0.0268	0.2234	51.87	25.7206	5.05	3.13	4.77
GLYCINE	20120	0.0824	0.6863	159.35	51.5196	10.12	9.61	14.66
ALANINE	10070	0.0426	0.3550	82.44	31.6304	6.21	4.97	7.58
CYSTINE (HALF)	0	0.	0.	16.27	8.4882	1.67	0.98	1.50
VALINE	8532	0.0339	0.2827	65.65	33.1240	6.51	3.96	6.04
METHIONINE	0	0.	0.	32.51	20.8950	4.10	1.96	2.99
ISOLEUCINE	5626	0.0224	0.1867	43.35	24.4908	4.81	2.61	3.99
LEUCINE	9684	0.0387	0.3224	74.86	42.2925	8.31	4.51	6.89
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	500	0.0021	0.0177	4.10	3.1995	0.63	0.25	0.38
PHENYLALANINE	2000	0.0086	0.0717	16.65	11.8437	2.33	1.00	1.53
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	3500	0.0207	0.0889	20.65	12.9983	2.55	2.49	3.80
HISTIDINE	200	0.0010	0.0083	1.92	1.2846	0.25	0.35	0.53
ARGININE	1800	0.0108	0.0901	20.92	15.6968	3.08	5.05	7.70
TOTALS		0.5215	4.3458	1000.00	509.0438	100.00	65.56	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	0	0.	0.		0.		0.	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	63980	0.2017	1.6811		28.5779		23.53	

TOTAL NITROGEN - MICROGRAMS 89.09

RUN NUMBER 12088/12728
SAMPLE CYPRAEA ZEBRA
LOCALITY MIAMI, FLORIDA
TYPE SHELL
FACTOR 1.250

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4672	0.0195	0.0244	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	70350	0.2412	0.3015	113.00	40.1251	12.29	4.22	9.94
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	55960	0.1997	0.2496	93.57	29.7375	9.11	3.50	8.23
SERINE	37580	0.1547	0.1934	72.47	20.3194	6.22	2.71	6.37
GLUTAMIC ACID	74360	0.2752	0.3439	128.92	50.6040	15.50	4.82	11.34
PROLINE	8372	0.1491	0.1864	69.86	21.4574	6.57	2.61	6.14
GLYCINE	58610	0.2149	0.2686	100.68	20.1643	6.18	3.76	8.85
ALANINE	58540	0.2127	0.2659	99.66	23.6888	7.25	3.72	8.76
CYSTINE (HALF)	2261	0.0151	0.0189	13.62	4.4019	1.35	0.51	1.20
VALINE	28380	0.0991	0.1238	46.41	14.5057	4.44	1.73	4.08
METHIONINE	6353	0.0230	0.0287	10.77	4.2896	1.31	0.40	0.95
ISOLEUCINE	17640	0.0619	0.0774	29.02	10.1581	3.11	1.08	2.55
LEUCINE	73820	0.2634	0.3292	123.39	43.1846	13.23	4.61	10.85
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	5643	0.0188	0.0235	8.79	4.2496	1.30	0.33	0.77
PHENYLALANINE	19570	0.0700	0.0875	32.81	14.4578	4.43	1.23	2.88
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5256	0.0315	0.0393	14.74	5.7479	1.76	1.10	2.59
HISTIDINE	1214	0.0093	0.0116	4.37	1.8070	0.55	0.49	1.15
ARGININE	10230	0.0809	0.1012	37.92	17.6243	5.40	5.67	13.34
TOTALS		2.1399	2.6749	1000.00	326.5230	100.00	42.48	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	2967	0.0204	0.0255		4.5654		0.36	
GALACTOSAMINE	15970	0.1203	0.1503		26.9328		2.10	
AMMONIA	65850	0.5181	0.6476		11.0097		9.07	

TOTAL NITROGEN - MICROGRAMS 54.00

RUN NUMBER 1355A/1427B
SAMPLE DOLABELLA SCAPULA
LOCALITY CALAPAN, MINDORO, PHILIPPINE ISL.
TYPE SHELL
FACTOR 2.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2303	0.0096	0.0241	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	69920	0.2397	0.5992	273.18	79.7596	29.22	8.39	21.90
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	10220	0.0365	0.0912	41.57	10.8619	3.98	1.28	3.33
SERINE	16130	0.0664	0.1660	75.67	17.4429	6.39	2.32	6.07
GLUTAMIC ACID	15970	0.0591	0.1477	67.35	21.7360	7.96	2.07	5.40
PROLINE	3312	0.0590	0.1475	67.22	16.9773	6.22	2.06	5.39
GLYCINE	33700	0.1236	0.3089	140.82	23.1884	8.50	4.32	11.29
ALANINE	16770	0.0609	0.1523	69.45	13.5723	4.97	2.13	5.57
CYSTINE (HALF)	0	0.	0.	7.86	2.0884	0.77	0.24	0.63
VALINE	5919	0.0207	0.0516	23.55	6.0507	2.22	0.72	1.89
METHIONINE	3809	0.0138	0.0345	15.71	5.1437	1.88	0.48	1.26
ISOLEUCINE	4670	0.0164	0.0410	18.69	5.3785	1.97	0.57	1.50
LEUCINE	7484	0.0267	0.0667	30.43	8.7563	3.21	0.93	2.44
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	8343	0.0277	0.0694	31.62	12.5658	4.60	0.97	2.53
PHENYLALANINE	7260	0.0260	0.0649	29.60	10.7270	3.93	0.91	2.37
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5224	0.0313	0.0782	35.63	11.4257	4.19	2.19	5.71
HISTIDINE	375	0.0029	0.0072	3.28	1.1164	0.41	0.30	0.79
ARGININE	7583	0.0600	0.1500	68.37	26.1281	9.57	8.40	21.93
TOTALS		0.8802	2.2004	1000.00	272.9191	100.00	38.30	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	466	0.0032	0.0080		1.4341		0.11	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	40780	0.2461	0.6153		10.4596		8.61	

TOTAL NITROGEN - MICROGRAMS 47.03

RUN NUMBER 1297A/1295B
SAMPLE DOLABELLA SCAPULA
LOCALITY CALAPAN, MINDORO, PHILIPPINE ISL.
TYPE PERIOSTRACUM
FACTOR 909.100

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1778	0.0074	6.7589	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	257200	0.8817	801.5787	134.96	106690.1307	14.27	11222.10	11.17
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	99910	0.3566	324.1548	54.58	38613.3221	5.16	4538.17	4.52
SERINE	167200	0.6882	625.6494	105.34	65749.4944	8.79	8759.09	8.72
GLUTAMIC ACID	202600	0.7497	681.5307	114.74	100273.6051	13.41	9541.43	9.50
PROLINE	11500	0.2048	186.1915	31.35	21436.2217	2.87	2606.68	2.59
GLYCINE	130800	0.4796	435.9680	73.40	32728.1199	4.38	6103.55	6.07
ALANINE	141600	0.5145	467.7637	78.75	41673.0646	5.57	6548.69	6.52
CYSTINE (HALF)	0	0.	0.	0.81	586.2929	0.08	67.77	0.07
VALINE	126500	0.4415	401.4002	67.58	47024.0303	6.29	5619.60	5.59
METHIONINE	8705	0.0315	28.6469	4.82	4274.6955	0.57	401.06	0.40
ISOLEUCINE	126000	0.4425	402.2708	67.73	52769.8786	7.06	5631.79	5.61
LEUCINE	190400	0.6793	617.5264	103.97	81007.1082	10.84	8645.37	8.60
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	14760	0.0491	44.6162	7.51	8084.0055	1.08	624.63	0.62
PHENYLALANINE	87340	0.3125	284.0816	47.83	46927.4315	6.28	3977.14	3.96
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	37910	0.2269	206.2476	34.72	30151.3427	4.03	5774.93	5.75
HISTIDINE	35930	0.2757	250.6828	42.21	38895.9361	5.20	10528.68	10.48
ARGININE	24530	0.1941	176.4258	29.70	30735.1411	4.11	9879.85	9.83
TOTALS		6.5356	5941.4937	1000.00	747619.8154	100.00	100470.53	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	32820	0.2255	204.9925		36728.5106		2869.90	
GALACTOSAMINE	3336	0.0251	22.8370		4091.7107		319.72	
AMMONIA	103700	0.6258	568.9419		9672.0120		7965.19	

TOTAL NITROGEN - MICROGRAMS 111625.33

RUN NUMBER 1341A/1338B
SAMPLE EPITONIUM ANGULATUM
LOCALITY FREEPORT, TEXAS
TYPE SHELL
FACTOR 2.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3767	0.0158	0.0394	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1925	0.0081	0.0203	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	25030	0.0858	0.2145	85.45	28.5524	9.25	3.00	6.79
METHIONINE SULFONE	1400	0.0058	0.0144	0.	0.	0.	0.	0.
THREONINE	17420	0.0622	0.1554	61.91	18.5142	6.00	2.18	4.92
SERINE	27340	0.1125	0.2813	112.06	29.5653	9.58	3.94	8.90
GLUTAMIC ACID	29500	0.1092	0.2729	108.70	40.1511	13.01	3.82	8.63
PROLINE	3390	0.0604	0.1509	60.12	17.3771	5.63	2.11	4.77
GLYCINE	26930	0.0987	0.2468	98.32	18.5301	6.01	3.46	7.81
ALANINE	31490	0.1144	0.2861	113.94	25.4855	8.26	4.00	9.05
CYSTINE (HALF)	0	0.	0.	11.23	3.4159	1.11	0.39	0.89
VALINE	11950	0.0417	0.1043	41.53	12.2159	3.96	1.46	3.30
METHIONINE	3128	0.0113	0.0283	23.32	8.7370	2.83	0.82	1.85
ISOLEUCINE	9103	0.0320	0.0799	31.83	10.4840	3.40	1.12	2.53
LEUCINE	22330	0.0797	0.1992	79.33	26.1260	8.47	2.79	6.30
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	3793	0.0126	0.0315	12.56	5.7128	1.85	0.44	1.00
PHENYLALANINE	6229	0.0223	0.0557	22.19	9.2037	2.98	0.78	1.76
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	246	0.0016	0.0041	1.63	0.6627	0.21	0.11	0.26
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	10350	0.0619	0.1548	61.68	22.6371	7.34	4.34	9.80
HISTIDINE	3474	0.0267	0.0667	26.55	10.3420	3.35	2.80	6.32
ARGININE	6047	0.0478	0.1196	47.64	20.8356	6.75	6.70	15.13
TOTALS		1.0105	2.5262	1000.00	308.5486	100.00	44.26	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	5141	0.0353	0.0883	15.8212	1.24
GALACTOSAMINE	819	0.0062	0.0154	2.7624	0.22
AMMONIA	73390	0.4429	1.1073	18.8236	15.50

TOTAL NITROGEN - MICROGRAMS 61.22

RUN NUMBER 1267A/1264B
SAMPLE FISSURELLA BARBADENSIS
LOCALITY PUERTO RICO
TYPE SHELL
FACTOR 3.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1778	0.0074	0.0248	0.	0.	0.	0.	0.
TAURINE	4532	0.0175	0.0583	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	121800	0.4176	1.3904	119.07	185.0688	13.20	19.47	11.17
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	57650	0.2057	0.6851	58.67	81.6131	5.82	9.59	5.50
SERINE	66530	0.2738	0.9119	78.09	95.8310	6.84	12.77	7.32
GLUTAMIC ACID	97000	0.3569	1.1952	102.35	175.8537	12.55	16.73	9.60
PROLINE	91950	0.3909	1.3018	111.47	149.8710	10.69	18.22	10.45
GLYCINE	116300	0.4264	1.4199	121.59	106.5922	7.61	19.88	11.40
ALANINE	100400	0.3648	1.2149	104.03	108.2327	7.72	17.01	9.76
CYSTINE (HALF)	0	0.	0.	6.35	8.9808	0.64	1.04	0.60
VALINE	60440	0.2110	0.7025	60.16	82.2974	5.87	9.83	5.64
METHIONINE	20290	0.0734	0.2446	20.94	36.4965	2.60	3.42	1.96
ISOLEUCINE	38990	0.1369	0.4560	39.05	59.8138	4.27	6.38	3.66
LEUCINE	79490	0.2836	0.9444	80.87	123.8800	8.84	13.22	7.58
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	20420	0.0679	0.2261	19.36	40.9665	2.92	3.17	1.82
PHENYLALANINE	39880	0.1427	0.4751	40.69	78.4876	5.60	6.65	3.82
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	9096	0.0544	0.1813	15.52	26.4994	1.89	5.08	2.91
HISTIDINE	6652	0.0511	0.1700	14.56	26.3774	1.88	7.14	4.10
ARGININE	3200	0.0253	0.0843	7.22	14.6866	1.05	4.72	2.71
TOTALS		3.5095	11.6865	1000.00	1401.5486	100.00	174.32	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	800	0.0055	0.0183	3.2793	0.26
GALACTOSAMINE	400	0.0030	0.0100	1.7971	0.14
AMMONIA	71400	0.4309	1.4349	24.3932	20.09

TOTAL NITROGEN - MICROGRAMS 194.81

RUN NUMBER 1319A/1317B
SAMPLE FISSURELLA BARBADENSIS
LOCALITY CABLE BEACH, CUBA
TYPE SHELL
FACTOR 2.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	9630	0.0403	0.1007	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	800	0.0034	0.0085	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	62280	0.2135	0.5338	131.75	71.0445	14.13	7.47	11.04
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	28590	0.1020	0.2551	62.96	30.3858	6.04	3.57	5.28
SERINE	33940	0.1397	0.3492	86.21	36.7026	7.30	4.89	7.22
GLUTAMIC ACID	43350	0.1604	0.4010	98.99	59.0017	11.74	5.61	8.29
PROLINE	8311	0.1480	0.3700	91.34	42.6022	8.47	5.18	7.65
GLYCINE	42260	0.1549	0.3874	95.61	29.0784	5.78	5.42	8.01
ALANINE	38190	0.1388	0.3469	85.63	30.9079	6.15	4.86	7.18
CYSTINE (HALF)	0	0.	0.	17.80	8.7325	1.74	1.01	1.49
VALINE	25210	0.0880	0.2200	54.30	25.7710	5.13	3.08	4.55
METHIONINE	9517	0.0345	0.0861	23.14	13.9915	2.78	1.31	1.94
ISOLEUCINE	12140	0.0426	0.1066	26.31	13.9818	2.78	1.49	2.20
LEUCINE	32630	0.1164	0.2910	71.84	38.1770	7.59	4.07	6.02
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	10820	0.0360	0.0899	22.20	16.2966	3.24	1.26	1.86
PHENYLALANINE	16480	0.0590	0.1474	36.39	24.3500	4.84	2.06	3.05
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	10040	0.0601	0.1502	37.08	21.9591	4.37	4.21	6.21
HISTIDINE	4024	0.0309	0.0772	19.06	11.9794	2.38	3.24	4.79
ARGININE	8070	0.0638	0.1596	39.40	27.8061	5.53	8.94	13.21
TOTALS		1.0323	4.0807	1000.00	502.7680	100.00	67.69	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	1423	0.0098	0.0244		4.3792		0.34	
GALACTOSAMINE	252	0.0019	0.0047		0.8500		0.07	
AMMONIA	83750	0.5054	1.2636		21.4808		17.69	

TOTAL NITROGEN - MICROGRAMS 85.78

RUN NUMBER 941A/939B
SAMPLE GASTROPODE, ORDER INDEFINABLE
LOCALITY BAJA CALIFORNIA, MEXICO
TYPE SHELL
FACTOR 769.230

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	22470	0.0924	71.0715	0.	0.	0.	0.	0.
TAURINE	10850	0.0451	35.4476	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	3152	0.0141	10.8217	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	129400	0.5487	422.0410	101.38	56173.6525	10.83	5908.57	7.45
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	70550	0.2919	224.5311	53.94	26746.1493	5.16	3143.44	3.96
SERINE	128200	0.5237	402.8402	96.77	42334.4786	8.16	5639.76	7.11
GLUTAMIC ACID	82000	0.3395	261.1338	62.73	38420.6100	7.41	3655.87	4.61
PROLINE	29170	0.5118	393.6568	94.56	45321.7103	8.74	5511.20	6.95
GLYCINE	102600	0.7632	587.0905	141.03	44072.8823	8.50	8219.27	10.36
ALANINE	57950	0.2467	189.7696	45.59	16906.5734	3.26	2656.77	3.35
CYSTINE (HALF)	51700	0.4064	312.6509	95.57	48189.5264	9.29	5570.12	7.02
VALINE	76490	0.2933	225.6074	54.19	26429.9036	5.10	3158.50	3.98
METHIONINE	9729	0.0392	30.1707	9.60	5960.5110	1.15	559.22	0.71
ISOLEUCINE	53160	0.1306	100.4832	24.14	13181.3895	2.54	1406.77	1.77
LEUCINE	28270	0.0803	61.8006	14.85	8107.0031	1.56	865.21	1.09
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	51940	0.2751	211.6194	50.83	38343.3175	7.39	2962.67	3.74
PHENYLALANINE	16250	0.0744	57.1951	13.74	9448.0573	1.82	800.73	1.01
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	5000	0.0245	18.8214	4.52	3052.6404	0.59	527.00	0.66
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	28550	0.1321	101.6329	24.41	14857.7139	2.87	2845.72	3.59
HISTIDINE	4932	0.0254	19.5559	4.70	3034.2916	0.59	821.35	1.04
ARGININE	108500	0.5815	447.3095	107.45	77925.7821	15.03	25049.33	31.59
TOTALS		5.4408	4185.2508	1000.00	518506.1904	100.00	79303.50	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	46210	0.2128	163.6938	29329.0260	2291.71
GALACTOSAMINE	15000	0.	0.	0.	0.
AMMONIA	299200	0.9249	711.4486	12094.6259	9961.28

TOTAL NITROGEN - MICROGRAMS 91553.50

RUN NUMBER 1417A/1428B
SAMPLE HELISOMA TRIVALVIS
LOCALITY LA PORTE, INDIANA
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1146	0.0048	0.0479	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	186400	0.6390	6.3901	143.26	850.5259	17.47	89.46	13.36
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	28630	0.1022	1.0218	22.91	121.7133	2.50	14.30	2.14
SERINE	80400	0.3309	3.3093	74.19	347.7767	7.15	46.33	6.92
GLUTAMIC ACID	82710	0.3060	3.0605	68.61	450.2913	9.25	42.85	6.40
PROLINE	9659	0.1720	1.7202	38.57	198.0482	4.07	24.08	3.60
GLYCINE	462100	1.6942	16.9423	379.83	1271.8551	26.13	237.19	35.42
ALANINE	75500	0.2743	2.7435	61.51	244.4148	5.02	38.41	5.73
CYSTINE (HALF)	1240	0.0083	0.0827	2.62	14.1760	0.29	1.64	0.24
VALINE	49020	0.1711	1.7110	38.36	200.4430	4.12	23.95	3.58
METHIONINE	3683	0.0133	0.1333	2.99	19.8942	0.41	1.87	0.28
ISOLEUCINE	18730	0.0658	0.6578	14.75	86.2863	1.77	9.21	1.37
LEUCINE	62920	0.2245	2.2447	50.32	294.4647	6.05	31.43	4.69
DOPA	1246	0.0045	0.0446	1.00	8.7907	0.18	0.62	0.09
TYROSINE	55860	0.1857	1.8574	41.64	336.5344	6.91	26.00	3.88
PHENYLALANINE	21680	0.0776	0.7757	17.39	128.1331	2.63	10.86	1.62
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	833	0.0055	0.0549	1.23	8.9031	0.18	1.54	0.23
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	18680	0.1118	1.1179	25.06	163.4248	3.36	31.30	4.67
HISTIDINE	622	0.0048	0.0477	1.07	7.4067	0.15	2.00	0.30
ARGININE	8282	0.0655	0.6552	14.69	114.1461	2.35	36.69	5.48
TOTALS		4.4618	44.6185	1000.00	4867.2284	100.00	669.74	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	34110	0.2344	2.3435	419.8893	32.81
GALACTOSAMINE	820	0.0062	0.0617	11.0632	0.86
AMMONIA	151900	0.9167	9.1672	155.8419	128.34

TOTAL NITROGEN - MICROGRAMS 831.76

RUN NUMBER 1339A/1337B
SAMPLE HALIOTIS CRACHFORDI
LOCALITY SAN DIEGO, CALIFORNIA
TYPE SHELL
FACTOR 20.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	632	0.0026	0.0529	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	223500	0.7662	15.3240	163.89	2039.6195	18.44	214.54	12.51
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	28710	0.1025	2.0493	21.92	244.1067	2.21	28.69	1.67
SERINE	125100	0.5149	10.2984	110.14	1082.2605	9.79	144.18	8.41
GLUTAMIC ACID	74580	0.2760	5.5193	59.03	812.0596	7.34	77.27	4.51
PROLINE	10760	0.1918	3.8326	40.99	441.2462	3.99	53.66	3.13
GLYCINE	255900	0.9368	18.7351	200.37	1406.4444	12.72	262.29	15.30
ALANINE	155600	0.6744	13.4884	144.26	1201.6791	10.87	188.84	11.01
CYSTINE (HALF)	0	0.	0.	0.40	4.5848	0.04	0.53	0.03
VALINE	53110	0.1156	2.3113	24.72	270.7739	2.45	32.36	1.89
METHIONINE	5063	0.0212	0.4245	4.54	63.3395	0.57	5.94	0.35
ISOLEUCINE	19520	0.0686	1.3710	14.66	179.8513	1.63	19.19	1.12
LEUCINE	33440	0.1193	2.3860	25.52	312.9974	2.83	33.40	1.95
DOPA	2425	0.0087	0.1735	1.86	34.2172	0.31	2.43	0.14
TYROSINE	45990	0.1529	3.0584	32.71	554.1432	5.01	42.82	2.50
PHENYLALANINE	39180	0.1399	2.7979	29.92	462.1774	4.18	39.17	2.28
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	258	0.0016	0.0329	0.35	5.3440	0.05	0.92	0.05
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	22680	0.1357	2.7145	29.03	396.8389	3.59	76.01	4.43
HISTIDINE	3965	0.0304	0.6086	6.51	94.4297	0.85	25.56	1.49
ARGININE	52700	0.4169	8.3386	89.18	1452.6688	13.14	466.96	27.23
TOTALS		4.6759	93.5172	1000.00	11058.7821	100.00	1714.76	100.00

UREA	0	0.	0.		0.	
GLUCOSAMINE	31085	0.2136	4.2714		765.3039	59.80
GALACTOSAMINE	3795	0.0286	0.5715		102.4021	8.00
AMMONIA	43900	0.5667	11.3337		192.6735	158.67

TOTAL NITROGEN - MICROGRAMS 1941.23

RUN NUMBER 1089A/1004H
SAMPLE HYDATINA PHYSIS
LOCALITY PHILIPPINE ISLANDS
TYPE PERIOSTRACUM
FACTOR 533.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3479	0.0149	12.3790	0.	0.	0.	0.	0.
TAURINE	2746	0.0112	9.3611	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1000	0.0045	3.7461	0.	0.	0.	0.	0.
OH - PROLINE	1200	0.0709	58.8233	11.92	7713.4985	1.24	823.53	1.00
ASPARTIC ACID	197600	0.7829	652.4010	132.16	86834.5706	13.94	9133.61	11.11
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	107100	0.4270	355.8598	72.09	42390.0217	6.81	4982.04	6.06
SERINE	107600	0.4323	360.2503	72.98	37858.7074	6.08	5043.50	6.14
GLUTAMIC ACID	196200	0.8067	673.9462	136.53	99157.7028	15.92	9435.25	11.48
PROLINE	11370	0.2263	188.2365	37.53	21326.2739	3.42	2593.31	3.15
GLYCINE	104500	0.4248	353.9959	71.71	26574.4702	4.27	4955.94	6.03
ALANINE	130800	0.5255	438.0131	88.73	39022.5884	6.26	6132.18	7.46
CYSTINE (HALF)	2420	0.0175	14.6135	6.59	3941.3694	0.63	455.57	0.55
VALINE	132700	0.5898	324.8548	65.81	38056.7370	6.11	4547.97	5.53
METHIONINE	13170	0.0530	44.2004	9.64	7100.4476	1.14	666.17	0.81
ISOLEUCINE	67950	0.3351	280.1123	56.75	36745.1264	5.90	3921.57	4.77
LEUCINE	120100	0.5897	491.3861	99.55	64460.2867	10.35	6879.43	8.37
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	19740	0.0825	68.7850	13.93	12463.1552	2.00	962.99	1.17
PHENYLALANINE	47730	0.1951	162.5453	32.93	26850.8620	4.31	2275.63	2.77
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	40180	0.2292	188.4785	38.18	27553.6668	4.42	5277.40	6.42
HISTIDINE	8268	0.0448	37.3417	7.56	5793.9351	0.93	1568.35	1.91
ARGININE	46400	0.2690	224.1537	45.41	39049.8146	6.27	12552.61	15.27
TOTALS		5.9286	4940.4854	1000.00	622893.2295	100.00	82207.06	100.00

UREA	0	0.	0.		0.	
GLUCOSAMINE	21770	0.1004	83.6982		14996.2141	1171.78
GALACTOSAMINE	10000	0.0533	44.4324		7960.9563	622.05
AMMONIA	383100	1.3104	1092.0086		18564.1466	15288.12

TOTAL NITROGEN - MICROGRAMS 99289.01

RUN NUMBER 13344/13488
SAMPLE JANTHINA JANTHINA
LOCALITY CAPE FLORIDA KEY, BISCAYNE, FLORIDA
TYPE SHELL
FACTOR 3.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2460	0.0103	0.0343	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	688	0.0029	0.0097	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	55550	0.1904	0.6341	112.65	84.4053	12.17	8.88	9.60
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	28700	0.1024	0.3411	60.59	40.6296	5.86	4.78	5.16
SERINE	38200	0.1572	0.5236	93.01	55.0240	7.94	7.33	7.92
GLUTAMIC ACID	55100	0.2039	0.6789	120.60	99.8922	14.41	9.51	10.27
PROLINE	6442	0.1147	0.3820	67.86	43.9849	6.34	5.35	5.78
GLYCINE	50460	0.1850	0.6161	109.44	46.2480	6.67	8.62	9.32
ALANINE	41940	0.1524	0.5075	90.15	45.2119	6.52	7.10	7.68
CYSTINE (HALF)	0	0.	0.	4.36	2.9713	0.43	0.34	0.37
VALINE	27110	0.0946	0.3151	55.97	36.9140	5.32	4.41	4.77
METHIONINE	13100	0.0474	0.1579	29.60	24.8691	3.59	2.33	2.52
ISOLEUCINE	15060	0.0529	0.1761	31.28	23.1033	3.33	2.47	2.66
LEUCINE	42120	0.1503	0.5004	88.89	65.6413	9.47	7.01	7.57
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	6255	0.0208	0.0693	12.30	12.5487	1.81	0.97	1.05
PHENYLALANINE	16910	0.0605	0.2015	35.79	33.2805	4.80	2.82	3.05
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	11800	0.0706	0.2352	41.77	34.3770	4.96	6.58	7.12
HISTIDINE	1103	0.0085	0.0282	5.01	4.3738	0.63	1.18	1.28
ARGININE	8703	0.0689	0.2293	40.73	39.9429	5.76	12.84	13.88
TOTALS		1.6937	5.6402	1000.00	693.4178	100.00	92.52	100.00

UREA	0	0.	0.		0.	
GLUCOSAMINE	5598	0.0385	0.1281		22.9472	1.79
GALACTOSAMINE	1873	0.0141	0.0470		8.4149	0.66
AMMONIA	57890	0.3494	1.1634		19.7776	16.29

TOTAL NITROGEN - MICROGRAMS 111.26

RUN NUMBER 953A/955B
SAMPLE LITTORINA LITTOREA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4562	0.0192	0.1917	0.	0.	0.	0.	0.
TAURINE	2000	0.0085	0.0849	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	9502	0.0424	0.4241	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	73250	0.3108	3.1056	141.74	413.3803	15.45	43.48	12.65
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	38060	0.1575	1.5747	71.87	187.5758	7.01	22.05	6.41
SERINE	33090	0.1376	1.3762	62.81	144.6275	5.41	19.27	5.60
GLUTAMIC ACID	50380	0.2500	2.4997	114.08	367.7793	13.74	35.00	10.18
PROLINE	6289	0.1156	1.1560	52.76	133.0862	4.97	16.18	4.71
GLYCINE	56380	0.2357	2.3565	107.55	176.9048	6.61	32.99	9.60
ALANINE	58810	0.2504	2.5036	114.26	223.0474	8.34	35.05	10.19
CYSTINE (HALF)	1000	0.0079	0.0786	13.61	36.1100	1.35	4.17	1.21
VALINE	35510	0.1362	1.3616	62.14	159.5091	5.96	19.06	5.54
METHIONINE	6632	0.0267	0.2674	29.68	97.0522	3.63	9.11	2.65
ISOLEUCINE	19870	0.0783	0.7827	35.72	102.6806	3.84	10.96	3.19
LEUCINE	46090	0.1827	1.8268	83.37	239.6388	8.96	25.58	7.44
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	6727	0.0299	0.2988	13.64	54.1357	2.02	4.18	1.22
PHENYLALANINE	15610	0.0714	0.7143	32.60	117.9875	4.41	10.00	2.91
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	15570	0.0716	0.7155	32.66	104.6062	3.91	20.04	5.83
HISTIDINE	2090	0.0139	0.1387	6.33	21.5145	0.80	5.82	1.69
ARGININE	9248	0.0552	0.5519	25.19	96.1478	3.59	30.91	8.99
TOTALS		2.2409	22.0095	1000.00	2675.7835	100.00	343.84	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	9129	0.0497	0.4971	89.0631	6.96	
GALACTOSAMINE	4761	0.0272	0.2720	48.7306	3.81	
AMMONIA	118300	0.3657	3.6569	62.1669	51.20	

TOTAL NITROGEN - MICROGRAMS 405.80

RUN NUMBER 963A/976B
SAMPLE LUNATIA TRISERIATA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2956	0.0122	0.1216	0.	0.	0.	0.	0.
TAURINE	300	0.0013	0.0127	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	2628	0.0112	0.1120	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	38310	0.1524	1.5236	140.79	202.7863	15.78	21.33	12.26
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	15980	0.0612	0.6120	56.56	72.9045	5.67	8.57	4.92
SERINE	22560	0.0899	0.8988	83.06	94.4554	7.35	12.58	7.23
GLUTAMIC ACID	28980	0.1164	1.1838	109.40	174.1760	13.56	16.57	9.53
PROLINE	1274	0.0228	0.2277	21.04	26.2155	2.04	3.19	1.83
GLYCINE	41880	0.1714	1.7143	158.42	128.6914	10.02	24.00	13.79
ALANINE	30760	0.1301	1.3015	120.27	115.9470	9.03	18.22	10.47
CYSTINE [HALF]	200	0.0016	0.0160	10.66	13.9770	1.09	1.62	0.93
VALINE	16610	0.0661	0.6606	61.04	77.3856	6.02	9.25	5.32
METHIONINE	300	0.0012	0.0124	10.50	16.9577	1.32	1.59	0.91
ISOLEUCINE	11160	0.0444	0.4443	41.05	58.2790	4.54	6.22	3.57
LEUCINE	20740	0.0829	0.8286	76.57	108.6965	8.46	11.60	6.67
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1000	0.0042	0.0424	3.92	7.6792	0.60	0.59	0.34
PHENYLALANINE	8213	0.0353	0.3533	32.65	58.3655	4.54	4.95	2.84
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	8721	0.0372	0.3722	34.40	54.4141	4.24	10.42	5.99
HISTIDINE	1096	0.0054	0.0544	5.03	8.4479	0.66	2.29	1.31
ARGININE	6241	0.0375	0.3749	34.64	65.3117	5.08	20.99	12.07
TOTALS		1.0867	10.8672	1000.00	1284.6903	100.00	173.98	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	1000	0.0046	0.0459	8.2226	0.64
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	75630	0.2385	2.3847	40.5395	33.39

TOTAL NITROGEN - MICROGRAMS 208.01

RUN NUMBER 976A/974B
SAMPLE LUNATIA TRISERIATA
LOCALITY WOODS HOLE
TYPE OPERCULUM
FACTOR 1169.590

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	0	0.	0.	0.	0.	0.	0.	0.
TAURINE	911	0.0039	4.5254	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	152200	0.6053	707.9403	103.74	94226.8586	12.89	9911.16	9.76
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	14550	0.0557	65.1763	9.55	7763.6020	1.06	912.47	0.90
SERINE	36190	0.1442	168.6353	24.71	17721.8844	2.42	2360.89	2.32
GLUTAMIC ACID	46550	0.1902	222.4037	32.59	32722.2495	4.48	3113.65	3.07
PROLINE	17860	0.3196	373.7671	54.77	43031.8060	5.89	5232.74	5.15
GLYCINE	495400	2.0278	2371.7351	347.54	178046.1533	24.35	33204.29	32.70
ALANINE	259100	1.0983	1282.1695	187.88	114228.4832	15.62	17950.37	17.68
CYSTINE (HALF)	500	0.0040	4.6653	1.33	1095.6541	0.15	126.64	0.12
VALINE	94460	0.3757	439.3695	64.38	51472.1417	7.04	6151.17	6.06
METHIONINE	599	0.0025	2.9070	0.43	433.7809	0.06	40.70	0.04
ISOLEUCINE	7331	0.0292	34.1332	5.00	4477.5955	0.61	477.87	0.47
LEUCINE	50919	0.2034	237.8898	34.86	31206.3890	4.27	3330.46	3.28
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	56000	0.3645	426.2968	62.47	77240.7245	10.56	5968.16	5.88
PHENYLALANINE	46580	0.2004	234.3708	34.34	38715.7192	5.29	3281.19	3.23
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	30560	0.1304	152.5509	22.35	22301.4125	3.05	4271.42	4.21
HISTIDINE	2010	0.0100	11.6785	1.71	1812.0313	0.25	490.50	0.48
ARGININE	12000	0.0721	84.3100	12.35	14687.6391	2.01	4721.36	4.65
TOTALS		5.8350	6824.5245	1000.00	731184.3193	100.00	101545.05	100.00

UREA	0	0.	0.		0.		0.
GLUCOSAMINE	1000	0.0046	5.3676		961.7046		75.15
GALACTOSAMINE	24147	0.1200	140.4031		25156.0288		1965.64
AMMONIA	95990	0.3027	353.9932		6017.8844		4955.90

TOTAL NITROGEN - MICROGRAMS 108541.74

RUN NUMBER 1401A/1396B
SAMPLE MELANELLA MARTINI
LOCALITY BROOME, WEST AUSTRALIA
TYPE SHELL
FACTOR 1.007

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1591	0.0067	0.0111	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	6091	0.0312	0.0520	96.69	6.9149	11.74	0.73	8.68
METHIONINE SULFONE	750	0.0031	0.0052	0.	0.	0.	0.	0.
THREONINE	3387	0.0121	0.0202	37.50	2.4003	4.07	0.28	3.37
SERINE	12430	0.0512	0.0853	158.74	8.9630	15.21	1.19	14.25
GLUTAMIC ACID	5312	0.0197	0.0328	60.98	4.8209	8.18	0.46	5.48
PROLINE	1050	0.0187	0.0312	58.02	3.5889	6.09	0.44	5.21
GLYCINE	16710	0.0613	0.1021	190.08	7.6668	13.01	1.43	17.07
ALANINE	17710	0.0644	0.1073	199.66	9.5573	16.22	1.50	17.93
CYSTINE (HALF)	0	0.	0.	14.78	0.9620	1.63	0.11	1.33
VALINE	3466	0.0121	0.0202	37.53	2.3626	4.01	0.28	3.37
METHIONINE	83	0.0003	0.0005	8.83	0.7082	1.20	0.07	0.79
ISOLEUCINE	1230	0.0043	0.0072	13.40	0.9446	1.60	0.10	1.20
LEUCINE	4499	0.0161	0.0268	49.80	3.5099	5.96	0.37	4.47
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	790	0.0026	0.0044	8.15	0.7934	1.35	0.06	0.73
PHENYLALANINE	1075	0.0038	0.0064	11.93	1.0591	1.80	0.09	1.07
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	1130	0.0068	0.0113	20.98	1.6480	2.80	0.32	3.77
HISTIDINE	250	0.0019	0.0032	5.95	0.4963	0.84	0.13	1.60
ARGININE	1098	0.0087	0.0145	26.95	2.5227	4.28	0.81	9.68
TOTALS		0.3247	0.5413	1000.00	58.9189	100.00	8.38	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	108	0.0007	0.0012		0.2216		0.02	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	17010	0.1027	0.1711		2.9092		2.40	

TOTAL NITROGEN - MICROGRAMS 10.79

RUN NUMBER 1423A/1418B
SAMPLE MUREX BREVIFRONS
LOCALITY MAYAGUEZ, PUERTO RICO
TYPE SHELL
FACTOR 0.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2079	0.0087	0.0043	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	68700	0.2355	0.1178	119.40	15.6736	12.52	1.65	8.61
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	24670	0.0880	0.0440	44.64	5.2439	4.19	0.62	3.22
SERINE	45010	0.1853	0.0926	93.92	9.7347	7.78	1.30	6.78
GLUTAMIC ACID	54700	0.2024	0.1012	102.61	14.8899	11.89	1.42	7.40
PROLINE	1233	0.0220	0.0110	11.13	1.2641	1.01	0.15	0.80
GLYCINE	67600	0.2478	0.1239	125.65	9.3029	7.43	1.73	9.06
ALANINE	44060	0.1601	0.0801	81.17	7.1317	5.70	1.12	5.86
CYSTINE (HALF)	0	0.	0.	3.16	0.3770	0.30	0.04	0.23
VALINE	24400	0.0852	0.0426	43.18	4.9886	3.99	0.60	3.11
METHIONINE	12860	0.0466	0.0233	23.60	3.4732	2.77	0.33	1.70
ISOLEUCINE	16780	0.0589	0.0295	29.88	3.8651	3.09	0.41	2.16
LEUCINE	44530	0.1589	0.0794	80.54	10.4200	8.32	1.11	5.81
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	13040	0.0434	0.0217	21.98	3.9280	3.14	0.30	1.59
PHENYLALANINE	19450	0.0696	0.0348	35.28	5.7477	4.59	0.49	2.54
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	253	0.0017	0.0008	0.85	0.1352	0.11	0.02	0.12
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	20980	0.1256	0.0628	63.65	9.1773	7.33	1.76	9.18
HISTIDINE	9343	0.0717	0.0359	36.35	5.5628	4.44	1.51	7.87
ARGININE	20700	0.1638	0.0819	83.02	14.2648	11.40	4.59	23.96
TOTALS		1.9750	0.9875	1000.00	125.1807	100.00	19.14	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	1154	0.0079	0.0040		0.7103		0.06	
GALACTOSAMINE	377	0.0028	0.0014		0.2543		0.02	
AMMONIA	33630	0.3237	0.1618		2.7511		2.27	

TOTAL NITROGEN - MICROGRAMS 21.48

RUN NUMBER 1364A/1397B
SAMPLE NERITA PLEXA
LOCALITY MAURITIUS ISLAND
TYPE SHELL
FACTOR 3.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1109	0.0046	0.0154	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1327	0.0056	0.0187	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	57630	0.1976	0.6579	103.08	87.5658	11.01	9.21	8.11
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	26770	0.0955	0.3181	49.85	37.8974	4.76	4.45	3.92
SERINE	32430	0.1335	0.4445	69.65	46.7128	5.87	6.22	5.48
GLUTAMIC ACID	59280	0.2194	0.7304	114.45	107.4702	13.51	10.23	9.00
PROLINE	9141	0.1628	0.5421	84.94	62.4132	7.85	7.59	6.68
GLYCINE	60790	0.2229	0.7422	116.29	55.7158	7.01	10.39	9.14
ALANINE	56960	0.2070	0.6892	107.99	61.4037	7.72	9.65	8.49
CYSTINE (HALF)	0	0.	0.	1.73	1.3395	0.17	0.15	0.14
VALINE	26440	0.0923	0.3073	48.15	36.0017	4.53	4.30	3.79
METHIONINE	12430	0.0450	0.1498	26.12	24.8765	3.13	2.33	2.05
ISOLEUCINE	12280	0.0431	0.1436	22.50	18.8385	2.37	2.01	1.77
LEUCINE	36480	0.1301	0.4334	67.90	56.8517	7.15	6.07	5.34
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	12970	0.0431	0.1436	22.50	26.0203	3.27	2.01	1.77
PHENYLALANINE	23520	0.0842	0.2802	43.91	46.2896	5.82	3.92	3.45
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	363	0.0024	0.0080	1.25	1.2920	0.16	0.22	0.20
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	11600	0.0694	0.2312	36.22	33.7943	4.25	6.47	5.70
HISTIDINE	4011	0.0308	0.1025	16.06	15.9049	2.00	4.31	3.79
ARGININE	16330	0.1292	0.4302	67.41	74.9474	9.42	24.09	21.20
TOTALS		1.9185	6.3885	1000.00	795.3353	100.00	113.64	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	1941	0.0133	0.0444		7.9565		0.62	
GALACTOSAMINE	862	0.0065	0.0216		3.8727		0.30	
AMMONIA	51040	0.3060	1.0257		17.4374		14.36	

TOTAL NITROGEN - MICROGRAMS 128.92

RUN NUMBER 1274A/1271B
SAMPLE NERITA PLEXA
LOCALITY MAURITIUS
TYPE OPERCULUM
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2317	0.0097	0.0969	0.	0.	0.	0.	0.
TAURINE	306	0.0012	0.0118	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	432	0.0018	0.0183	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	277100	0.9499	9.4995	80.44	1264.3816	9.61	132.99	6.67
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	41490	0.1481	1.4807	12.54	176.3843	1.34	20.73	1.04
SERINE	133500	0.5495	5.4950	46.53	577.4651	4.39	76.93	3.86
GLUTAMIC ACID	133100	0.4925	4.9251	41.70	724.6255	5.51	68.95	3.46
PROLINE	36300	0.6465	6.4648	54.74	744.2955	5.66	90.51	4.54
GLYCINE	30724	3.9571	39.5710	335.07	2970.5976	22.57	553.99	27.79
ALANINE	460900	1.6748	16.7478	141.82	1492.0633	11.34	234.47	11.76
CYSTINE (HALF)	0	0.	0.	0.68	9.7897	0.07	1.13	0.06
VALINE	135700	0.4736	4.7365	40.11	554.8780	4.22	66.31	3.33
METHIONINE	3554	0.0129	0.1287	1.23	21.6591	0.16	2.03	0.10
ISOLEUCINE	21030	0.0739	0.7385	6.25	96.8820	0.74	10.34	0.52
LEUCINE	170800	0.6093	6.0935	51.60	799.3416	6.07	85.31	4.28
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	105300	0.3501	3.5012	29.65	634.3909	4.82	49.02	2.46
PHENYLALANINE	239100	0.8555	8.5546	72.44	1413.1280	10.74	119.76	6.01
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	11890	0.0784	0.7835	6.63	127.0800	0.97	21.94	1.10
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	29170	0.1745	1.7457	14.78	255.1982	1.94	48.88	2.45
HISTIDINE	10550	0.0810	0.8097	6.86	125.6284	0.95	34.01	1.71
ARGININE	84980	0.6723	6.7231	56.93	1171.2315	8.90	376.49	18.88
TOTALS		11.8126	118.1258	1000.00	13159.0202	100.00	1993.80	100.00

UREA	0	0.	0.		0.	
GLUCOSAMINE	6263	0.0451	0.4509		80.7896	6.31
GALACTOSAMINE	5520	0.0401	0.4006		71.7759	5.61
AMMONIA	171800	1.0368	10.3681		176.2583	145.15

TOTAL NITROGEN - MICROGRAMS 2150.87

RUN NUMBER 972A/987B
SAMPLE NASSARIUS TRIVITTATUS
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 11.299

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1619	0.0067	0.0752	0.	0.	0.	0.	0.
TAURINE	500	0.0021	0.0240	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	700	0.0030	0.0337	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	13340	0.0531	0.5994	115.79	79.7852	12.91	8.39	10.77
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	7503	0.0287	0.3247	62.72	38.6770	6.26	4.55	5.83
SERINE	7536	0.0300	0.3392	65.53	35.6507	5.77	4.75	6.10
GLUTAMIC ACID	11520	0.0471	0.5317	102.71	78.2316	12.66	7.44	9.55
PROLINE	1600	0.0286	0.3231	62.41	37.2005	6.02	4.52	5.81
GLYCINE	17950	0.0735	0.8302	160.36	62.3229	10.09	11.62	14.92
ALANINE	8757	0.0371	0.4186	80.87	37.2966	6.04	5.86	7.52
CYSTINE (HALF)	0	0.	0.	14.89	9.3381	1.51	1.08	1.39
VALINE	8143	0.0324	0.3659	70.68	42.8662	6.94	5.12	6.57
METHIONINE	1605	0.0067	0.0752	20.42	15.7732	2.55	1.48	1.90
ISOLEUCINE	6315	0.0251	0.2840	54.87	37.2616	6.03	3.98	5.10
LEUCINE	11570	0.0462	0.5223	100.89	68.5141	11.09	7.31	9.38
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	2000	0.0085	0.0958	18.50	17.3534	2.81	1.34	1.72
PHENYLALANINE	3000	0.0129	0.1458	28.17	24.0888	3.90	2.04	2.62
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	2200	0.0094	0.1061	20.49	15.5099	2.51	2.97	3.81
HISTIDINE	700	0.0035	0.0393	7.59	6.0964	0.99	1.65	2.12
ARGININE	1000	0.0060	0.0679	13.11	11.8243	1.91	3.80	4.88
TOTALS		0.4604	5.2023	1000.00	617.7904	100.00	77.91	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	500	0.0023	0.0259		4.6453		0.36	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	74870	0.2361	2.6674		45.3453		37.34	

TOTAL NITROGEN - MICROGRAMS 115.62

RUN NUMBER 1039A/1050B
SAMPLE OXYNOE VIRIDIS
LOCALITY TAHITI
TYPE SHELL
FACTOR 11.076

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	477	0.0020	0.0226	0.	0.	0.	0.	0.
TAURINE	1826	0.0075	0.0827	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	3155	0.0142	0.1571	0.	0.	0.	0.	0.
OH - PROLINE	1644	0.0967	1.0711	38.21	140.4552	4.17	15.00	3.59
ASPARTIC ACID	64880	0.3363	3.7248	132.88	495.7663	14.73	52.15	12.49
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	36740	0.1465	1.6225	57.88	193.2766	5.74	22.72	5.44
SERINE	57010	0.2290	2.5369	90.50	266.6063	7.92	35.52	8.51
GLUTAMIC ACID	72130	0.2973	3.2931	117.48	484.5173	14.40	46.10	11.04
PROLINE	9365	0.1754	1.9424	69.30	223.6341	6.65	27.19	6.51
GLYCINE	56620	0.2302	2.5493	90.94	191.3745	5.69	35.69	8.55
ALANINE	90200	0.3625	4.0147	143.22	357.6686	10.63	56.21	13.46
CYSTINE (HALF)	0	0.	0.	3.43	11.6575	0.35	1.35	0.32
VALINE	40120	0.1523	1.6867	60.17	197.6005	5.87	23.61	5.66
METHIONINE	1275	0.0051	0.0569	7.09	29.6578	0.88	2.78	0.67
ISOLEUCINE	26620	0.1017	1.1269	40.20	147.8216	4.39	15.78	3.78
LEUCINE	40720	0.1600	1.7718	63.21	232.4263	6.91	24.81	5.94
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	7965	0.0333	0.3689	13.16	66.8478	1.99	5.17	1.24
PHENYLALANINE	24580	0.1004	1.1126	39.69	183.7869	5.46	15.58	3.73
BETA - ALANINE	1700	0.0093	0.1032	3.68	9.1917	0.27	1.44	0.35
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5000	0.0281	0.3117	11.12	45.5728	1.35	8.73	2.09
HISTIDINE	300	0.0016	0.0180	0.64	2.7959	0.08	0.76	0.18
ARGININE	7500	0.0435	0.4816	17.18	83.8935	2.49	26.97	6.46
TOTALS		2.5330	28.0556	1000.00	3364.5512	100.00	417.53	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	5000	0.0231	0.2555		45.7782		3.58	
GALACTOSAMINE	600	0.0032	0.0354		6.3487		0.50	
AMMONIA	80000	0.2736	3.0309		51.5251		42.43	

TOTAL NITROGEN - MICROGRAMS 464.04

RUN NUMBER S10
SAMPLE PLANORBIS, RECENT
LOCALITY HUNGARY
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			3.7000	98.51	492.4700	10.36	51.80	7.51
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			2.1000	55.91	250.1520	5.26	29.40	4.26
SERINE			2.3000	61.24	241.7070	5.09	32.20	4.67
GLUTAMIC ACID			3.4000	90.52	500.2420	10.52	47.60	6.90
PROLINE			2.2000	58.57	253.2860	5.33	30.80	4.47
GLYCINE			4.3000	114.48	322.8010	6.79	60.20	8.73
ALANINE			3.3000	87.86	293.9970	6.19	46.20	6.70
CYSTINE [HALF]			0.7800	20.77	94.4736	1.99	10.92	1.58
VALINE			2.3000	61.24	269.4450	5.67	32.20	4.67
METHIONINE			0.3900	10.38	58.1958	1.22	5.46	0.79
ISOLEUCINE			1.4000	37.27	183.6520	3.86	19.60	2.84
LEUCINE			2.1000	55.91	275.4780	5.80	29.40	4.26
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			2.5000	66.56	452.9750	9.53	35.00	5.08
PHENYLALANINE			0.	0.	0.	0.	0.	0.
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.6000	15.97	97.3140	2.05	16.80	2.44
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			3.0900	82.27	451.7271	9.50	86.52	12.55
HISTIDINE			1.3000	34.61	201.7080	4.24	54.60	7.92
ARGININE			1.8000	47.92	313.5780	6.60	100.80	14.62
TOTALS			39.5600	1000.00	4753.2015	100.00	689.50	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	0.	0.	0.

TOTAL NITROGEN - MICROGRAMS 689.50

RUN NUMBER S9
SAMPLE SUPREMUS
LOCALITY STEINHEIM
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.3100	116.80	41.2610	12.13	4.34	8.26
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.1100	41.45	13.1032	3.85	1.54	2.93
SERINE			0.1600	60.29	16.8144	4.94	2.24	4.26
GLUTAMIC ACID			0.2670	100.60	39.2837	11.55	3.74	7.11
PROLINE			0.2300	86.66	26.4799	7.78	3.22	6.13
GLYCINE			0.2700	101.73	20.2689	5.96	3.78	7.19
ALANINE			0.2600	97.97	23.1634	6.81	3.64	6.93
CYSTINE (HALF)			0.0260	9.80	3.1491	0.93	0.36	0.69
VALINE			0.1500	56.52	17.5725	5.17	2.10	4.00
METHIONINE			0.0270	10.17	4.0289	1.18	0.38	0.72
ISOLEUCINE			0.0750	28.26	9.8385	2.89	1.05	2.00
LEUCINE			0.1040	39.19	13.6427	4.01	1.46	2.77
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.1300	48.98	23.5547	6.92	1.82	3.46
PHENYLALANINE			0.0730	27.51	12.0589	3.55	1.02	1.94
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.0880	33.16	12.8647	3.78	2.46	4.69
HISTIDINE			0.1100	41.45	17.0676	5.02	4.62	8.79
ARGININE			0.2640	99.47	45.9914	13.52	14.78	28.13
TOTALS			2.6540	1000.00	340.1436	100.00	52.56	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	0.	0.	0.

TOTAL NITROGEN - MICROGRAMS 52.56

RUN NUMBER SR
SAMPLE SUPREMUS REVERTENS, TERTIARY
LOCALITY STEINHEIM
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.1900	103.37	25.2890	11.07	2.66	7.65
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.0580	31.56	6.9090	3.02	0.81	2.34
SERINE			0.1300	70.73	13.6617	5.98	1.82	5.24
GLUTAMIC ACID			0.1700	92.49	25.0121	10.95	2.38	6.85
PROLINE			0.1400	76.17	16.1182	7.05	1.96	5.64
GLYCINE			0.2200	119.70	16.5154	7.23	3.08	8.86
ALANINE			0.2200	119.70	19.5998	8.58	3.08	8.86
CYSTINE (HALF)			0.0310	16.87	3.7547	1.64	0.43	1.25
VALINE			0.1100	59.85	12.8865	5.64	1.54	4.43
METHIONINE			0.0390	21.22	5.8196	2.55	0.55	1.57
ISOLEUCINE			0.0520	28.29	6.8214	2.99	0.73	2.09
LEUCINE			0.0940	51.14	12.3309	5.40	1.32	3.79
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0390	21.22	7.0664	3.09	0.55	1.57
PHENYLALANINE			0.0700	38.08	11.5633	5.06	0.98	2.82
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.0650	35.36	9.5023	4.16	1.82	5.24
HISTIDINE			0.0500	27.20	7.7580	3.40	2.10	6.04
ARGININE			0.1600	87.05	27.8736	12.20	8.96	25.78
TOTALS			1.8380	1000.00	228.4819	100.00	34.76	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.		0.		0.	
GALACTOSAMINE			0.		0.		0.	
AMMONIA			0.		0.		0.	

TOTAL NITROGEN - MICROGRAMS 34.76

RUN NUMBER S7
SAMPLE REVERTENS, TERTIARY
LOCALITY STEINHEIM
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.2200	72.94	29.2820	7.67	3.08	5.16
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.0620	20.56	7.3854	1.94	0.87	1.45
SERINE			0.2400	79.58	25.2216	6.61	3.36	5.63
GLUTAMIC ACID			0.3700	122.68	54.4381	14.26	5.18	8.68
PROLINE			0.2500	82.89	28.7825	7.54	3.50	5.86
GLYCINE			0.3700	122.68	27.7759	7.28	5.18	8.68
ALANINE			0.2700	89.52	24.0543	6.30	3.78	6.33
CYSTINE (HALF)			0.0500	16.58	6.0560	1.59	0.70	1.17
VALINE			0.1700	56.37	19.9155	5.22	2.38	3.99
METHIONINE			0.0500	16.58	7.4610	1.95	0.70	1.17
ISOLEUCINE			0.0860	28.51	11.2815	2.96	1.20	2.02
LEUCINE			0.1400	46.42	18.3652	4.81	1.96	3.28
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0830	27.52	15.0388	3.94	1.16	1.95
PHENYLALANINE			0.0900	29.84	14.8671	3.90	1.26	2.11
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.1800	59.68	26.3142	6.89	5.04	8.44
HISTIDINE			0.0860	28.51	13.3438	3.50	3.61	6.05
ARGININE			0.2990	99.14	52.0888	13.65	16.74	28.04
TOTALS			3.0160	1000.00	381.6716	100.00	59.71	100.00

UREA	0.		0.	0.
GLUCOSAMINE	0.		0.	0.
GALACTOSAMINE	0.		0.	0.
AMMONIA	0.		0.	0.
		TOTAL NITROGEN - MICROGRAMS		59.71

RUN NUMBER S6
SAMPLE OXYSTOMA, TERTIARY
LOCALITY STEINHEIM
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.1700	72.84	22.6270	7.75	2.38	5.19
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.0500	21.42	5.9560	2.04	0.70	1.53
SERINE			0.1300	55.70	13.6617	4.68	1.82	3.97
GLUTAMIC ACID			0.3100	132.82	45.6103	15.63	4.34	9.47
PROLINE			0.1300	55.70	14.9669	5.13	1.82	3.97
GLYCINE			0.3400	145.67	25.5238	8.75	4.76	10.38
ALANINE			0.2500	107.11	22.2725	7.63	3.50	7.64
CYSTINE (HALF)			0.0500	21.42	6.0560	2.08	0.70	1.53
VALINE			0.1100	47.13	12.8865	4.42	1.54	3.36
METHIONINE			0.0250	10.71	3.7305	1.28	0.35	0.76
ISOLEUCINE			0.0900	38.56	11.8062	4.05	1.26	2.75
LEUCINE			0.1400	59.98	18.3652	6.29	1.96	4.28
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0390	16.71	7.0664	2.42	0.55	1.19
PHENYLALANINE			0.0700	29.99	11.5633	3.96	0.98	2.14
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.1500	64.27	21.9285	7.51	4.20	9.16
HISTIDINE			0.0500	21.42	7.7580	2.66	2.10	4.58
ARGININE			0.2300	98.54	40.0683	13.73	12.88	28.10
TOTALS			2.3340	1000.00	291.8471	100.00	45.84	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	0.	0.	0.

TOTAL NITROGEN - MICROGRAMS 45.84

RUN NUMBER 55
SAMPLE TROCHIFORMIS, TERTIARY
LOCALITY STEINHEIM
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.1900	91.74	25.2890	10.17	2.66	6.35
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.0400	19.31	4.7648	1.92	0.56	1.34
SERINE			0.1600	77.26	16.8144	6.76	2.24	5.35
GLUTAMIC ACID			0.2100	101.40	30.8973	12.42	2.94	7.02
PROLINE			0.1300	62.77	14.9669	6.02	1.82	4.34
GLYCINE			0.3700	178.66	27.7759	11.17	5.18	12.37
ALANINE			0.3200	154.51	28.5088	11.46	4.48	10.70
CYSTINE (HALF)			0.0220	10.62	2.6646	1.07	0.31	0.74
VALINE			0.0790	38.15	9.2548	3.72	1.11	2.64
METHIONINE			0.0240	11.59	3.5813	1.44	0.34	0.80
ISOLEUCINE			0.0320	15.45	4.1978	1.69	0.45	1.07
LEUCINE			0.0670	32.35	8.7891	3.53	0.94	2.24
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0180	8.69	3.2614	1.31	0.25	0.60
PHENYLALANINE			0.0360	17.38	5.9468	2.39	0.50	1.20
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.0750	36.21	10.9642	4.41	2.10	5.01
HISTIDINE			0.0480	23.18	7.4477	2.99	2.02	4.81
ARGININE			0.2500	120.71	43.5525	17.51	14.00	33.42
TOTALS			2.0710	1000.00	248.6774	100.00	41.89	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.		0.		0.	
GALACTOSAMINE			0.		0.		0.	
AMMONIA			0.		0.		0.	

TOTAL NITROGEN - MICROGRAMS 41.89

RUN NUMBER S4
SAMPLE PLANORBIFORMIS, TERTIARY
LOCALITY STEINHEIM
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.0860	85.74	11.4466	9.06	1.20	6.09
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.0320	31.90	3.8118	3.02	0.45	2.27
SERINE			0.0750	74.78	7.8817	6.24	1.05	5.32
GLUTAMIC ACID			0.1100	109.67	16.1843	12.82	1.54	7.80
PROLINE			0.0240	23.93	2.7631	2.19	0.34	1.70
GLYCINE			0.1300	129.61	9.7591	7.73	1.82	9.21
ALANINE			0.1120	111.67	9.9781	7.90	1.57	7.94
CYSTINE [HALF]			0.0250	24.93	3.0280	2.40	0.35	1.77
VALINE			0.0560	55.83	6.5604	5.20	0.78	3.97
METHIONINE			0.0280	27.92	4.1782	3.31	0.39	1.98
ISOLEUCINE			0.0400	39.88	5.2472	4.16	0.56	2.83
LEUCINE			0.0560	55.83	7.3461	5.82	0.78	3.97
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0160	15.95	2.8990	2.30	0.22	1.13
PHENYLALANINE			0.0430	42.87	7.1032	5.63	0.60	3.05
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.0410	40.88	5.9938	4.75	1.15	5.81
HISTIDINE			0.0200	19.94	3.1032	2.46	0.84	4.25
ARGININE			0.1090	108.67	18.9889	15.04	6.10	30.90
TOTALS			1.0030	1000.00	126.2727	100.00	19.75	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	0.	0.	0.

TOTAL NITROGEN - MICROGRAMS 19.75

RUN NUMBER S3
SAMPLE SULCATNS, TERTIARY
LOCALITY STEINHEIM
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.2000	83.47	26.6200	9.25	2.80	6.36
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.0570	23.79	6.7898	2.36	0.80	1.81
SERINE			0.1400	58.43	14.7126	5.11	1.96	4.45
GLUTAMIC ACID			0.3700	154.42	54.4381	18.92	5.18	11.76
PROLINE			0.0600	25.04	6.9078	2.40	0.84	1.91
GLYCINE			0.4400	183.64	33.0308	11.48	6.16	13.99
ALANINE			0.3700	154.42	32.9633	11.46	5.18	11.76
CYSTINE (HALF)			0.0810	33.81	9.8107	3.41	1.13	2.58
VALINE			0.0970	40.48	11.3635	3.95	1.36	3.08
METHIONINE			0.0160	6.68	2.3875	0.83	0.22	0.51
ISOLEUCINE			0.0470	19.62	6.1655	2.14	0.66	1.49
LEUCINE			0.0850	35.48	11.1503	3.87	1.19	2.70
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0450	18.78	8.1535	2.83	0.63	1.43
PHENYLALANINE			0.0570	23.79	9.4158	3.27	0.80	1.81
BETA - ALANIN-			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.0830	34.64	12.1338	4.22	2.32	5.28
HISTIDINE			0.0780	32.55	12.1025	4.21	3.28	7.44
ARGININE			0.1700	70.95	29.6157	10.29	9.52	21.62
TOTALS			2.3960	1000.00	287.7613	100.00	44.03	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	0.	0.	0.

TOTAL NITROGEN - MICROGRAMS 44.03

RUN NUMBER S2
SAMPLE TENUIS STEINHEIMENSIS, TERT.
LOCALITY STEINHEIM
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.0450	60.81	5.9895	6.35	0.63	4.28
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.0230	31.08	2.7398	2.90	0.32	2.19
SERINE			0.0480	64.86	5.0443	5.35	0.67	4.57
GLUTAMIC ACID			0.1080	145.95	15.8900	16.84	1.51	10.28
PROLINE			0.0440	59.46	5.0657	5.37	0.62	4.19
GLYCINE			0.0900	121.62	6.7563	7.16	1.26	8.56
ALANINE			0.0670	90.54	5.9690	6.33	0.94	6.37
CYSTINE [HALF]			0.0330	44.59	3.9970	4.24	0.46	3.14
VALINE			0.0380	51.35	4.4517	4.72	0.53	3.62
METHIONINE			0.0160	21.62	2.3875	2.53	0.22	1.52
ISOLEUCINE			0.	0.	0.	0.	0.	0.
LEUCINE			0.0380	51.35	4.9848	5.28	0.53	3.62
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0120	16.22	2.1743	2.30	0.17	1.14
PHENYLALANINE			0.0350	47.30	5.7816	6.13	0.49	3.33
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.0440	59.46	6.4324	6.82	1.23	8.37
HISTIDINE			0.0300	40.54	4.6548	4.93	1.26	8.56
ARGININE			0.0690	93.24	12.0205	12.74	3.86	26.26
TOTALS			0.7400	1000.00	94.3393	100.00	14.71	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	0.	0.	0.

TOTAL NITROGEN - MICROGRAMS 14.71

RUN NUMBER S1
SAMPLE STEINHEIMENSIS, TERTIARY
LOCALITY STEINHEIM
TYPE SHELL
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.0510	43.63	6.7881	4.88	0.71	3.23
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.0180	15.40	2.1442	1.54	0.25	1.14
SERINE			0.0390	33.36	4.0985	2.94	0.55	2.47
GLUTAMIC ACID			0.0520	44.48	7.6508	5.50	0.73	3.30
PROLINE			0.1730	147.99	19.9175	14.31	2.42	10.96
GLYCINE			0.1950	166.81	14.6386	10.52	2.73	12.36
ALANINE			0.1850	158.25	16.4816	11.84	2.59	11.72
CYSTINE (HALF)			0.0180	15.40	2.1802	1.57	0.25	1.14
VALINE			0.0660	56.46	7.7319	5.55	0.92	4.18
METHIONINE			0.0210	17.96	3.1336	2.25	0.29	1.33
ISOLEUCINE			0.0360	30.80	4.7225	3.39	0.50	2.28
LEUCINE			0.0520	44.48	6.8214	4.90	0.73	3.30
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0290	24.81	5.2545	3.77	0.41	1.84
PHENYLALANINE			0.0370	31.65	6.1120	4.39	0.52	2.34
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.0670	57.31	9.7947	7.04	1.88	8.49
HISTIDINE			0.0480	41.06	7.4477	5.35	2.02	9.13
ARGININE			0.0820	70.15	14.2852	10.26	4.59	20.79
TOTALS			1.1690	1000.00	139.2030	100.00	22.09	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	0.	0.	0.

TOTAL NITROGEN - MICROGRAMS 22.09

RUN NUMBER 1293A/1323B
SAMPLE POLINICES DUPLICATUS
LOCALITY PROVINCETOWN, MASS.
TYPE SHELL
FACTOR 3.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3814	0.0159	0.0531	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	16810	0.0576	0.1919	90.41	25.5419	10.81	2.69	8.48
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	8304	0.0296	0.0987	46.49	11.7557	4.98	1.38	4.36
SERINE	21886	0.0901	0.3000	141.33	31.5250	13.34	4.20	13.26
GLUTAMIC ACID	16200	0.0599	0.1996	94.04	29.3694	12.43	2.79	8.83
PROLINE	2200	0.0392	0.1305	61.47	15.0212	6.36	1.83	5.77
GLYCINE	31097	0.1140	0.3797	178.87	28.5013	12.06	5.32	16.79
ALANINE	30810	0.1120	0.3728	175.64	33.2136	14.06	5.22	16.48
CYSTINE (HALF)	0	0.	0.	17.92	4.6068	1.95	0.53	1.68
VALINE	7305	0.0255	0.0849	40.00	9.9468	4.21	1.19	3.75
METHIONINE	2100	0.0076	0.0253	11.93	3.7774	1.60	0.35	1.12
ISOLEUCINE	3381	0.0119	0.0395	18.63	5.1867	2.20	0.55	1.75
LEUCINE	12310	0.0439	0.1462	68.90	19.1843	8.12	2.05	6.47
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1200	0.0040	0.0133	6.26	2.4074	1.02	0.19	0.59
PHENYLALANINE	2100	0.0075	0.0250	11.79	4.1330	1.75	0.35	1.11
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	2202	0.0132	0.0439	20.67	6.4151	2.71	1.23	3.88
HISTIDINE	165	0.0013	0.0042	1.99	0.6543	0.28	0.18	0.56
ARGININE	1100	0.0087	0.0290	13.65	5.0485	2.14	1.62	5.13
TOTALS		0.6419	2.1376	1000.00	236.2884	100.00	31.67	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	400	0.0027	0.0092	1.6397	0.13
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	63680	0.3843	1.2797	21.7557	17.92

TOTAL NITROGEN - MICROGRAMS 49.71

RUN NUMBER 1292A/1326B
SAMPLE POLINICES DUPLICATUS
LOCALITY FREEPORT, TEXAS
TYPE SHELL
FACTOR 2.860

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4266	0.0178	0.0510	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	977	0.0041	0.0118	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	25480	0.0874	0.2498	117.41	33.2512	13.73	3.50	10.82
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	9990	0.0357	0.1020	47.92	12.1464	5.02	1.43	4.42
SERINE	21788	0.0897	0.2565	120.54	26.9543	11.13	3.59	11.11
GLUTAMIC ACID	17250	0.0638	0.1826	85.79	26.8591	11.09	2.56	7.91
PROLINE	2300	0.0410	0.1172	55.06	13.4875	5.57	1.64	5.07
GLYCINE	33060	0.1212	0.3467	162.92	26.0238	10.75	4.85	15.02
ALANINE	32890	0.1195	0.3418	160.64	30.4516	12.58	4.79	14.81
CYSTINE (HALF)	0	0.	0.	17.17	4.4255	1.83	0.51	1.58
VALINE	8932	0.0312	0.0892	41.90	10.4456	4.31	1.25	3.86
METHIONINE	1630	0.0059	0.0169	12.95	4.1104	1.70	0.39	1.19
ISOLEUCINE	5383	0.0189	0.0541	25.41	7.0924	2.93	0.76	2.34
LEUCINE	15440	0.0551	0.1575	74.04	20.6661	8.54	2.21	6.82
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1623	0.0054	0.0154	7.25	2.7965	1.15	0.22	0.67
PHENYLALANINE	2950	0.0106	0.0302	14.19	4.9864	2.06	0.42	1.31
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	4389	0.0293	0.0837	39.33	12.2328	5.05	2.34	7.25
HISTIDINE	667	0.0051	0.0146	6.88	2.2716	0.94	0.61	1.90
ARGININE	997	0.0079	0.0226	10.60	3.9300	1.62	1.26	3.91
TOTALS		0.7494	2.1434	1000.00	242.1311	100.00	32.32	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	650	0.0045	0.0128	2.2884	0.18	
GALACTOSAMINE	0	0.	0.	0.	0.	
AMMONIA	263200	1.5864	4.5429	77.2286	63.60	

TOTAL NITROGEN - MICROGRAMS 96.10

RUN NUMBER 1407A/1237B
SAMPLE POLINICES DUPLICATUS
LOCALITY GALVESTON, TEXAS
TYPE SHELL
FACTOR 4.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1383	0.0058	0.0231	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	946	0.0040	0.0160	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	18490	0.0634	0.2535	124.55	33.7473	14.40	3.55	11.52
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	9010	0.0322	0.1286	63.19	15.3215	6.54	1.80	5.85
SERINE	17930	0.0738	0.2952	145.02	31.0231	13.24	4.13	13.42
GLUTAMIC ACID	14450	0.0535	0.2139	105.07	31.4676	13.43	2.99	9.72
PROLINE	640	0.0114	0.0456	22.40	5.2490	2.24	0.64	2.07
GLYCINE	20100	0.0737	0.2948	144.81	22.1288	9.44	4.13	13.40
ALANINE	19770	0.0718	0.2874	141.16	25.6004	10.93	4.02	13.06
CYSTINE [HALF]	0	0.	0.	8.14	2.0066	0.86	0.23	0.75
VALINE	8720	0.0304	0.1217	59.81	14.2625	6.09	1.70	5.53
METHIONINE	468	0.0017	0.0068	10.43	3.1675	1.35	0.30	0.96
ISOLEUCINE	5091	0.0179	0.0715	35.13	9.3814	4.00	1.00	3.25
LEUCINE	10100	0.0360	0.1441	70.80	18.9071	8.07	2.02	6.55
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	295	0.0010	0.0039	1.93	0.7109	0.30	0.05	0.18
PHENYLALANINE	1918	0.0069	0.0274	13.48	4.5343	1.94	0.38	1.25
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	3179	0.0190	0.0761	37.38	11.1248	4.75	2.13	6.92
HISTIDINE	436	0.0033	0.0134	6.58	2.0767	0.89	0.56	1.82
ARGININE	652	0.0052	0.0206	10.14	3.5945	1.53	1.16	3.75
TOTALS		0.5109	2.0438	1000.00	234.3039	100.00	30.81	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	426	0.0029	0.0117		2.0976		0.16	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	161077	0.9721	3.8884		66.1028		54.44	

TOTAL NITROGEN - MICROGRAMS 85.41

RUN NUMBER 1291A/1322B
SAMPLE POLINICES DUPLICATUS
LOCALITY TREASURE ISLAND, FLORIDA
TYPE SHELL
FACTOR 3.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2902	0.0121	0.0404	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	800	0.0034	0.0113	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	12430	0.0426	0.1419	100.39	18.8867	11.67	1.99	9.39
METHIONINE SULFONE	1207	0.0050	0.0166	0.	0.	0.	0.	0.
THREONINE	5043	0.0201	0.0671	47.45	7.9886	4.94	0.94	4.44
SERINE	12310	0.0507	0.1687	119.38	17.7316	10.96	2.36	11.16
GLUTAMIC ACID	10460	0.0387	0.1289	91.19	18.9632	11.72	1.80	8.53
PROLINE	2200	0.0392	0.1305	92.31	15.0212	9.28	1.83	8.63
GLYCINE	23520	0.0862	0.2872	203.17	21.5567	13.32	4.02	19.00
ALANINE	10390	0.0378	0.1257	88.95	11.2006	6.92	1.76	8.32
CYSTINE (HALF)	0	0.	0.	20.48	3.5052	2.17	0.41	1.91
VALINE	4693	0.0164	0.0545	38.59	6.3902	3.95	0.76	3.61
METHIONINE	1350	0.0049	0.0163	28.37	5.9829	3.70	0.56	2.65
ISOLEUCINE	3171	0.0111	0.0371	26.24	4.8646	3.01	0.52	2.45
LEUCINE	8861	0.0316	0.1053	74.48	13.8093	8.54	1.47	6.97
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1310	0.0044	0.0145	10.26	2.6281	1.62	0.20	0.96
PHENYLALANINE	2345	0.0084	0.0279	19.77	4.6152	2.85	0.39	1.85
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	1612	0.0096	0.0321	22.73	4.6962	2.90	0.90	4.25
HISTIDINE	125	0.0010	0.0032	2.26	0.4957	0.31	0.13	0.63
ARGININE	751	0.0059	0.0198	14.00	3.4468	2.13	1.11	5.24
TOTALS		0.4291	1.4289	1000.00	161.7827	100.00	21.16	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	300	0.0021	0.0069	1.2298	0.10	
GALACTOSAMINE	0	0.	0.	0.	0.	
AMMONIA	26100	0.1575	0.5245	8.9168	7.34	

TOTAL NITROGEN - MICROGRAMS 28.60

RUN NUMBER 1288A/1324B
SAMPLE POLINICES DUPLICATUS
LOCALITY BIRD SHOALS, N. C.
TYPE SHELL
FACTOR 3.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	5754	0.0241	0.0801	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	2500	0.0106	0.0352	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	34400	0.1179	0.3927	109.84	52.2690	13.01	5.50	10.46
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	13170	0.0470	0.1565	43.78	18.6443	4.64	2.19	4.17
SERINE	26800	0.1103	0.3673	102.74	38.6032	9.61	5.14	9.78
GLUTAMIC ACID	24330	0.0900	0.2998	83.85	44.1085	10.98	4.20	7.98
PROLINE	5600	0.0997	0.3321	92.89	38.2359	9.51	4.65	8.84
GLYCINE	47640	0.1747	0.5816	162.68	43.6634	10.86	8.14	15.49
ALANINE	53620	0.1948	0.6488	181.47	57.8032	14.38	9.08	17.28
CYSTINE (HALF)	0	0.	0.	16.05	6.9500	1.73	0.80	1.53
VALINE	12871	0.0449	0.1496	41.84	17.5257	4.36	2.09	3.98
METHIONINE	2448	0.0089	0.0295	17.15	9.1473	2.28	0.86	1.63
ISOLEUCINE	7757	0.0272	0.0907	25.37	11.8999	2.96	1.27	2.42
LEUCINE	21241	0.0758	0.2523	70.58	33.1027	8.24	3.53	6.72
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	2339	0.0078	0.0259	7.24	4.6925	1.17	0.36	0.69
PHENYLALANINE	4451	0.0159	0.0530	14.83	8.7600	2.18	0.74	1.41
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	3096	0.0185	0.0617	17.26	9.0196	2.24	1.73	3.29
HISTIDINE	591	0.0045	0.0151	4.22	2.3435	0.58	0.63	1.21
ARGININE	1113	0.0088	0.0293	8.20	5.1082	1.27	1.64	3.12
TOTALS		1.0815	3.6015	1000.00	401.8768	100.00	52.57	100.00

UREA	0	0.	0.	0.	
GLUCOSAMINE	160	0.0011	0.0037	0.6559	0.05
GALACTOSAMINE	168	0.0013	0.0042	0.7548	0.06
AMMONIA	223500	1.3488	4.4916	76.3569	62.88

TOTAL NITROGEN - MICROGRAMS 115.56

RUN NUMBER 1112A/1156B
SAMPLE SIPHONARIA ALTERNATA
LOCALITY BERMUDA
TYPE SHELL
FACTOR 1.666

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4426	0.0189	0.0315	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	4925	0.0221	0.0369	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	130700	0.5178	0.8627	133.44	114.8257	14.17	12.08	11.40
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	44570	0.1777	0.2961	45.80	35.2675	4.35	4.14	3.91
SERINE	55650	0.2236	0.3725	57.62	39.1450	4.83	5.21	4.92
GLUTAMIC ACID	97050	0.4000	0.6665	103.09	98.0575	12.10	9.33	8.81
PROLINE	16920	0.3169	0.5279	81.65	60.7747	7.50	7.39	6.98
GLYCINE	110800	0.4504	0.7504	116.07	56.3308	6.95	10.51	9.92
ALANINE	71720	0.2882	0.4802	74.27	42.7766	5.28	6.72	6.35
CYSTINE (HALF)	6783	0.0492	0.0819	16.16	12.6506	1.56	1.46	1.38
VALINE	64140	0.2435	0.4056	62.74	47.5169	5.87	5.68	5.36
METHIONINE	23600	0.0950	0.1583	29.65	28.5995	3.53	2.68	2.53
ISOLEUCINE	35310	0.1350	0.2248	34.78	29.4930	3.64	3.15	2.97
LEUCINE	74840	0.2940	0.4898	75.77	64.2545	7.93	6.86	6.47
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	14270	0.0597	0.0994	15.38	18.0120	2.22	1.39	1.31
PHENYLALANINE	70320	0.2874	0.4788	74.06	79.0867	9.76	6.70	6.33
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	23170	0.1304	0.2173	33.61	31.7653	3.92	6.08	5.74
HISTIDINE	800	0.0043	0.0072	1.12	1.1215	0.14	0.30	0.29
ARGININE	30000	0.1739	0.2897	44.82	50.4755	6.23	16.23	15.32
TOTALS		3.8880	6.4774	1000.00	810.1535	100.00	105.92	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	21740	0.1003	0.1671	29.9392	2.34	
GALACTOSAMINE	3382	0.0180	0.0300	5.3827	0.42	
AMMONIA	168700	0.5770	0.9614	16.3432	13.46	

TOTAL NITROGEN - MICROGRAMS 122.14

RUN NUMBER 1173A/1178B
SAMPLE SUCCINEA OVALIS
LOCALITY OTTAWA COUNTY, MICHIGAN
TYPE SHELL
FACTOR 26.666

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	0	0.	0.	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1600	0.0088	0.2353	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	18000	0.0771	2.0561	10.74	273.6620	1.42	28.78	1.04
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	16400	0.0760	2.0275	10.59	241.5106	1.25	28.38	1.03
SERINE	58030	0.2655	7.0804	36.97	744.0824	3.85	99.13	3.58
GLUTAMIC ACID	14730	0.0680	1.8126	9.46	266.6877	1.38	25.38	0.92
PROLINE	15640	0.4115	10.9723	57.29	1263.2382	6.54	153.61	5.55
GLYCINE	304712	3.7793	100.7801	526.25	7565.5618	39.18	1410.92	51.02
ALANINE	52700	0.1365	3.6401	19.01	324.2936	1.68	50.96	1.84
CYSTINE (HALF)	3830	0.0290	0.7743	4.04	93.7838	0.49	10.84	0.39
VALINE	144400	0.5936	15.8297	82.66	1854.4474	9.60	221.62	8.01
METHIONINE	424	0.0018	0.0486	1.36	38.9755	0.20	3.66	0.13
ISOLEUCINE	81070	0.3560	9.4941	49.58	1245.4395	6.45	132.92	4.81
LEUCINE	194200	0.8685	23.1598	120.94	3038.1060	15.73	324.24	11.73
DOPA	15520	0.0660	1.7592	9.19	346.9004	1.80	24.63	0.89
TYROSINE	45730	0.1985	5.2927	27.64	958.9828	4.97	74.10	2.68
PHENYLALANINE	27020	0.1149	3.0628	15.99	505.9380	2.62	42.88	1.55
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	18540	0.0833	2.2210	11.60	324.6834	1.68	62.19	2.25
HISTIDINE	300	0.0018	0.0477	0.25	7.3950	0.04	2.00	0.07
ARGININE	7173	0.0463	1.2340	6.44	214.9810	1.11	69.11	2.50
TOTALS		7.1825	191.5283	1000.00	19308.6691	100.00	2765.33	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	7192	0.0389	1.0369		185.7884		14.52	
GALACTOSAMINE	2407	0.0133	0.3559		63.7651		4.98	
AMMONIA	127200	0.3472	9.2587		157.3975		129.62	

TOTAL NITROGEN - MICROGRAMS 2914.45

RUN NUMBER 14244/14198
SAMPLE TURITELLA TEREBRA
LOCALITY MANILA BAY, PHILIPPINES
TYPE SHELL
FACTOR 0.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2281	0.0095	0.0048	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	30430	0.1043	0.0522	120.42	6.9425	13.42	0.73	9.89
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	16358	0.0584	0.0292	67.39	3.4771	6.72	0.41	5.54
SERINE	21840	0.0899	0.0449	103.77	4.7235	9.13	0.63	8.52
GLUTAMIC ACID	24420	0.0904	0.0452	104.30	6.6474	12.85	0.63	8.57
PROLINE	4597	0.0819	0.0409	94.50	4.7128	9.11	0.57	7.76
GLYCINE	35510	0.1302	0.0651	150.28	4.8868	9.44	0.91	12.35
ALANINE	21940	0.0797	0.0399	92.03	3.5513	6.86	0.56	7.56
CYSTINE (HALF)	0	0.	0.	7.88	0.4137	0.80	0.05	0.65
VALINE	8449	0.0295	0.0147	34.04	1.7274	3.34	0.21	2.80
METHIONINE	2822	0.0102	0.0051	11.79	0.7622	1.47	0.07	0.97
ISOLEUCINE	5557	0.0195	0.0098	22.53	1.2800	2.47	0.14	1.85
LEUCINE	16930	0.0604	0.0302	69.72	3.9616	7.66	0.42	5.73
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	2865	0.0095	0.0048	11.00	0.8630	1.67	0.07	0.90
PHENYLALANINE	3140	0.0112	0.0056	12.97	0.9279	1.79	0.08	1.07
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	4380	0.0262	0.0131	30.26	1.9160	3.70	0.37	4.97
HISTIDINE	1616	0.0124	0.0062	14.33	0.9633	1.86	0.26	3.53
ARGININE	5782	0.0457	0.0229	52.60	3.9845	7.70	1.28	17.35
TOTALS		0.8690	0.4345	1000.00	51.7410	100.00	7.38	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	1142	0.0078	0.0039		0.7029	0.05
GALACTOSAMINE	349	0.0026	0.0013		0.2354	0.02
AMMONIA	41090	0.2480	0.1240		2.1078	1.74

TOTAL NITROGEN - MICROGRAMS 9.19

RUN NUMBER 1320A/1318B
SAMPLE UMBRACULUM INDICUM
LOCALITY PAPAWWA, KOLAO ISL., INDONESIA
TYPE SHELL
FACTOR 2.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4520	0.0189	0.0473	0.	0.	0.	0.	0.
TAURINE	1793	0.0069	0.0173	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	10910	0.0461	0.1153	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	32790	0.1124	0.2810	117.06	37.4044	13.17	3.93	11.02
METHIONINE SULFONE	1100	0.0045	0.0113	0.	0.	0.	0.	0.
THREONINE	15600	0.0557	0.1392	57.98	16.5799	5.84	1.95	5.46
SERINE	24750	0.1019	0.2547	106.09	26.7645	9.42	3.57	9.99
GLUTAMIC ACID	27160	0.1005	0.2512	104.66	36.9662	13.02	3.52	9.86
PROLINE	6086	0.1084	0.2710	112.87	31.1968	10.98	3.79	10.63
GLYCINE	36550	0.1340	0.3350	139.55	25.1495	8.85	4.69	13.14
ALANINE	23490	0.0854	0.2134	88.89	19.0109	6.69	2.99	8.37
CYSTINE [HALF]	0	0.	0.	21.08	6.1283	2.16	0.71	1.98
VALINE	7263	0.0254	0.0634	26.40	7.4246	2.61	0.89	2.49
METHIONINE	3200	0.0116	0.0290	59.34	21.2573	7.48	1.99	5.59
ISOLEUCINE	4530	0.0159	0.0398	16.57	5.2173	1.84	0.56	1.56
LEUCINE	26990	0.0963	0.2407	100.27	31.5782	11.12	3.37	9.44
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1820	0.0061	0.0151	6.30	2.7412	0.97	0.21	0.59
PHENYLALANINE	3090	0.0111	0.0276	11.51	4.5656	1.61	0.39	1.08
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	2463	0.0147	0.0368	15.35	5.3870	1.90	1.03	2.89
HISTIDINE	210	0.0016	0.0040	1.68	0.6252	0.22	0.17	0.47
ARGININE	1750	0.0138	0.0346	14.42	6.0298	2.12	1.94	5.43
TOTALS		0.9711	2.4278	1000.00	284.0269	100.00	35.69	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	4985	0.0342	0.0856		15.3412		1.20	
GALACTOSAMINE	610	0.0046	0.0115		2.0575		0.16	
AMMONIA	63220	0.3815	0.9538		16.2151		13.35	

TOTAL NITROGEN - MICROGRAMS 50.41

RUN NUMBER 1329A/1325B
SAMPLE UMBRACULUM INDICUM
LOCALITY HAWAII
TYPE SHELL
FACTOR 2.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3352	0.0140	0.0350	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	800	0.0034	0.0085	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	18280	0.0627	0.1567	142.68	20.8525	15.80	2.19	13.15
METHIONINE SULFONE	659	0.0027	0.0068	0.	0.	0.	0.	0.
THREONINE	7211	0.0257	0.0643	58.67	7.6639	5.81	0.90	5.40
SERINE	10340	0.0426	0.1064	97.03	11.1816	8.47	1.49	8.93
GLUTAMIC ACID	13410	0.0496	0.1241	113.13	18.2517	13.83	1.74	10.41
PROLINE	3209	0.0572	0.1429	130.30	16.4493	12.46	2.00	11.99
GLYCINE	14170	0.0520	0.1299	118.45	9.7502	7.39	1.82	10.90
ALANINE	8525	0.0310	0.0774	70.63	6.8995	5.23	1.08	6.50
CYSTINE (HALF)	0	0.	0.	22.89	3.0396	2.30	0.35	2.11
VALINE	4584	0.0160	0.0400	36.48	4.6860	3.55	0.56	3.36
METHIONINE	1422	0.0051	0.0129	23.50	3.8947	2.95	0.37	2.19
ISOLEUCINE	3703	0.0130	0.0325	29.65	4.2648	3.23	0.46	2.73
LEUCINE	9861	0.0352	0.0880	80.21	11.5373	8.74	1.23	7.38
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1414	0.0047	0.0118	10.72	2.1297	1.61	0.16	0.99
PHENYLALANINE	2100	0.0075	0.0188	17.13	3.1029	2.35	0.26	1.58
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	1997	0.0120	0.0299	27.25	4.3678	3.31	0.84	5.01
HISTIDINE	159	0.0012	0.0031	2.78	0.4733	0.36	0.13	0.77
ARGININE	998	0.0079	0.0197	18.00	3.4387	2.61	1.11	6.63
TOTALS		0.4434	1.1085	1000.00	131.9836	100.00	16.68	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	2200	0.0151	0.0378		6.7704		0.53	
GALACTOSAMINE	300	0.0023	0.0056		1.0119		0.08	
AMMONIA	53440	0.3225	0.8063		13.7067		11.29	

TOTAL NITROGEN - MICROGRAMS 28.58

RUN NUMBER 959A/983B
SAMPLE UROSALPINX CINEREA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1495	0.0061	0.0615	0.	0.	0.	0.	0.
TAURINE	734	0.0031	0.0312	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	8563	0.0365	0.3651	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	47430	0.1886	1.8863	116.55	251.0612	12.72	26.41	9.87
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	25820	0.0989	0.9889	61.10	117.7970	5.97	13.84	5.18
SERINE	26450	0.1054	1.0538	65.11	110.7423	5.61	14.75	5.52
GLUTAMIC ACID	43860	0.1792	1.7917	110.71	263.6079	13.35	25.08	9.38
PROLINE	4822	0.0862	0.8618	53.25	99.2237	5.03	12.07	4.51
GLYCINE	47880	0.1960	1.9599	121.10	147.1286	7.45	27.44	10.26
ALANINE	41400	0.1752	1.7516	108.23	156.0536	7.90	24.52	9.17
CYSTINE (HALF)	1575	0.0126	0.1256	12.35	24.2060	1.23	2.80	1.05
VALINE	25150	0.1000	1.0002	61.80	117.1733	5.93	14.00	5.24
METHIONINE	0	0.	0.	20.37	49.2019	2.49	4.62	1.73
ISOLEUCINE	17830	0.0710	0.7098	43.86	93.1106	4.72	9.94	3.72
LEUCINE	39050	0.1560	1.5601	96.40	204.6576	10.37	21.84	8.17
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	2000	0.0085	0.0848	5.24	15.3583	0.78	1.19	0.44
PHENYLALANINE	13690	0.0589	0.5889	36.39	97.2876	4.93	8.25	3.08
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	14760	0.0630	0.6300	38.93	92.0941	4.66	17.64	6.60
HISTIDINE	1431	0.0071	0.0711	4.39	11.0300	0.56	2.99	1.12
ARGININE	11910	0.0715	0.7154	44.21	124.6375	6.31	40.06	14.98
TOTALS		1.6238	16.2377	1000.00	1974.3712	100.00	267.43	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	1000	0.0046	0.0459	8.2226	0.64
GALACTOSAMINE	995	0.0049	0.0495	8.8627	0.69
AMMONIA	95050	0.2997	2.9970	50.9491	41.96

TOTAL NITROGEN - MICROGRAMS 310.73

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*     XEQ

*     BINARY

LIBRARY ROUTINES REQUESTED

      .CI        .FL        .PT        .OE        XFIX       .CO        EXIT

LOADING MAP
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RUN NUMBER 1399A/1394B
SAMPLE VIVIPARUS GEORGIANUS
LOCALITY LAKE WOODRUFF, FLORIDA
TYPE SHELL
FACTOR 2.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3150	0.0132	0.0329	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	463	0.0020	0.0049	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	16780	0.0575	0.1438	47.98	19.1414	6.02	2.01	4.57
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	3820	0.0136	0.0341	11.37	4.0599	1.28	0.48	1.08
SERINE	9860	0.0406	0.1015	33.85	10.6626	3.35	1.42	3.22
GLUTAMIC ACID	8385	0.0310	0.0776	25.88	11.4124	3.59	1.09	2.46
PROLINE	3656	0.0651	0.1628	54.31	18.7407	5.89	2.28	5.17
GLYCINE	169600	0.6218	1.5545	518.66	116.6991	36.69	21.76	49.38
ALANINE	5436	0.0198	0.0494	16.48	4.3995	1.38	0.69	1.57
CYSTINE (HALF)	0	0.	0.	7.67	2.8564	0.90	0.33	0.75
VALINE	5791	0.0202	0.0505	16.86	5.9199	1.86	0.71	1.61
METHIONINE	3233	0.0117	0.0293	11.24	5.0255	1.58	0.47	1.07
ISOLEUCINE	8960	0.0315	0.0787	26.25	10.3193	3.24	1.10	2.50
LEUCINE	19720	0.0704	0.1759	58.68	23.0723	7.25	2.46	5.59
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	16620	0.0553	0.1382	46.09	25.0322	7.87	1.93	4.39
PHENYLALANINE	31890	0.1141	0.2852	95.17	47.1190	14.81	3.99	9.06
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	2904	0.0174	0.0434	14.50	6.3515	2.00	1.22	2.76
HISTIDINE	1333	0.0102	0.0256	8.53	3.9683	1.25	1.07	2.44
ARGININE	952	0.0075	0.0188	6.28	3.2802	1.03	1.05	2.39
TOTALS		1.2028	3.0070	1000.00	318.0603	100.00	44.08	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	96	0.0007	0.0016	0.2954	0.02
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	34570	0.2066	0.5216	8.8668	7.30

TOTAL NITROGEN - MICROGRAMS 51.40

RUN NUMBER 980A/989B
SAMPLE AEQUIPECTEN IRRADIANS
LOCALITY WOODS HOLE
TYPE LIGHT SHELL
FACTOR 6.667

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4137	0.0170	0.1134	0.	0.	0.	0.	0.
TAURINE	703	0.0030	0.0199	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1337	0.0057	0.0380	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	145100	0.5771	3.8470	308.27	512.0333	36.68	53.86	29.51
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	8300	0.0318	0.2119	16.98	25.2441	1.81	2.97	1.63
SERINE	100000	0.3984	2.6560	212.84	279.1207	20.00	37.18	20.37
GLUTAMIC ACID	24170	0.0987	0.6582	52.75	96.8436	6.94	9.22	5.05
PROLINE	1200	0.0214	0.1430	11.46	16.4617	1.18	2.00	1.10
GLYCINE	103800	0.4249	2.8326	226.98	212.6399	15.23	39.66	21.73
ALANINE	28070	0.1188	0.7918	63.45	70.5375	5.05	11.08	6.07
CYSTINE (HALF)	500	0.0040	0.0266	10.18	15.3918	1.10	1.78	0.97
VALINE	8896	0.0354	0.2359	18.90	27.6306	1.98	3.30	1.81
METHIONINE	500	0.0021	0.0138	3.86	7.1853	0.51	0.67	0.37
ISOLEUCINE	5381	0.0214	0.1428	11.44	18.7333	1.34	2.00	1.10
LEUCINE	10150	0.0406	0.2703	21.66	35.4631	2.54	3.78	2.07
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	200	0.0008	0.0057	0.45	1.0239	0.07	0.08	0.04
PHENYLALANINE	2500	0.0108	0.0717	5.75	11.8440	0.85	1.00	0.55
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	500	0.0021	0.0143	1.14	2.3173	0.17	0.40	0.22
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	12360	0.0528	0.3517	28.18	51.4124	3.68	9.85	5.40
HISTIDINE	700	0.0035	0.0232	1.86	3.5970	0.26	0.97	0.53
ARGININE	1200	0.0072	0.0481	3.85	8.3719	0.60	2.69	1.47
TOTALS		1.6774	12.5157	1000.00	1395.8514	100.00	182.50	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	700	0.0032	0.0214		3.8372		0.30	
GALACTOSAMINE	600	0.0030	0.0199		3.5629		0.28	
AMMONIA	124200	0.3916	2.6107		44.3823		36.55	

TOTAL NITROGEN - MICROGRAMS 219.63

RUN NUMBER 990A/988B
SAMPLE AEQUIPECTEN IRRADIANS
LOCALITY WOODS HOLE
TYPE DARK SHELL
FACTOR 6.667

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1604	0.0066	0.0440	0.	0.	0.	0.	0.
TAURINE	1323	0.0056	0.0375	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	19920	0.0849	0.5662	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	285500	1.1354	7.5694	285.50	1007.4811	33.88	105.97	27.95
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	21470	0.0822	0.5482	20.68	65.3002	2.20	7.67	2.02
SERINE	206800	0.8239	5.4926	207.17	577.2216	19.41	76.90	20.28
GLUTAMIC ACID	60200	0.2459	1.6394	61.83	241.2074	8.11	22.95	6.05
PROLINE	5651	0.1010	0.6733	25.40	77.5208	2.61	9.43	2.49
GLYCINE	215900	0.8837	5.8916	222.22	442.2827	14.87	82.48	21.76
ALANINE	59820	0.2531	1.6873	63.64	150.3226	5.05	23.62	6.23
CYSTINE [HALF]	3774	0.0301	0.2007	10.13	32.5169	1.09	3.76	0.99
VALINE	16160	0.0643	0.4284	16.16	50.1922	1.69	6.00	1.58
METHIONINE	0	0.	0.	19.29	76.3044	2.57	7.16	1.89
ISOLEUCINE	15290	0.0609	0.4058	15.30	53.2304	1.79	5.68	1.50
LEUCINE	26650	0.1065	0.7098	26.77	93.1126	3.13	9.94	2.62
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	400	0.0017	0.0113	0.43	2.0478	0.07	0.16	0.04
PHENYLALANINE	8132	0.0350	0.2332	8.80	38.5262	1.30	3.27	0.86
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	500	0.0021	0.0143	0.54	2.3173	0.08	0.40	0.11
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	12440	0.0531	0.3540	13.35	51.7452	1.74	9.91	2.61
HISTIDINE	800	0.0040	0.0265	1.00	4.1108	0.14	1.11	0.29
ARGININE	1200	0.0072	0.0481	1.81	8.3719	0.28	2.69	0.71
TOTALS		3.9873	26.5815	1000.00	2973.8121	100.00	379.10	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	700	0.0032	0.0214	3.8372	0.30
GALACTOSAMINE	500	0.0025	0.0166	2.9691	0.23
AMMONIA	134300	0.4235	2.8230	47.9915	39.52

TOTAL NITROGEN - MICROGRAMS 419.15

RUN NUMBER 1038A/1036B
SAMPLE AEQUIPECTEN IRRADIANS
LOCALITY HADLEY HARBOR, WOODS HOLE
TYPE MANTLE NO. 62
FACTOR 666.666

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	5000	0.0213	14.2328	0.	0.	0.	0.	0.
TAURINE	8862	0.0363	24.1685	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	300	0.0013	0.8991	0.	0.	0.	0.	0.
OH - PROLINE	1900	0.1118	74.5097	17.27	9770.4608	1.81	1043.14	1.33
ASPARTIC ACID	164500	0.6517	434.4951	100.69	57831.2943	10.71	6082.93	7.77
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	84220	0.3358	223.8701	51.88	26667.4012	4.94	3134.18	4.01
SERINE	88460	0.3554	236.9356	54.91	24899.5636	4.61	3317.10	4.24
GLUTAMIC ACID	200800	0.8277	551.7994	127.88	81186.2444	15.03	7725.19	9.87
PROLINE	18060	0.3382	225.4679	52.25	25958.1238	4.81	3156.55	4.03
GLYCINE	200000	0.8130	542.0049	125.61	40688.3060	7.54	7588.07	9.70
ALANINE	122300	0.4915	327.6402	75.93	29189.4611	5.41	4586.96	5.86
CYSTINE (HALF)	200	0.0014	0.9662	8.01	4185.3730	0.78	483.78	0.62
VALINE	94100	0.3572	238.1221	55.18	27896.0054	5.17	3333.71	4.26
METHIONINE	41040	0.1653	110.1892	25.72	16563.5971	3.07	1554.02	1.99
ISOLEUCINE	85690	0.3275	218.3322	50.60	28640.8126	5.30	3056.65	3.91
LEUCINE	127000	0.4989	332.6128	77.08	43632.1437	8.08	4656.58	5.95
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	300	0.0013	0.8363	0.19	151.5282	0.03	11.71	0.01
PHENYLALANINE	44790	0.1830	122.0268	28.28	20157.6152	3.73	1708.38	2.18
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	500	0.0024	1.6095	0.37	261.0492	0.05	45.07	0.06
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	85470	0.4811	320.7427	74.33	46889.3771	8.68	8980.80	11.48
HISTIDINE	1000	0.0054	3.6153	0.84	560.9539	0.10	151.84	0.19
ARGININE	81480	0.4723	314.8982	72.98	54858.4215	10.16	17634.30	22.54
TOTALS		6.4800	4319.9746	1000.00	539987.7285	100.00	78250.94	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	800	0.0037	2.4606		440.8638		34.45	
GALACTOSAMINE	300	0.0016	1.0664		191.0635		14.93	
AMMONIA	368400	1.2601	840.0881		14281.4976		11761.23	

TOTAL NITROGEN - MICROGRAMS 90061.56

RUN NUMBER 1255A/1434B
SAMPLE AEQUIPECTEN
LOCALITY WOODS HOLE
TYPE LIGAMENT
FACTOR 905.800

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2676	0.0112	10.1356	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	48480	0.1662	150.5423	19.54	20037.1778	2.63	2107.59	1.90
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	27640	0.0986	89.3516	11.60	10643.5599	1.40	1250.92	1.13
SERINE	175400	0.7220	653.9507	84.87	68723.6776	9.03	9155.31	8.24
GLUTAMIC ACID	32110	0.1188	107.6235	13.97	15834.6385	2.08	1506.73	1.36
PROLINE	4449	0.0792	71.7703	9.31	8262.9184	1.09	1004.78	0.90
GLYCINE	366166	5.1870	4698.3439	609.75	352704.6768	46.33	65776.81	59.20
ALANINE	59200	0.2151	194.8523	25.29	17359.3936	2.28	2727.93	2.46
CYSTINE (HALF)	0	0.	0.	0.94	879.2040	0.12	101.63	0.09
VALINE	16090	0.0562	50.8702	6.60	5959.4479	0.78	712.18	0.64
METHIONINE	236400	0.8557	775.1353	100.60	115665.6853	15.19	10851.89	9.77
ISOLEUCINE	19120	0.0671	60.8214	7.89	7978.5523	1.05	851.50	0.77
LEUCINE	3700	0.0132	11.9567	1.55	1568.4785	0.21	167.39	0.15
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	712	0.0024	2.1444	0.28	388.5446	0.05	30.02	0.03
PHENYLALANINE	208700	0.7467	676.3523	87.78	111726.6313	14.67	9468.93	8.52
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	21210	0.1269	114.9732	14.92	16807.9288	2.21	3219.25	2.90
HISTIDINE	342	0.0026	2.3775	0.31	368.8874	0.05	99.85	0.09
ARGININE	5163	0.0408	36.9988	4.80	6445.5569	0.85	2071.93	1.86
TOTALS		8.5098	7708.1998	1000.00	761354.9541	100.00	111104.67	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	0	0.	0.	0.	0.
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	87700	0.5293	479.4126	8150.0134	6711.78

TOTAL NITROGEN - MICROGRAMS 117816.44

RUN NUMBER 1276A71435B
SAMPLE AEQUIPECTEN
LOCALITY WOODS HOLE
TYPE MUSCLE
FACTOR 505.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	7744	0.0324	16.3542	0.	0.	0.	0.	0.
TAURINE	62800	0.2465	122.4836	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	109800	0.3764	190.1080	71.70	25303.3685	8.09	2661.51	5.60
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	50630	0.1867	91.2587	34.42	10870.7336	3.48	1277.62	2.69
SERINE	58480	0.2407	121.5696	45.85	12775.7448	4.09	1701.97	3.58
GLUTAMIC ACID	150300	0.5932	299.5727	112.98	44076.1273	14.10	4194.02	8.83
PROLINE	7185	0.1280	64.6266	24.37	7440.4618	2.38	904.77	1.91
GLYCINE	372500	1.3657	689.7566	260.14	51780.0311	16.56	9656.59	20.33
ALANINE	110300	0.4028	202.4237	76.34	18033.9315	5.77	2833.93	5.97
CYSTINE (HALF)	0	0.	0.	49.14	15779.6969	5.05	1823.94	3.84
VALINE	49550	0.1729	87.3481	32.94	10232.8286	3.27	1222.87	2.57
METHIONINE	28790	0.1042	52.6349	19.85	7854.1789	2.51	736.89	1.55
ISOLEUCINE	46450	0.1631	82.3666	31.07	10807.4687	3.46	1153.41	2.43
LEUCINE	88250	0.3148	159.0106	59.97	20859.0063	6.67	2226.15	4.69
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	17560	0.0584	29.4865	11.12	5343.0283	1.71	412.84	0.87
PHENYLALANINE	29640	0.1060	53.5568	20.20	8847.3766	2.83	749.82	1.58
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	66080	0.3955	199.7229	75.33	29197.4971	9.34	5592.24	11.78
HISTIDINE	13420	0.1030	52.0167	19.62	8070.9052	2.58	2184.70	4.60
ARGININE	36460	0.2884	145.6814	54.94	25379.1484	8.12	8158.16	17.18
TOTALS		5.2608	2660.0021	1003.00	312651.5312	100.00	47491.45	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	421	0.0029	1.4608	261.7397	20.45
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	77920	0.4702	237.4965	4037.4739	3324.98

TOTAL NITROGEN - MICROGRAMS 50836.88

RUN NUMBER 519A/592B
SAMPLE ANADARA TRANSVERSA
LOCALITY HADLEY HARBOR WOODS HOLE,MASS.
TYPE SHELL NO. 29
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.2900	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.3600	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			3.4100	142.01	453.8710	15.73	47.74	10.59
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.5800	24.15	69.0896	2.39	8.12	1.80
SERINE			0.8100	33.73	85.1229	2.95	11.34	2.51
GLUTAMIC ACID			0.7800	32.48	114.7614	3.98	10.92	2.42
PROLINE			1.8900	78.71	217.5957	7.54	26.46	5.87
GLYCINE			6.7100	279.43	503.7197	17.45	93.94	20.83
ALANINE			1.2900	53.72	114.9261	3.98	18.06	4.00
CYSTINE [HALF]			0.	8.65	25.1559	0.87	2.91	0.64
VALINE			0.9600	39.98	112.4640	3.90	13.44	2.98
METHIONINE			0.	13.54	48.5170	1.68	4.55	1.01
ISOLEUCINE			0.5500	22.90	72.1490	2.50	7.70	1.71
LEUCINE			0.7700	32.07	101.0086	3.50	10.78	2.39
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			1.3200	54.97	239.1708	8.29	18.48	4.10
PHENYLALANINE			0.9800	40.81	161.8862	5.61	13.72	3.04
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.8600	35.81	125.7234	4.36	24.08	5.34
HISTIDINE			0.3700	15.41	57.4092	1.99	15.54	3.45
ARGININE			2.2000	91.62	383.2620	13.28	123.20	27.32
TOTALS			24.1300	1000.00	2885.8325	100.00	450.98	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	2.9000	49.3000	40.60

TOTAL NITROGEN - MICROGRAMS 491.58

RUN NUMBER 542A/539B
SAMPLE ANADARA TRANSVERSA
LOCALITY GULF OF MEXICO,TEXAS
TYPE SHELL NO. 26
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.6400	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			1.7200	152.63	228.9320	16.72	24.08	13.04
METHIONINE SULFONE			0.1100	0.	0.	0.	0.	0.
THREONINE			0.4800	42.59	57.1776	4.18	6.72	3.64
SERINE			0.7600	67.44	79.8684	5.83	10.64	5.76
GLUTAMIC ACID			1.0800	95.84	158.9004	11.60	15.12	8.19
PROLINE			0.8000	70.99	92.1040	6.73	11.20	6.07
GLYCINE			1.7600	156.18	132.1232	9.65	24.64	13.34
ALANINE			0.7200	63.89	64.1448	4.68	10.08	5.46
CYSTINE (HALF)			0.	40.67	55.5164	4.05	6.42	3.48
VALINE			0.6800	60.34	79.6620	5.82	9.52	5.16
METHIONINE			0.	8.04	13.5158	0.99	1.27	0.69
ISOLEUCINE			0.4900	43.48	64.2782	4.69	6.86	3.72
LEUCINE			0.6900	61.23	90.5142	6.61	9.66	5.23
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.1600	14.20	28.9904	2.12	2.24	1.21
PHENYLALANINE			0.4500	39.93	74.3355	5.43	6.30	3.41
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.3800	33.72	55.5522	4.06	10.64	5.76
HISTIDINE			0.1100	9.76	17.0676	1.25	4.62	2.50
ARGININE			0.4400	39.05	76.6524	5.60	24.64	13.34
TOTALS			11.4700	1000.00	1369.3351	100.00	184.65	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.0600		10.7502		0.84	
GALACTOSAMINE			0.0200		3.5834		0.28	
AMMONIA			1.7000		28.9000		23.80	

TOTAL NITROGEN - MICROGRAMS 209.57

RUN NUMBER 529A/513B
SAMPLE ANADARA TRANSVERSA
LOCALITY BRETON SOUND, MISS. DELTA
TYPE SHELL NO. 28
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.2200	0.	0.	0.	0.	0.
TAURINE			0.0340	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.0090	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			1.4400	122.36	191.6640	12.94	20.16	8.88
METHIONINE SULFONE			0.3400	0.	0.	0.	0.	0.
THREONINE			0.4700	39.94	55.9864	3.78	6.58	2.90
SERINE			0.6100	51.83	64.1049	4.33	8.54	3.76
GLUTAMIC ACID			1.0100	85.82	148.6013	10.03	14.14	6.23
PROLINE			0.8400	71.38	96.7092	6.53	11.76	5.18
GLYCINE			1.7800	151.25	133.6246	9.02	24.92	10.98
ALANINE			0.7200	61.18	64.1448	4.33	10.08	4.44
CYSTINE (HALF)			0.	16.18	23.0702	1.56	2.67	1.17
VALINE			0.6000	50.98	70.2900	4.74	8.40	3.70
METHIONINE			0.0500	28.73	50.4499	3.40	4.73	2.08
ISOLEUCINE			0.4600	39.09	60.3428	4.07	6.44	2.84
LEUCINE			0.6200	52.68	81.3316	5.49	8.68	3.82
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.2200	18.69	39.8618	2.69	3.08	1.36
PHENYLALANINE			0.4100	34.84	67.7279	4.57	5.74	2.53
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.7800	66.28	114.0282	7.70	21.84	9.62
HISTIDINE			0.1700	14.45	26.3772	1.78	7.14	3.14
ARGININE			1.1100	94.32	193.3731	13.05	62.16	27.38
TOTALS			11.8930	1000.00	1481.6879	100.00	227.06	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.		0.		0.	
GALACTOSAMINE			0.		0.		0.	
AMMONIA			3.7000		62.9000		51.80	

TOTAL NITROGEN - MICROGRAMS 278.86

RUN NUMBER 535A/531B
SAMPLE ANADARA TRANSVERSA
LOCALITY HADLEY HARBOR WOODS HOLE,MASS.
TYPE SHELL NO. 25
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.3400	0.	0.	0.	0.	0.
TAURINE			0.0800	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.0040	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			1.7900	140.85	238.2490	15.53	25.06	12.48
METHIONINE SULFONE			0.2600	0.	0.	0.	0.	0.
THREONINE			0.5900	46.43	70.2808	4.58	8.26	4.11
SERINE			1.5800	124.32	166.0422	10.82	22.12	11.01
GLUTAMIC ACID			1.4800	116.46	217.7524	14.19	20.72	10.31
PROLINE			0.8900	70.03	102.4657	6.68	12.46	6.20
GLYCINE			1.7600	138.49*	132.1232	8.61	24.64	12.27
ALANINE			0.9200	72.39	81.9628	5.34	12.88	6.41
CYSTINE (HALF)			0.0120	26.20	40.3265	2.63	4.66	2.32
VALINE			0.5400	42.49	63.2610	4.12	7.56	3.76
METHIONINE			0.0180	18.55	35.1714	2.29	3.30	1.64
ISOLEUCINE			0.4900	38.56	64.2782	4.19	6.86	3.41
LEUCINE			0.7300	57.44	95.7614	6.24	10.22	5.09
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.1300	10.23	23.5547	1.54	1.82	0.91
PHENYLALANINE			0.5100	40.13	84.2469	5.49	7.14	3.55
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.2300	18.10	33.6237	2.19	6.44	3.21
HISTIDINE			0.0900	7.08	13.9644	0.91	3.78	1.88
ARGININE			0.4100	32.26	71.4261	4.65	22.96	11.43
TOTALS			12.8540	1000.00	1534.4903	100.00	200.88	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.0800	14.3336	1.12
GALACTOSAMINE	0.0800	14.3336	1.12
AMMONIA	2.9000	49.3000	40.60

TOTAL NITROGEN - MICROGRAMS 243.72

RUN NUMBER 53JA/518B
SAMPLE ANADARKA TRANSVERSA
LOCALITY BRETON GUSIER PASS, MISS. DELT
TYPE SHELL NO. 27
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.6600	0.	0.	0.	0.	0.
TAURINE			0.0300	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.0600	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			1.2600	108.21	167.7060	11.61	17.64	8.24
METHIONINE SULFONE			0.2100	0.	0.	0.	0.	0.
THREONINE			0.5700	48.95	67.8984	4.70	7.98	3.73
SERINE			0.8400	72.14	88.2756	6.11	11.76	5.49
GLUTAMIC ACID			0.9900	85.02	145.6587	10.08	13.86	6.47
PROLINE			0.7500	64.41	86.3475	5.98	10.50	4.90
GLYCINE			1.7700	152.01	132.8739	9.20	24.78	11.57
ALANINE			0.8100	69.56	72.1629	5.00	11.34	5.30
CYSTINE (HALF)			0.	43.09	60.7688	4.21	7.02	3.28
VALINE			0.4800	41.22	56.2320	3.89	6.72	3.14
METHIONINE			0.0150	20.79	36.1273	2.50	3.39	1.58
ISOLEUCINE			0.4200	36.07	55.0956	3.81	5.88	2.75
LEUCINE			0.5700	48.95	74.7726	5.18	7.98	3.73
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.2300	19.75	41.6737	2.89	3.22	1.50
PHENYLALANINE			0.5100	43.80	84.2469	5.83	7.14	3.33
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.5900	50.67	86.2521	5.97	16.52	7.72
HISTIDINE			0.2700	23.19	41.8932	2.90	11.34	5.30
ARGININE			0.8400	72.14	146.3364	10.13	47.04	21.97
TOTALS			11.6750	1000.00	1444.3216	100.00	214.11	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.		0.		0.	
GALACTOSAMINE			0.		0.		0.	
AMMONIA			1.9000		32.3000		26.60	

TOTAL NITROGEN - MICROGRAMS 240.71

RUN NUMBER 1333A/1332B
SAMPLE ARCTICA ISLANDICA
LOCALITY GEORGES BANK
TYPE SHELL
FACTOR 6.660

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1255	0.0052	0.0350	0.	0.	0.	0.	0.
TAURINE	684	0.0026	0.0176	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	95540	0.3275	2.1813	114.06	290.3361	12.73	30.54	10.29
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	60230	0.2150	1.4316	74.85	170.5311	7.48	20.04	6.75
SERINE	57320	0.2359	1.5713	82.16	165.1296	7.24	22.00	7.41
GLUTAMIC ACID	69400	0.2568	1.7103	89.43	251.6339	11.04	23.94	8.07
PROLINE	25220	0.4492	2.9914	156.41	344.3960	15.10	41.88	14.11
GLYCINE	111900	0.4103	2.7324	142.87	205.1190	9.00	38.25	12.89
ALANINE	77170	0.2804	1.8676	97.65	166.3808	7.30	26.15	8.81
CYSTINE (HALF)	0	0.	0.	2.20	5.0944	0.22	0.59	0.20
VALINE	32090	0.1120	0.7460	39.00	87.3900	3.83	10.44	3.52
METHIONINE	13270	0.0480	0.3199	16.73	47.7386	2.09	4.48	1.51
ISOLEUCINE	20580	0.0723	0.4813	25.17	63.1427	2.77	6.74	2.27
LEUCINE	29480	0.1052	0.7005	36.62	91.8853	4.03	9.81	3.30
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	30070	0.1000	0.6659	34.82	120.6525	5.29	9.32	3.14
PHENYLALANINE	22290	0.0797	0.5311	27.77	87.7377	3.85	7.44	2.51
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	3152	0.0208	0.1383	7.23	22.4365	0.98	3.87	1.31
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	12250	0.0733	0.4882	25.53	71.3759	3.13	13.67	4.61
HISTIDINE	2635	0.0202	0.1347	7.04	20.8973	0.92	5.66	1.91
ARGININE	7425	0.0587	0.3912	20.46	68.1548	2.99	21.91	7.38
TOTALS		2.8732	19.1356	1000.00	2280.0324	100.00	296.73	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	7810	0.0537	0.3574	64.0292	5.00
GALACTOSAMINE	9790	0.0737	0.4910	87.9679	6.87
AMMONIA	30925	0.1866	1.2430	21.1305	17.40

TOTAL NITROGEN - MICROGRAMS 326.00

RUN NUMBER 1296A/1398B
SAMPLE ARCTICA ISLANDICA
LOCALITY GEORGES BANK
TYPE PERIOSTRACUM
FACTOR 1000.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1226	0.0051	5.1265	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	26040	0.0893	89.2698	16.40	11881.8100	2.22	1249.78	1.45
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	7656	0.0273	27.3233	5.02	3254.7563	0.61	382.53	0.44
SERINE	30830	0.1269	126.8985	23.31	13335.7674	2.49	1776.58	2.06
GLUTAMIC ACID	19200	0.0710	71.0453	13.05	10452.8991	1.95	994.63	1.16
PROLINE	7792	0.1388	138.7711	25.49	15976.7223	2.98	1942.80	2.26
GLYCINE	408312	3.6392	3639.2301	668.55	73197.0000	51.01	50949.22	59.17
ALANINE	30800	0.1119	111.9186	20.56	9970.8285	1.86	1566.86	1.82
CYSTINE (HALF)	10983	0.0733	73.2688	14.13	9319.0170	1.74	1077.17	1.25
VALINE	17220	0.0601	60.1047	11.04	7041.2670	1.31	841.47	0.98
METHIONINE	30070	0.1089	108.8507	20.00	16242.6982	3.03	1523.91	1.77
ISOLEUCINE	32980	0.1158	115.8209	21.28	15193.3850	2.84	1621.49	1.88
LEUCINE	17800	0.0635	63.5034	11.67	8330.3746	1.56	889.05	1.03
DOPA	13570	0.0486	48.5510	8.92	9573.7685	1.79	679.71	0.79
TYROSINE	114300	0.3800	380.0499	69.82	68861.2367	12.86	5320.70	6.18
PHENYLALANINE	19430	0.0695	69.5170	12.77	11483.5123	2.14	973.24	1.13
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	17505	0.1048	104.7576	19.24	15314.5179	2.86	2933.21	3.41
HISTIDINE	5985	0.0306	30.5833	5.62	4745.3001	0.89	1284.50	1.49
ARGININE	22795	0.1803	180.3402	33.13	31417.0644	5.87	10099.05	11.73
TOTALS		5.4449	5444.9307	1000.00	535591.9209	100.00	86105.89	100.00

UREA	0	0.	0.	0.	
GLUCOSAMINE	950	0.0065	6.5270	1169.4366	91.38
GALACTOSAMINE	150	0.0011	1.1295	202.3758	15.81
AMMONIA	97850	0.5905	590.5250	10038.9257	8267.35

TOTAL NITROGEN - MICROGRAMS 94480.43

RUN NUMBER 1392A/1367B
SAMPLE CORBICULA CONSOBRINA
LOCALITY NILE RIVER, EGYPT
TYPE SHELL
FACTOR 2.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3707	0.0155	0.0388	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	67320	0.2308	0.5770	215.73	76.7937	24.71	8.08	19.93
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	10430	0.0372	0.0931	34.79	11.0851	3.57	1.30	3.21
SERINE	20970	0.0863	0.2158	80.68	22.6769	7.30	3.02	7.45
GLUTAMIC ACID	17960	0.0665	0.1661	62.12	24.4445	7.87	2.33	5.74
PROLINE	5017	0.0893	0.2234	83.52	25.7172	8.28	3.13	7.72
GLYCINE	72340	0.2652	0.6631	247.92	49.7760	16.02	9.28	22.90
ALANINE	17060	0.0642	0.1604	59.98	14.2926	4.60	2.25	5.54
CYSTINE (HALF)	0	0.	0.	10.38	3.3615	1.08	0.39	0.96
VALINE	9361	0.0327	0.0817	30.54	9.5693	3.08	1.14	2.82
METHIONINE	3419	0.0124	0.0309	11.57	4.6170	1.49	0.43	1.07
ISOLEUCINE	4145	0.0146	0.0364	13.61	4.7738	1.54	0.51	1.26
LEUCINE	9523	0.0340	0.0849	31.76	11.1419	3.59	1.19	2.93
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	15260	0.0507	0.1268	47.43	22.9839	7.40	1.78	4.38
PHENYLALANINE	5993	0.0214	0.0536	20.04	8.8550	2.85	0.75	1.85
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5399	0.0323	0.0808	30.20	11.8085	3.80	2.26	5.58
HISTIDINE	970	0.0074	0.0186	6.96	2.8877	0.93	0.78	1.93
ARGININE	1720	0.0137	0.0341	12.76	5.9471	1.91	1.91	4.72
TOTALS		1.0742	2.6855	1000.00	310.7317	100.00	40.53	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	1214	0.0063	0.0209		3.7360		0.29	
GALACTOSAMINE	319	0.0024	0.0060		1.0760		0.08	
AMMONIA	46770	0.2823	0.7056		11.9959		9.88	

TOTAL NITROGEN - MICROGRAMS 50.78

RUN NUMBER 1298A/1331B
SAMPLE CORBICULA CONSOBRINA
LOCALITY NILE RIVER, EGYPT
TYPE PERIOSTRACUM
FACTOR 1250.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	5862	0.0245	30.6398	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	25860	0.0887	110.8159	22.93	14749.5972	3.00	1551.42	2.07
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	8567	0.0306	38.2182	7.91	4552.5564	0.93	535.06	0.71
SERINE	15700	0.0646	80.7779	16.71	8488.9535	1.73	1130.89	1.51
GLUTAMIC ACID	12960	0.0480	59.9445	12.40	8819.6336	1.79	839.22	1.12
PROLINE	4963	0.0884	110.4853	22.86	12720.1734	2.59	1546.79	2.07
GLYCINE	136312	2.4220	3027.4977	626.43	227274.2520	46.25	42384.97	56.58
ALANINE	30286	0.1101	137.5636	28.46	12255.5402	2.49	1925.89	2.57
CYSTINE (HALF)	0	0.	0.	4.54	2657.8291	0.54	307.21	0.41
VALINE	13450	0.0469	58.6824	12.14	6874.6400	1.40	821.55	1.10
METHIONINE	36830	0.1333	166.6516	34.48	24867.7492	5.06	2333.12	3.11
ISOLEUCINE	10730	0.0377	47.1027	9.75	6178.9350	1.26	659.44	0.88
LEUCINE	30390	0.1084	135.5244	28.04	17778.0957	3.62	1897.34	2.53
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	108600	0.3611	451.3716	93.40	81784.0148	16.64	6319.20	8.44
PHENYLALANINE	31060	0.1111	138.9088	28.74	22946.3389	4.67	1944.72	2.60
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	8270	0.0495	61.8642	12.80	9043.9205	1.84	1732.20	2.31
HISTIDINE	10540	0.0809	101.1128	20.92	15688.6646	3.19	4246.74	5.67
ARGININE	8540	0.0676	84.4541	17.47	14712.7511	2.99	4729.43	6.31
TOTALS		3.8733	4841.6154	1000.00	491393.6426	100.00	74905.20	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	11015	0.0757	94.5981	16949.1372	1324.37
GALACTOSAMINE	6480	0.0488	60.9940	10928.2906	853.92
AMMONIA	90550	0.5465	683.0869	11612.4773	9563.22

TOTAL NITROGEN - MICROGRAMS 86646.71

RUN NUMBER 1340A/1336B
SAMPLE CRASSOSTREA VIRGINICA
LOCALITY MBL TANK & CARRIKER
TYPE SHELL
FACTOR 5.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	24340	0.1018	0.5089	0.	0.	0.	0.	0.
TAURINE	162	0.0006	0.0031	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1025	0.0043	0.0217	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	393500	1.3490	6.7449	189.75	897.7520	22.97	94.43	17.04
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	24730	0.0883	0.4413	12.41	52.5667	1.34	6.18	1.11
SERINE	336100	1.3916	6.9582	195.75	731.2395	18.71	97.42	17.58
GLUTAMIC ACID	64620	0.2391	1.1956	33.63	175.9027	4.50	16.74	3.02
PROLINE	17280	0.3077	1.5387	43.29	177.1546	4.53	21.54	3.89
GLYCINE	92012	2.2596	11.2979	317.83	848.1327	21.70	158.17	28.54
ALANINE	89050	0.3236	1.6179	45.51	144.1400	3.69	22.65	4.09
CYSTINE (HALF)	0	0.	0.	10.34	44.5098	1.14	5.14	0.93
VALINE	33810	0.1180	0.5901	16.60	69.1246	1.77	8.26	1.49
METHIONINE	6001	0.0239	0.1195	3.91	20.7486	0.53	1.95	0.35
ISOLEUCINE	10270	0.0361	0.1803	5.07	23.6562	0.61	2.52	0.46
LEUCINE	37310	0.1331	0.6655	18.72	87.3051	2.23	9.32	1.68
DOPA	1100	0.0039	0.0197	0.55	3.8803	0.10	0.28	0.05
TYROSINE	75640	0.2522	1.2608	35.47	228.4530	5.84	17.65	3.18
PHENYLALANINE	24900	0.0891	0.4454	12.53	73.5819	1.88	6.24	1.13
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	305	0.0020	0.0100	0.28	1.6299	0.04	0.28	0.05
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	31470	0.1883	0.9417	26.49	137.6601	3.52	26.37	4.76
HISTIDINE	7935	0.0609	0.3045	8.57	47.2446	1.21	12.79	2.31
ARGININE	20930	0.1656	0.8279	23.29	144.2332	3.69	46.36	8.36
TOTALS		7.1387	35.6937	1000.00	3908.9155	100.00	554.28	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	1763	0.0121	0.0606		10.8511		0.85	
GALACTOSAMINE	300	0.0023	0.0113		2.0238		0.16	
AMMONIA	130200	0.7856	3.9288		66.7894		55.00	

TOTAL NITROGEN - MICROGRAMS 610.29

RUN NUMBER 1275A/1273B
SAMPLE CRASSOSTREA VIRGINICA
LOCALITY VIRGINIA
TYPE LIGAMENT
FACTOR 227.270

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	52930	0.2213	50.3007	0.	0.	0.	0.	0.
TAURINE	2449	0.0095	2.1494	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	94400	0.3992	90.7158	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	161412	2.3507	534.2442	179.20	71107.9054	20.09	7479.42	17.52
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	107900	0.3851	87.5176	29.36	10425.0971	2.95	1225.25	2.87
SERINE	213200	0.8775	199.4401	66.90	20959.1565	5.92	2792.16	6.54
GLUTAMIC ACID	212600	0.7867	178.7885	59.97	26305.1573	7.43	2503.04	5.86
PROLINE	102300	1.8219	414.0645	138.89	47671.2443	13.47	5796.90	13.58
GLYCINE	37112	2.0563	467.7887	156.91	35116.9003	9.92	6549.04	15.34
ALANINE	347400	1.2624	286.8953	96.23	25559.5059	7.22	4016.53	9.41
CYSTINE (HALF)	0	0.	0.	12.78	4615.3148	1.30	533.47	1.25
VALINE	129500	0.4520	102.7276	34.46	12034.5414	3.40	1438.19	3.37
METHIONINE	450100	1.6293	370.2958	151.69	67481.2648	19.06	6331.17	14.83
ISOLEUCINE	79460	0.2791	63.4201	21.27	8319.4490	2.35	887.88	2.08
LEUCINE	51310	0.1831	41.6027	13.95	5457.4360	1.54	582.44	1.36
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	39090	0.1300	29.5394	9.91	5352.2497	1.51	413.55	0.97
PHENYLALANINE	53390	0.1910	43.4130	14.56	7171.4004	2.03	607.78	1.42
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	19199	0.1149	26.1122	8.76	3817.3496	1.08	731.14	1.71
HISTIDINE	2709	0.0208	4.7251	1.58	733.1392	0.21	198.45	0.46
ARGININE	5939	0.0470	10.6785	3.58	1860.2934	0.53	597.99	1.40
TOTALS		13.2196	3004.4193	1000.00	353987.4023	100.00	42684.42	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	0	0.	0.		0.	0.
GALACTOSAMINE	0	0.	0.		0.	0.
AMMONIA	176533	1.0654	242.1283		4116.1806	3389.80

TOTAL NITROGEN - MICROGRAMS 46074.22

RUN NUMBER 966A/977B
SAMPLE LAEVICARDIUM MORTONI
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 16.666

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	5771	0.0237	0.3955	0.	0.	0.	0.	0.
TAURINE	1832	0.0078	0.1297	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	20000	0.0853	1.4211	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	90300	0.3591	5.9850	126.95	796.6096	14.38	83.79	11.96
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	44110	0.1689	2.8155	59.72	335.3870	6.05	39.42	5.63
SERINE	42680	0.1700	2.8339	60.11	297.8129	5.37	39.67	5.66
GLUTAMIC ACID	62590	0.2557	4.2611	90.39	626.9402	11.31	59.66	8.52
PROLINE	18060	0.3231	5.3855	114.24	620.0379	11.19	75.40	10.76
GLYCINE	113700	0.4654	7.7565	164.53	582.2839	10.51	108.59	15.50
ALANINE	39910	0.1689	2.8142	59.69	250.7185	4.52	39.40	5.62
CYSTINE [HALF]	32680	0.2607	4.3450	100.83	575.7751	10.39	66.55	9.50
VALINE	43200	0.1718	2.8633	60.73	335.4330	6.05	40.09	5.72
METHIONINE	7282	0.0302	0.5036	37.91	266.6650	4.81	25.02	3.57
ISOLEUCINE	21900	0.0872	1.4530	30.82	190.6003	3.44	20.34	2.90
LEUCINE	25310	0.1011	1.6852	35.75	221.0702	3.99	23.59	3.37
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	4673	0.0198	0.3301	7.00	59.8055	1.08	4.62	0.66
PHENYLALANINE	9414	0.0405	0.6750	14.32	111.4961	2.01	9.45	1.35
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	16002	0.0683	1.1382	24.14	166.3991	3.00	31.87	4.55
HISTIDINE	823	0.0041	0.0681	1.45	10.5722	0.19	2.86	0.41
ARGININE	5378	0.0323	0.5384	11.42	93.7971	1.69	30.15	4.30
TOTALS		2.8440	47.3980	1000.00	5541.4038	100.00	700.47	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	1000	0.0046	0.0765	13.7038	1.07
GALACTOSAMINE	1000	0.0050	0.0829	14.8449	1.16
AMMONIA	137400	0.4332	7.2203	122.7446	101.08

TOTAL NITROGEN - MICROGRAMS 803.79

RUN NUMBER 952A/9546
SAMPLE LAEVICARDIUM MORTONI
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 16.660

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4015	0.0165	0.2744	0.	0.	0.	0.	0.
TAURINE	2841	0.0121	0.2010	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	2565	0.0115	0.1908	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	79060	0.3352	5.5846	119.60	743.3169	13.84	78.19	11.50
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	39920	0.1652	2.7516	58.93	327.7733	6.10	38.52	5.66
SERINE	37040	0.1513	2.5208	53.98	264.9085	4.93	35.29	5.19
GLUTAMIC ACID	57100	0.2364	3.9383	84.34	579.4358	10.79	55.14	8.11
PROLINE	17640	0.0130	5.2143	111.66	600.3209	11.18	73.00	10.74
GLYCINE	139000	0.5810	9.6792	207.28	726.6148	13.53	135.51	19.93
ALANINE	36200	0.1544	2.5717	55.07	229.1125	4.27	36.00	5.29
CYSTINE (HALF)	34030	0.2675	4.4571	103.62	587.2094	10.94	67.87	9.98
VALINE	45420	0.1742	2.9014	62.13	339.9044	6.33	40.62	5.97
METHIONINE	17440	0.0703	1.1713	28.77	200.5016	3.73	18.81	2.77
ISOLEUCINE	29730	0.0895	1.4918	31.95	195.6883	3.64	20.88	3.07
LEUCINE	25470	0.0930	1.5498	33.19	203.3005	3.79	21.70	3.19
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	3300	0.0133	0.2220	4.75	40.2215	0.75	3.11	0.46
PHENYLALANINE	12230	0.0560	0.9323	19.97	154.0048	2.87	13.05	1.92
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	9609	0.0447	0.7453	15.96	108.9523	2.03	20.87	3.07
HISTIDINE	643	0.0043	0.0724	1.55	11.2326	0.21	3.04	0.45
ARGININE	4414	0.0197	0.3258	7.04	57.2751	1.07	18.41	2.71
TOTALS		2.0255	47.1275	1000.00	5369.7733	100.00	680.01	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	0	0.	0.	0.	0.	
GALACTOSAMINE	0	0.	0.	0.	0.	
AMMONIA	17900	0.2360	3.9524	67.4125	55.52	

TOTAL NITROGEN - MICROGRAMS 735.53

RUN NUMBER 967A/981B
SAMPLE LAEVICARDIUM MORTONI
LOCALITY WOODS HOLE
TYPE MANTLE
FACTOR 1000.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1572	0.0065	6.4638	0.	0.	0.	0.	0.
TAURINE	19300	0.0820	81.9707	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1108	0.0047	4.7239	0.	0.	0.	0.	0.
OH - PROLINE	1371	0.0572	57.1965	9.25	7500.1764	0.99	800.75	0.78
ASPARTIC ACID	178200	0.7067	708.6896	114.66	94326.5854	12.48	9921.65	9.68
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	89160	0.3415	341.4784	55.25	40676.9022	5.38	4780.70	4.66
SERINE	89950	0.3584	358.3665	57.98	37660.7389	4.98	5017.13	4.90
GLUTAMIC ACID	199700	0.8158	815.7680	131.99	120023.9415	15.88	11420.75	11.14
PROLINE	19060	0.3407	340.6613	55.12	39220.3359	5.19	4769.26	4.65
GLYCINE	214800	0.8792	879.2468	142.26	66005.0592	8.73	12309.46	12.01
ALANINE	118400	0.5010	500.9520	81.05	44629.8116	5.90	7013.33	6.84
CYSTINE (HALF)	2910	0.0232	23.2150	17.34	12983.4665	1.72	1500.73	1.46
VALINE	89660	0.3566	356.5719	57.69	41772.3960	5.53	4992.01	4.87
METHIONINE	37410	0.1552	155.2282	25.81	23799.7970	3.15	2232.93	2.18
ISOLEUCINE	79000	0.3145	314.4904	50.88	41254.8565	5.46	4402.87	4.30
LEUCINE	117800	0.4706	470.6352	76.15	61737.9302	8.17	6588.89	6.43
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	2000	0.0085	8.4764	1.37	1535.8339	0.20	118.67	0.12
PHENYLALANINE	43690	0.1880	187.9544	30.41	31048.1870	4.11	2631.36	2.57
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	1580	0.0068	6.7724	1.10	1098.4149	0.15	189.63	0.19
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	62190	0.2654	265.4289	42.95	38803.0562	5.13	7432.01	7.25
HISTIDINE	7305	0.0363	36.2891	5.87	5630.6200	0.74	1524.14	1.49
ARGININE	44103	0.2649	264.9306	42.86	46153.5629	6.11	14836.11	14.48
TOTALS		6.1855	6185.5101	1000.00	755861.6670	100.00	102482.37	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	1097	0.0050	5.0344	902.0169	70.48	
GALACTOSAMINE	500	0.0025	2.4857	445.3642	34.80	
AMMONIA	219600	0.6930	693.0475	11781.8067	9702.66	

TOTAL NITROGEN - MICROGRAMS 112290.32

RUN NUMBER 1113A/1157B
SAMPLE LIMOPSIS COMPRESSUS
LOCALITY SALINA CRUZ, MEXICO
TYPE SHELL NO. 128
FACTOR 6.667

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2953	0.0126	0.0841	0.	0.	0.	0.	0.
TAURINE	1000	0.0041	0.0273	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	61900	0.2452	1.6350	142.77	217.6125	15.96	22.89	10.48
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	12340	0.0492	0.3280	28.64	39.0730	2.87	4.59	2.10
SERINE	36380	0.1462	0.9744	85.09	102.4009	7.51	13.64	6.25
GLUTAMIC ACID	27800	0.1146	0.7639	66.71	112.3983	8.24	10.70	4.90
PROLINE	9590	0.0468	0.3121	27.25	35.9328	2.64	4.37	2.00
GLYCINE	114100	0.4638	3.0921	270.01	232.1247	17.02	43.29	19.82
ALANINE	41450	0.0862	0.5746	50.18	51.1945	3.75	8.04	3.68
CYSTINE (HALF)	4250	0.0309	0.2061	25.56	35.4502	2.60	4.10	1.88
VALINE	4990	0.0455	0.3032	26.47	35.5145	2.60	4.24	1.94
METHIONINE	3028	0.0243	0.1618	14.13	24.1506	1.77	2.27	1.04
ISOLEUCINE	8920	0.0341	0.2274	19.86	29.8304	2.19	3.18	1.46
LEUCINE	15110	0.0633	0.4219	36.84	55.3470	4.06	5.91	2.70
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1000	0.0042	0.0279	2.43	5.0509	0.37	0.39	0.18
PHENYLALANINE	23660	0.0926	0.6173	53.91	101.9798	7.48	8.64	3.96
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	280	0.0014	0.0090	0.79	1.4619	0.11	0.25	0.12
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	13100	0.0737	0.4916	42.93	71.8668	5.27	13.76	6.30
HISTIDINE	300	0.0016	0.0108	0.95	1.6828	0.12	0.46	0.21
ARGININE	31260	0.1812	1.2081	105.49	210.4638	15.44	67.65	30.98
TOTALS		1.7215	11.4767	1000.00	1363.5352	100.00	218.38	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	3584	0.0165	0.1102	19.7505	1.54
GALACTOSAMINE	250	0.0013	0.0089	1.5922	0.12
AMMONIA	134900	0.4614	3.0762	52.2952	43.07

TOTAL NITROGEN - MICROGRAMS 263.11

RUN NUMBER 1327A/1311B
SAMPLE LYONSIA HYALINA
LOCALITY LONG ISLAND, NEW YORK
TYPE SHELL
FACTOR 28.170

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4097	0.0171	0.4826	0.	0.	0.	0.	0.
TAURINE	500	0.0019	0.0544	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	316	0.0013	0.0376	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	67900	0.2328	6.5572	34.00	872.7669	4.21	91.80	2.84
METHIONINE SULFONE	7129	0.0294	0.8281	0.	0.	0.	0.	0.
THREONINE	19890	0.0710	1.9996	10.37	238.1980	1.15	28.00	0.87
SERINE	161200	0.6635	18.6911	96.92	1964.2482	9.47	261.68	8.09
GLUTAMIC ACID	49980	0.1849	5.2098	27.01	766.5114	3.69	72.94	2.25
PROLINE	8453	0.1505	4.2408	21.99	488.2435	2.35	59.37	1.83
GLYCINE	162112	2.5899	72.9580	378.30	5476.9552	26.40	1021.41	31.57
ALANINE	297900	1.0825	30.4936	158.11	2716.6762	13.10	426.91	13.19
CYSTINE (HALF)	0	0.	0.	2.07	48.2399	0.23	5.58	0.17
VALINE	36510	0.1274	3.5898	18.61	420.5487	2.03	50.26	1.55
METHIONINE	36820	0.1333	3.7546	23.18	667.0941	3.22	62.59	1.93
ISOLEUCINE	42680	0.1499	4.2223	21.89	553.6793	2.67	59.11	1.83
LEUCINE	69730	0.2468	7.0078	36.34	919.2868	4.43	98.11	3.03
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	80970	0.2692	7.5841	39.32	1374.1672	6.62	106.18	3.28
PHENYLALANINE	101500	0.3631	10.2299	53.04	1689.8760	8.15	143.22	4.43
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	1180	0.0078	0.2202	1.14	35.7081	0.17	6.16	0.19
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	19950	0.1194	3.3632	17.44	491.6669	2.37	94.17	2.91
HISTIDINE	934	0.0072	0.2019	1.05	31.3306	0.15	8.48	0.26
ARGININE	51250	0.4055	11.4218	59.22	1989.7876	9.59	639.62	19.77
TOTALS		6.8565	193.1486	1000.00	20745.1846	100.00	3235.58	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	6690	0.0460	1.2948	231.9883	18.13
GALACTOSAMINE	550	0.0041	0.1167	20.9034	1.63
AMMONIA	144100	0.8696	24.4979	416.4638	342.97

TOTAL NITROGEN - MICROGRAMS 3598.31

RUN NUMBER 1204A/1199B
SAMPLE MACOMA TENTA
LOCALITY WOODS HOLE, HADLEY HARBOR
TYPE SHELL
FACTOR 9.610

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	12610	0.0610	0.5858	0.	0.	0.	0.	0.
TAURINE	2064	0.0094	0.0903	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	30760	0.1508	1.4494	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	30440	0.1304	1.2531	47.98	166.7832	6.26	17.54	4.39
METHIONINE SULFONE	6684	0.0320	0.3071	0.	0.	0.	0.	0.
THREONINE	12450	0.0577	0.5547	21.24	66.0735	2.48	7.77	1.94
SERINE	24260	0.1110	1.0668	40.85	112.1049	4.20	14.93	3.74
GLUTAMIC ACID	21650	0.0999	0.9601	36.76	141.2614	5.30	13.44	3.37
PROLINE	4189	0.1102	1.0591	40.55	121.9339	4.57	14.83	3.71
GLYCINE	316200	1.4415	13.8531	530.46	1039.9538	39.01	193.94	48.55
ALANINE	23240	0.0970	0.9323	35.70	83.0601	3.12	13.05	3.27
CYSTINE [HALF]	1328	0.0101	0.0968	23.12	73.1258	2.74	8.45	2.12
VALINE	18710	0.0769	0.7392	28.30	86.5938	3.25	10.35	2.59
METHIONINE	1605	0.0069	0.0664	62.35	242.9707	9.11	22.80	5.71
ISOLEUCINE	10740	0.0472	0.4533	17.36	59.4610	2.23	6.35	1.59
LEUCINE	19970	0.0893	0.8583	32.87	112.5893	4.22	12.02	3.01
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	9062	0.0393	0.3780	14.47	68.4856	2.57	5.29	1.32
PHENYLALANINE	15100	0.0642	0.6168	23.62	101.8954	3.82	8.64	2.16
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	3946	0.0191	0.1833	7.02	29.7265	1.11	5.13	1.28
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	7952	0.0357	0.3433	13.15	50.1871	1.88	9.61	2.41
HISTIDINE	110	0.0007	0.0063	0.24	0.9772	0.04	0.26	0.07
ARGININE	10093	0.0651	0.6258	23.96	109.0147	4.09	35.04	8.77
TOTALS		2.7554	26.4791	1000.00	2666.1978	100.00	399.45	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	1146	0.0062	0.0595		10.6689		0.83	
GALACTOSAMINE	1200	0.0067	0.0639		11.4565		0.90	
AMMONIA	132300	0.3611	3.4705		58.9978		48.59	

TOTAL NITROGEN - MICROGRAMS 449.76

RUN NUMBER 1307A/1304B
SAMPLE MACOMA TENTA
LOCALITY WOODS HOLE, HADLEY HARBOR
TYPE SHELL
FACTOR 33.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1811	0.0076	0.2524	0.	0.	0.	0.	0.
TAURINE	630	0.0024	0.0811	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	20120	0.0690	2.2989	60.22	305.9884	7.62	32.19	5.93
METHIONINE SULFONE	4559	0.0188	0.6266	0.	0.	0.	0.	0.
THREONINE	8188	0.0292	0.9740	25.51	116.0192	2.89	13.64	2.51
SERINE	13490	0.0555	1.8507	48.48	194.4875	4.85	25.91	4.77
GLUTAMIC ACID	14280	0.0523	1.7612	46.13	259.1189	6.46	24.66	4.54
PROLINE	3150	0.0561	1.8698	48.98	215.2705	5.36	26.18	4.82
GLYCINE	150700	0.5525	18.4155	482.39	1382.4525	34.44	257.82	47.47
ALANINE	13660	0.0496	1.6544	43.34	147.3895	3.67	23.16	4.26
CYSTINE (HALF)	0	0.	0.	6.79	31.4015	0.78	3.63	0.67
VALINE	10540	0.0371	1.2378	32.42	145.0089	3.61	17.33	3.19
METHIONINE	20030	0.0725	2.4167	76.82	437.6039	10.90	41.06	7.56
ISOLEUCINE	5790	0.0203	0.6777	17.75	88.9033	2.21	9.49	1.75
LEUCINE	8719	0.0311	1.0368	27.16	136.0024	3.39	14.51	2.67
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	14990	0.0498	1.6612	43.52	300.9993	7.50	23.26	4.28
PHENYLALANINE	10300	0.0369	1.2283	32.17	202.8965	5.05	17.20	3.17
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	800	0.0048	0.1596	4.18	23.3274	0.58	4.47	0.82
HISTIDINE	50	0.0004	0.0128	0.34	1.9845	0.05	0.54	0.10
ARGININE	550	0.0044	0.1450	3.80	25.2653	0.63	8.12	1.50
TOTALS		1.1509	38.3604	1000.00	4014.1194	100.00	543.14	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	914	0.0063	0.2093	37.5003	2.93
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	50660	0.3057	10.1901	173.2315	142.66

TOTAL NITROGEN - MICROGRAMS 688.73

RUN NUMBER 1306A/1303B
SAMPLE MALLETIA,SP. M
LOCALITY BERMUDA-WOODS HOLE TRANSECT
TYPE SHELL
FACTOR 14.280

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	10030	0.0419	0.5989	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1430	0.0060	0.0863	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	61380	0.2104	3.0048	117.01	399.9417	14.07	42.07	9.67
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	18950	0.0676	0.9658	37.61	115.0414	4.05	13.52	3.11
SERINE	21450	0.0883	1.2608	49.10	132.4952	4.66	17.65	4.06
GLUTAMIC ACID	23660	0.0875	1.2502	48.68	183.9410	6.47	17.50	4.02
PROLINE	7425	0.1322	1.8883	73.53	217.4019	7.65	26.44	6.07
GLYCINE	173900	0.6376	9.1046	354.55	683.4857	24.04	127.47	29.29
ALANINE	31870	0.1158	1.6537	64.40	147.3299	5.18	23.15	5.32
CYSTINE (HALF)	0	0.	0.	16.70	51.9518	1.83	6.00	1.38
VALINE	24210	0.0845	1.2067	46.99	141.3646	4.97	16.89	3.88
METHIONINE	4201	0.0152	0.2172	11.49	44.0411	1.55	4.13	0.95
ISOLEUCINE	7768	0.0273	0.3896	15.17	51.1024	1.80	5.45	1.25
LEUCINE	11980	0.0427	0.6103	23.77	80.0626	2.82	8.54	1.96
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	8298	0.0276	0.3940	15.34	71.3888	2.51	5.52	1.27
PHENYLALANINE	13240	0.0474	0.6764	26.34	111.7424	3.93	9.47	2.18
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	12420	0.0743	1.0614	41.33	155.1640	5.46	29.72	6.83
HISTIDINE	1111	0.0085	0.1218	4.74	18.8920	0.66	5.11	1.18
ARGININE	12100	0.0957	1.3670	53.23	238.1440	8.38	76.55	17.59
TOTALS		1.8108	25.8578	1000.00	2843.4904	100.00	435.19	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	853	0.0059	0.0837	14.9944	1.17
GALACTOSAMINE	1245	0.0094	0.1339	23.9864	1.87
AMMONIA	84630	0.5107	7.2934	123.9878	102.11

TOTAL NITROGEN - MICROGRAMS 540.35

RUN NUMBER 1108A/1109B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 6.666

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1639	0.0070	0.0467	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	79140	0.3135	2.0901	148.35	278.1955	15.96	29.26	12.55
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	26960	0.1075	0.7166	50.66	85.3576	4.90	10.03	4.30
SERINE	38330	0.1540	1.0255	72.66	107.8799	6.19	14.37	6.16
GLUTAMIC ACID	36730	0.1514	1.0092	71.63	148.4898	8.52	14.13	6.06
PROLINE	13410	0.2511	1.6740	118.82	192.7265	11.06	23.44	10.05
GLYCINE	70760	0.2876	1.9174	136.10	143.9410	8.26	26.84	11.51
ALANINE	31990	0.1288	0.8589	60.92	76.3433	4.38	12.00	5.14
CYSTINE (HALF)	7420	0.0530	0.3587	27.63	47.4934	2.72	5.49	2.35
VALINE	18630	0.0707	0.4714	33.46	55.2233	3.17	6.60	2.83
METHIONINE	6887	0.0277	0.1849	13.12	27.5896	1.58	2.59	1.11
ISOLEUCINE	12620	0.0452	0.3215	22.82	42.1766	2.42	4.50	1.93
LEUCINE	22270	0.0875	0.5832	41.39	76.5033	4.39	8.16	3.50
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	23710	0.0991	0.6609	46.91	119.7459	6.87	9.25	3.97
PHENYLALANINE	18530	0.0757	0.5048	35.83	83.3855	4.78	7.07	3.03
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	32610	0.1635	1.2236	86.85	178.8828	10.26	34.26	14.69
HISTIDINE	500	0.0027	0.0181	1.28	2.8045	0.16	0.76	0.33
ARGININE	11020	0.0655	0.4374	31.05	76.2071	4.37	24.50	10.50
TOTALS		2.1195	14.1020	1000.00	1742.9456	100.00	233.25	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	7476	0.0345	0.2299	41.1946	3.22	
GALACTOSAMINE	4657	0.0248	0.1655	29.6565	2.32	
AMMONIA	168700	0.5770	3.8466	65.3922	53.85	

TOTAL NITROGEN - MICROGRAMS 292.64

RUN NUMBER 907A/909B
SAMPLE MERCENARIA
LOCALITY WOODS HOLE
TYPE MANTLE FOLD 1,
FACTOR 2777.770

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2907	0.0164	45.5056	0.	0.	0.	0.	0.
TAURINE	1451	0.0069	19.2619	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	30350	0.2851	789.6974	109.06	75826.7278	11.81	7975.76	8.74
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	28190	0.1113	309.2628	59.21	36839.3824	5.74	4329.68	4.74
SERINE	30050	0.1227	340.8411	65.25	35818.9924	5.58	4771.78	5.23
GLUTAMIC ACID	59740	0.2408	668.9941	128.07	98429.0975	15.33	9365.92	10.26
PROLINE	5340	0.0982	272.6708	52.20	31392.5897	4.89	3817.39	4.18
GLYCINE	71810	0.2855	793.1279	151.84	59540.1102	9.27	11103.79	12.17
ALANINE	36710	0.1478	410.4324	78.57	36565.4249	5.70	5746.05	6.30
CYSTINE (HALF)	0	0.	0.	9.81	6205.7917	0.97	717.31	0.79
VALINE	25090	0.0966	268.4678	51.40	31451.0064	4.90	3758.55	4.12
METHIONINE	7147	0.0285	79.1576	15.15	11811.8947	1.84	1108.21	1.21
ISOLEUCINE	19690	0.0768	213.3579	40.85	27988.2859	4.36	2987.01	3.27
LEUCINE	34050	0.1326	368.3859	70.52	48324.8563	7.53	5157.40	5.65
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	9240	0.0380	105.4286	20.18	19102.6096	2.98	1476.00	1.62
PHENYLALANINE	9132	0.0376	104.4968	20.00	17261.8246	2.69	1462.96	1.60
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	16330	0.0896	248.8943	47.65	36385.8559	5.67	6969.04	7.64
HISTIDINE	11895	0.0758	210.6749	40.33	32688.3112	5.09	8848.34	9.69
ARGININE	11000	0.0750	208.4275	39.90	36310.1528	5.66	11671.94	12.79
TOTALS		1.8654	5237.0852	1000.00	641942.9102	100.00	91267.13	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	0	0.	0.		0.		0.	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	45650	0.3742	1039.3869		17669.5770		14551.42	

TOTAL NITROGEN - MICROGRAMS 105818.55

RUN NUMBER 908A/910B
SAMPLE MERCENARIA
LOCALITY WOODS HOLE
TYPE MANTLE FOLD 2
FACTOR 2777.770

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	5086	0.0287	79.6153	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	1545	0.0284	78.8907	19.32	10344.9388	2.04	1104.47	1.48
ASPARTIC ACID	39400	0.1615	445.8010	109.15	59336.1088	11.71	6241.21	8.34
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	20590	0.0813	225.8858	55.31	26907.5163	5.31	3162.40	4.22
SERINE	22110	0.0903	250.7819	61.40	26354.6729	5.20	3510.95	4.69
GLUTAMIC ACID	45190	0.1822	506.0569	123.90	74456.1586	14.69	7084.80	9.46
PROLINE	3593	0.0660	183.4656	44.92	21122.3923	4.17	2568.52	3.43
GLYCINE	54130	0.2152	597.8556	146.38	44881.0217	8.86	8369.98	11.18
ALANINE	26780	0.1078	299.4111	73.31	26674.5322	5.26	4191.75	5.60
CYSTINE (HALF)	0	0.	0.	13.96	6906.1855	1.36	798.27	1.07
VALINE	18990	0.0732	203.1967	49.75	23804.4863	4.70	2844.75	3.80
METHIONINE	4575	0.0182	50.6710	12.41	7561.1331	1.49	709.39	0.95
ISOLEUCINE	14860	0.0580	161.2374	39.48	21151.1272	4.17	2257.32	3.02
LEUCINE	25560	0.0996	276.5328	67.71	36275.5750	7.16	3871.46	5.17
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	4601	0.0189	52.4975	12.85	9512.0245	1.88	734.97	0.98
PHENYLALANINE	6000	0.0247	68.6575	16.81	11341.5405	2.24	961.21	1.28
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	599	0.0027	7.4297	1.82	1205.0252	0.24	208.03	0.28
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	17140	0.0940	261.2399	63.96	38190.6656	7.54	7314.72	9.77
HISTIDINE	4442	0.0283	78.6666	19.26	12205.9078	2.41	3304.00	4.41
ARGININE	14722	0.1004	278.9518	68.30	48596.1882	9.59	15621.30	20.87
TOTALS		1.4765	4106.8450	1000.00	506827.1987	100.00	74859.50	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	0	0.	0.		0.		0.	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	53430	0.4380	1216.5266		20680.9530		17031.37	

TOTAL NITROGEN - MICROGRAMS 91890.87

RUN NUMBER 912A/982B
SAMPLE MERCENARIA
LOCALITY WOODS HOLE
TYPE MANTLE FOLD 3+4
FACTOR 1315.790

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	6671	0.0376	49.4654	0.	0.	0.	0.	0.
TAURINE	639	0.0031	4.0181	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	3800	0.0699	91.9118	16.80	12052.3945	1.81	1286.77	1.39
ASPARTIC ACID	101700	0.4143	545.0747	99.61	72549.4446	10.88	7631.05	8.25
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	50610	0.1999	263.0021	48.06	31328.8101	4.70	3682.03	3.98
SERINE	59050	0.2411	317.2617	57.98	33341.0359	5.00	4441.66	4.80
GLUTAMIC ACID	136400	0.5499	723.5386	132.22	106454.2374	15.97	10129.54	10.96
PROLINE	14930	0.2744	361.1166	65.99	41575.3575	6.24	5055.63	5.47
GLYCINE	181500	0.7209	948.5198	173.33	71205.3802	10.68	13279.28	14.36
ALANINE	79540	0.3193	420.1843	76.78	37434.2153	5.62	5882.58	6.36
CYSTINE (HALF)	0	0.	0.	7.18	4761.9667	0.71	550.43	0.60
VALINE	51640	0.1989	261.7388	47.83	30662.7018	4.60	3664.34	3.96
METHIONINE	21730	0.0866	114.0037	20.83	17011.6253	2.55	1596.05	1.73
ISOLEUCINE	40650	0.1586	208.6478	38.13	27370.4182	4.11	2921.07	3.16
LEUCINE	71700	0.2793	367.4475	67.15	48201.7615	7.23	5144.26	5.56
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	20410	0.0838	110.3113	20.16	19987.2954	3.00	1544.36	1.67
PHENYLALANINE	24020	0.0989	130.1968	23.79	21507.2111	3.23	1822.76	1.97
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	2625	0.0117	15.4229	2.82	2501.4331	0.38	431.84	0.47
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	53130	0.1818	239.1886	43.71	34966.9816	5.25	6697.28	7.24
HISTIDINE	8200	0.0523	68.7885	12.57	10673.2254	1.60	2889.12	3.12
ARGININE	27480	0.1874	246.6433	45.07	42967.7308	6.45	13812.03	14.94
TOTALS		4.1697	5486.4822	1000.00	666553.2217	100.00	92462.06	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	1764	0.0096	12.6385		2264.4332		176.94	
GALACTOSAMINE	260	0.0015	1.9543		350.1572		27.36	
AMMONIA	128900	1.0566	1390.2076		23633.5297		19462.91	

TOTAL NITROGEN - MICROGRAMS 112129.27

* XED

* BINARY

RUN NUMBER 951A/950B
SAMPLE MERCENARIA
LOCALITY WOODS HOLE
TYPE MANTLE PORTION 5
FACTOR 800.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1000	0.0041	3.2895	0.	0.	0.	0.	0.
TAURINE	12577	0.0534	42.7335	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	960	0.0188	15.0588	5.79	1974.6635	0.62	210.82	0.50
ASPARTIC ACID	80040	0.3394	271.4946	104.42	36135.9304	11.30	3801.92	8.93
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	43620	0.1513	145.0393	55.79	17277.0819	5.40	2030.55	4.77
SERINE	48210	0.1969	157.5490	60.60	16556.8264	5.18	2205.69	5.18
GLUTAMIC ACID	99130	0.4500	327.9818	126.15	48255.9597	15.09	4593.74	10.79
PROLINE	10520	0.1511	144.8421	55.71	16675.6715	5.22	2027.79	4.77
GLYCINE	114700	0.4794	383.5319	147.52	28791.7374	9.01	5369.45	12.62
ALANINE	56880	0.2421	193.7165	74.51	17258.2007	5.40	2712.03	6.37
CYSTINE (HALF)	5397	0.0424	33.9434	29.87	9407.0182	2.94	1087.34	2.56
VALINE	45460	0.1743	139.4479	53.64	16336.3159	5.11	1952.27	4.59
METHIONINE	19740	0.0796	63.6646	24.49	9500.0291	2.97	891.30	2.09
ISOLEUCINE	35010	0.1379	110.3329	42.44	14473.4663	4.53	1544.66	3.63
LEUCINE	56080	0.2223	177.8201	68.39	23326.4348	7.30	2489.48	5.85
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	17970	0.0798	63.8508	24.56	11569.1203	3.62	893.91	2.10
PHENYLALANINE	27760	0.1041	83.3127	32.04	13762.4320	4.30	1166.38	2.74
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	1000	0.0049	3.9149	1.51	634.9498	0.20	109.62	0.26
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	34510	0.1597	127.7840	49.15	18680.7407	5.84	3577.95	8.41
HISTIDINE	7502	0.0387	30.9361	11.90	4800.0425	1.50	1299.32	3.05
ARGININE	17730	0.1025	81.9884	31.53	14283.2060	4.47	4591.35	10.79
TOTALS		3.2528	2602.2325	1000.00	319699.8252	100.00	42552.57	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	3060	0.0163	13.0683		2341.4538		182.96	
GALACTOSAMINE	1000	0.0057	4.5701		818.8289		63.98	
AMMONIA	119200	0.3685	294.7759		5011.1901		4126.86	

TOTAL NITROGEN - MICROGRAMS 46926.37

RUN NUMBER 1269A/1245B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE LIGAMENT
FACTOR 438.590

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4213	0.0176	7.7264	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	144600	0.4957	217.4155	31.48	28938.0088	4.07	3043.82	3.05
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	54170	0.1933	84.7909	12.28	10100.2963	1.42	1187.07	1.19
SERINE	71840	0.2957	129.6905	18.78	13629.1740	1.92	1815.67	1.82
GLUTAMIC ACID	53030	0.1962	86.0626	12.46	12662.3958	1.78	1204.88	1.21
PROLINE	25580	0.4556	199.8065	28.93	23003.7166	3.24	2797.29	2.80
GLYCINE	66500	9.8550	4322.2863	625.75	324474.0356	45.65	60512.01	60.58
ALANINE	16212	0.0589	25.8373	3.74	2301.8438	0.32	361.72	0.36
CYSTINE (HALF)	0	0.	0.	0.80	670.2262	0.09	77.47	0.08
VALINE	128300	0.4478	196.4087	28.43	23009.2809	3.24	2749.72	2.75
METHIONINE	219300	0.7938	348.1730	50.41	51954.3725	7.31	4874.42	4.88
ISOLEUCINE	117600	0.4130	181.1350	26.22	23761.2859	3.34	2535.89	2.54
LEUCINE	54010	0.1213	53.2160	7.70	6980.8754	0.98	745.02	0.75
DOPA	5803	0.0208	9.1060	1.32	1795.6197	0.25	127.48	0.13
TYROSINE	95912	2.0622	904.4506	130.94	163877.4036	23.05	12662.31	12.68
PHENYLALANINE	51660	0.1133	49.6807	7.19	8206.7570	1.15	695.53	0.70
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	6894	0.0413	18.0948	2.62	2645.2774	0.37	506.65	0.51
HISTIDINE	5036	0.0386	16.9512	2.45	2630.1457	0.37	711.95	0.71
ARGININE	16910	0.1338	58.6753	8.49	10221.8226	1.44	3285.82	3.29
TOTALS		15.7539	6909.5074	1000.00	710862.5342	100.00	99894.73	100.00

UREA	0	0.	0.	0.	
GLUCOSAMINE	7895	0.0542	23.7902	4262.4956	333.06
GALACTOSAMINE	1965	0.0148	6.4897	1162.7558	90.86
AMMONIA	44810	0.2704	118.6072	2016.3229	1660.50

TOTAL NITROGEN - MICROGRAMS 101979.15

RUN NUMBER 911A/914B
SAMPLE MERCENARIA
LOCALITY WOODS HOLE
TYPE MANTLE FOLD 3, MUCUS
FACTOR 22/2.730

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1200	0.0068	15.3693	0.	0.	0.	0.	0.
TAURINE	1098	0.0052	11.9257	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	67540	0.2751	625.2553	119.23	83221.4846	12.33	8753.57	9.25
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	39260	0.1551	352.3988	67.20	41977.7466	6.22	4933.58	5.21
SERINE	36560	0.1493	339.2855	64.70	35655.5087	5.28	4750.00	5.02
GLUTAMIC ACID	64370	0.2595	589.7828	112.47	86774.7469	12.86	8256.96	8.72
PROLINE	5193	0.0955	216.9538	41.37	24977.8913	3.70	3037.35	3.21
GLYCINE	48670	0.1935	439.8162	83.87	33017.0004	4.89	6157.43	6.51
ALANINE	41670	0.1677	381.1820	72.69	33959.5010	5.03	5336.55	5.64
CYSTINE (HALF)	852	0.0067	15.2470	7.21	4578.1886	0.68	529.18	0.56
VALINE	36590	0.1409	320.3359	61.08	37527.3466	5.56	4484.70	4.74
METHIONINE	10600	0.0423	96.0564	18.32	14333.5317	2.12	1344.79	1.42
ISOLEUCINE	30310	0.1182	268.7203	51.24	35250.7275	5.22	3762.08	3.97
LEUCINE	44930	0.1750	397.7167	75.84	52172.4745	7.73	5568.03	5.88
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	18410	0.0756	171.8667	32.77	31140.5356	4.62	2406.13	2.54
PHENYLALANINE	21050	0.0867	197.0792	37.58	32555.5066	4.82	2759.11	2.91
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	30940	0.1698	385.8341	73.57	56405.0881	8.36	10803.35	11.41
HISTIDINE	9729	0.0620	140.9716	26.88	21873.1482	3.24	5920.81	6.26
ARGININE	18260	0.1246	283.0836	53.98	49315.9866	7.31	15852.68	16.75
TOTALS		2.3095	5248.8807	1000.00	674736.4082	100.00	94656.32	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	8650	0.0471	107.0466	19179.5455	1498.65
GALACTOSAMINE	5220	0.0299	67.8768	12161.4848	950.28
AMMONIA	67050	0.7135	1621.6487	27568.0285	22703.08

TOTAL NITROGEN - MICROGRAMS 119808.33

RUN NUMBER 1353A/1379B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE A I
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	8827	0.0369	0.0369	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	3163	0.0134	0.0134	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	54080	0.1854	0.1854	168.24	24.6762	18.44	2.60	14.64
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	17180	0.0613	0.0613	55.64	7.3036	5.46	0.86	4.84
SERINE	27610	0.1136	0.1136	103.13	11.9429	8.93	1.59	8.97
GLUTAMIC ACID	22860	0.0846	0.0846	76.76	12.4455	9.30	1.18	6.68
PROLINE	8158	0.1453	0.1453	131.85	16.7272	12.50	2.03	11.47
GLYCINE	33750	0.1237	0.1237	112.29	9.2891	6.94	1.73	9.77
ALANINE	20890	0.0759	0.0759	68.88	6.7627	5.05	1.06	5.99
CYSTINE (HALF)	0	0.	0.	23.99	3.2017	2.39	0.37	2.09
VALINE	12700	0.0443	0.0443	40.23	5.1930	3.88	0.62	3.50
METHIONINE	0	0.	0.	10.96	1.8024	1.35	0.17	0.95
ISOLEUCINE	9004	0.0316	0.0316	28.69	4.1480	3.10	0.44	2.50
LEUCINE	12000	0.0428	0.0428	38.85	5.6160	4.20	0.60	3.38
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	6651	0.0221	0.0221	20.07	4.0070	2.99	0.31	1.75
PHENYLALANINE	7278	0.0260	0.0260	23.63	4.3014	3.21	0.36	2.06
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	12870	0.0770	0.0770	69.84	11.2508	8.41	2.15	12.16
HISTIDINE	229	0.0018	0.0018	1.59	0.2727	0.20	0.07	0.42
ARGININE	3531	0.0279	0.0279	25.35	4.8666	3.64	1.56	8.82
TOTALS		1.1137	1.1137	1000.00	133.8069	100.00	17.73	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	515	0.0035	0.0035		0.6340	0.05
GALACTOSAMINE	563	0.0043	0.0043		0.7623	0.06
AMMONIA	59200	0.3573	0.3573		6.0736	5.00

TOTAL NITROGEN - MICROGRAMS 22.84

RUN NUMBER 1376A/1374B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE A II
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	6153	0.0257	0.0257	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	31820	0.1091	0.1091	152.66	14.5192	16.95	1.53	12.86
METHIONINE SULFONE	1395	0.0058	0.0058	0.	0.	0.	0.	0.
THREONINE	9307	0.0332	0.0332	46.49	3.9566	4.62	0.47	3.91
SERINE	17680	0.0728	0.0728	101.84	7.6476	8.93	1.02	8.58
GLUTAMIC ACID	13890	0.0514	0.0514	71.93	7.5620	8.83	0.72	6.06
PROLINE	5035	0.0897	0.0897	125.49	10.3238	12.05	1.26	10.57
GLYCINE	28510	0.1045	0.1045	146.29	7.8469	9.16	1.46	12.32
ALANINE	13370	0.0486	0.0486	67.99	4.3282	5.05	0.68	5.73
CYSTINE (HALF)	0	0.	0.	25.79	2.2318	2.60	0.26	2.17
VALINE	7356	0.0258	0.0258	36.08	3.0201	3.53	0.36	3.04
METHIONINE	0	0.	0.	6.63	0.7068	0.83	0.07	0.56
ISOLEUCINE	7349	0.0258	0.0258	36.12	3.3856	3.95	0.36	3.04
LEUCINE	7840	0.0280	0.0280	39.14	3.6691	4.28	0.39	3.30
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	3670	0.0129	0.0129	18.01	2.3315	2.72	0.18	1.52
PHENYLALANINE	3650	0.0131	0.0131	18.28	2.1572	2.52	0.18	1.54
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	7709	0.0461	0.0461	64.56	6.7443	7.87	1.29	10.87
HISTIDINE	486	0.0037	0.0037	5.22	0.5787	0.68	0.16	1.32
ARGININE	3385	0.0268	0.0268	37.48	4.6654	5.45	1.50	12.62
TOTALS		0.7229	0.7229	1000.00	85.6750	100.00	11.88	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	1046	0.0072	0.0072	1.2901	0.10	
GALACTOSAMINE	761	0.0057	0.0057	1.0267	0.08	
AMMONIA	35390	0.2136	0.2136	3.6308	2.99	

TOTAL NITROGEN - MICROGRAMS 15.05

RUN NUMBER 1360A/1362B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE A III
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	18840	0.0788	0.0788	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	5716	0.0242	0.0242	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	68630	0.2353	0.2353	154.35	31.3152	16.61	3.29	12.88
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	23820	0.0850	0.0850	55.77	10.1265	5.37	1.19	4.65
SERINE	31460	0.1295	0.1295	84.95	13.6083	7.22	1.81	7.09
GLUTAMIC ACID	33550	0.1241	0.1241	81.44	18.2654	9.69	1.74	6.79
PROLINE	11520	0.2052	0.2052	134.60	23.6206	12.53	2.87	11.23
GLYCINE	41680	0.1528	0.1528	100.25	11.4717	6.08	2.14	8.36
ALANINE	28400	0.1032	0.1032	67.70	9.1939	4.88	1.44	5.65
CYSTINE (HALF)	0	0.	0.	37.01	6.8336	3.62	0.79	3.09
VALINE	15350	0.0536	0.0536	35.15	6.2766	3.33	0.75	2.93
METHIONINE	2096	0.0076	0.0076	19.30	4.3894	2.33	0.41	1.61
ISOLEUCINE	10930	0.0384	0.0384	25.18	5.0353	2.67	0.54	2.10
LEUCINE	15100	0.0539	0.0539	35.34	7.0668	3.75	0.75	2.95
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	10660	0.0354	0.0354	23.25	6.4222	3.41	0.50	1.94
PHENYLALANINE	11950	0.0428	0.0428	28.05	7.0627	3.75	0.60	2.34
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	18180	0.1088	0.1088	71.38	15.9051	8.44	3.05	11.91
HISTIDINE	2260	0.0173	0.0173	11.38	2.6912	1.43	0.73	2.85
ARGININE	6722	0.0532	0.0532	34.89	9.2646	4.91	2.98	11.64
TOTALS		1.5490	1.5490	1000.00	188.5491	100.00	25.58	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	2254	0.0155	0.0155		2.7746	0.22
GALACTOSAMINE	3495	0.0263	0.0263		4.7167	0.37
AMMONIA	39130	0.2361	0.2361		4.0145	3.31

TOTAL NITROGEN - MICROGRAMS 29.47

RUN NUMBER 1562A/13616
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE B I
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	11990	0.0501	0.0501	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	45540	0.1563	0.1563	130.41	20.7977	14.87	2.19	10.80
METHIONINE SULFONE	1656	0.0068	0.0068	0.	0.	0.	0.	0.
THREONINE	9967	0.0356	0.0356	29.69	4.2372	3.03	0.50	2.46
SERINE	16680	0.0695	0.0695	57.99	7.3016	5.22	0.97	4.80
GLUTAMIC ACID	17290	0.0640	0.0640	53.40	9.4131	6.73	0.90	4.42
PROLINE	6425	0.1144	0.1144	95.50	13.1738	9.42	1.60	7.91
GLYCINE	89140	0.3268	0.3268	272.77	24.5343	17.55	4.58	22.60
ALANINE	16420	0.0597	0.0597	49.80	5.3156	3.80	0.84	4.13
CYSTINE (HALF)	0	0.	0.	29.97	4.3490	3.11	0.50	2.48
VALINE	13730	0.0479	0.0479	40.00	5.6142	4.02	0.67	3.31
METHIONINE	872	0.0032	0.0032	7.32	1.3086	0.94	0.12	0.61
ISOLEUCINE	10760	0.0376	0.0376	31.36	4.9293	3.53	0.53	2.60
LEUCINE	9334	0.0340	0.0340	28.39	4.4619	3.19	0.48	2.35
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	15001	0.0532	0.0532	44.40	9.6400	6.89	0.74	3.68
PHENYLALANINE	7304	0.0271	0.0271	22.65	4.4823	3.21	0.38	1.88
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	10270	0.0615	0.0615	51.30	8.9849	6.43	1.72	8.50
HISTIDINE	1475	0.0113	0.0113	9.45	1.7564	1.26	0.48	2.35
ARGININE	5910	0.0547	0.0547	45.63	9.5237	6.81	3.06	15.12
TOTALS		1.2136	1.2136	1000.00	139.8236	100.00	20.25	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	1421	0.0098	0.0098		1.7492	0.14
GALACTOSAMINE	1145	0.0086	0.0086		1.5421	0.12
AMMONIA	31090	0.1876	0.1876		3.1897	2.63

TOTAL NITROGEN - MICROGRAMS 23.13

RUN NUMBER 1367A/1365B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE B II
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	11950	0.0500	0.0500	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	27100	0.1146	0.1146	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	97400	0.3339	0.3339	86.63	44.4427	10.01	4.67	7.33
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	36400	0.1299	0.1299	33.70	15.4745	3.48	1.82	2.85
SERINE	44970	0.1851	0.1851	48.02	19.4521	4.38	2.59	4.06
GLUTAMIC ACID	46690	0.1728	0.1728	44.82	25.4191	5.72	2.42	3.79
PROLINE	21640	0.3854	0.3854	99.99	44.3707	9.99	5.40	8.46
GLYCINE	334200	1.2253	1.2253	317.89	91.9831	20.71	17.15	26.88
ALANINE	47730	0.1734	0.1734	45.00	15.4515	3.48	2.43	3.81
CYSTINE (HALF)	0	0.	0.	9.28	4.3345	0.98	0.50	0.79
VALINE	47360	0.1654	0.1654	42.91	19.3737	4.36	2.32	3.63
METHIONINE	16460	0.0596	0.0596	42.31	24.3340	5.48	2.28	3.58
ISOLEUCINE	35730	0.1255	0.1255	32.55	16.4603	3.71	1.76	2.75
LEUCINE	28180	0.1005	0.1005	26.08	13.1882	2.97	1.41	2.21
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	62600	0.2081	0.2081	54.00	37.7140	8.49	2.91	4.57
PHENYLALANINE	25330	0.0906	0.0906	23.51	14.9705	3.37	1.27	1.99
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	25060	0.1679	0.1679	43.57	24.5487	5.53	4.70	7.37
HISTIDINE	5155	0.0398	0.0398	10.32	6.1742	1.39	1.67	2.62
ARGININE	19200	0.1519	0.1519	39.41	26.4623	5.96	8.51	13.33
TOTALS		3.8797	3.8797	1000.00	444.1543	100.00	63.81	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	2807	0.0193	0.0193	3.4554	0.27
GALACTOSAMINE	3663	0.0276	0.0276	4.9420	0.39
AMMONIA	94560	0.5707	0.5707	9.7014	7.99

TOTAL NITROGEN - MICROGRAMS 72.45

RUN NUMBER 1354A/13788
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE C I
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2953	0.0123	0.0123	0.	0.	0.	0.	0.
TAURINE	1500	0.0058	0.0058	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1141	0.0048	0.0048	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	26740	0.0917	0.0917	97.56	12.2012	10.73	1.28	7.78
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	14130	0.0504	0.0504	53.67	6.0070	5.28	0.71	4.28
SERINE	16050	0.0661	0.0661	70.31	6.9426	6.10	0.92	5.60
GLUTAMIC ACID	29770	0.1102	0.1102	117.24	16.2074	14.25	1.54	9.34
PROLINE	2050	0.0366	0.0366	38.91	4.2095	3.70	0.51	3.10
GLYCINE	35760	0.1311	0.1311	139.54	9.8424	8.65	1.84	11.12
ALANINE	31670	0.1151	0.1151	122.48	10.2525	9.01	1.61	9.76
CYSTINE (HALF)	0	0.	0.	15.38	1.7503	1.54	0.20	1.23
VALINE	15740	0.0549	0.0549	58.47	6.4361	5.66	0.77	4.66
METHIONINE	3431	0.0124	0.0124	17.86	2.5035	2.20	0.23	1.42
ISOLEUCINE	10090	0.0354	0.0354	37.71	4.6483	4.09	0.50	3.01
LEUCINE	17550	0.0626	0.0626	66.64	8.2134	7.22	0.88	5.31
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	2150	0.0071	0.0071	7.61	1.2953	1.14	0.10	0.61
PHENYLALANINE	4111	0.0147	0.0147	15.65	2.4297	2.14	0.21	1.25
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	12210	0.0731	0.0731	77.77	10.6821	9.39	2.05	12.40
HISTIDINE	1570	0.0120	0.0120	12.82	1.8695	1.64	0.51	3.07
ARGININE	5954	0.0473	0.0473	50.36	8.2474	7.25	2.65	16.06
TOTALS		0.9438	0.9438	1000.00	113.7381	100.00	16.50	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	1627	0.0112	0.0112		2.0028		0.16	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	78550	0.4727	0.4727		8.0363		6.62	

TOTAL NITROGEN - MICROGRAMS 23.28

RUN NUMBER 1352A/1349B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE C II
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	400	0.0017	0.0017	0.	0.	0.	0.	0.
TAURINE	930	0.0036	0.0036	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	16260	0.0557	0.0557	122.73	7.4193	13.78	0.78	10.17
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	6705	0.0239	0.0239	52.69	2.8505	5.30	0.34	4.37
SERINE	9876	0.0407	0.0407	89.50	4.2719	7.94	0.57	7.42
GLUTAMIC ACID	12800	0.0474	0.0474	104.28	6.9686	12.95	0.66	8.64
PROLINE	1371	0.0244	0.0244	53.76	2.8111	5.22	0.34	4.46
GLYCINE	18900	0.0693	0.0693	152.57	5.2019	9.66	0.97	12.65
ALANINE	15840	0.0576	0.0576	126.73	5.1279	9.53	0.81	10.50
CYSTINE (HALF)	0	0.	0.	10.29	0.5662	1.05	0.07	0.85
VALINE	7063	0.0247	0.0247	54.43	2.8962	5.38	0.35	4.51
METHIONINE	420	0.0015	0.0015	3.35	0.2269	0.42	0.02	0.28
ISOLEUCINE	4582	0.0161	0.0161	35.43	2.1109	3.92	0.23	2.94
LEUCINE	6910	0.0247	0.0247	54.34	3.2376	6.01	0.35	4.50
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1400	0.0047	0.0047	10.25	0.8434	1.57	0.07	0.85
PHENYLALANINE	1750	0.0063	0.0063	13.79	1.0343	1.92	0.09	1.14
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5263	0.0315	0.0315	69.35	4.6044	8.55	0.88	11.50
HISTIDINE	137	0.0011	0.0011	2.31	0.1631	0.30	0.04	0.58
ARGININE	2537	0.0201	0.0201	44.19	3.4966	6.50	1.12	14.65
TOTALS		0.4548	0.4548	1000.00	53.8308	100.00	7.67	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	381	0.0026	0.0026	0.4690	0.04
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	33690	0.2033	0.2033	3.4564	2.85

TOTAL NITROGEN - MICROGRAMS 10.55

RUN NUMBER 1351A/1350B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE C III
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3625	0.0151	0.0151	0.	0.	0.	0.	0.
TAURINE	935	0.0036	0.0036	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	15710	0.0539	0.0539	97.31	7.1683	11.05	0.75	8.22
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	6853	0.0245	0.0245	44.19	2.9134	4.49	0.34	3.73
SERINE	18800	0.0774	0.0774	139.81	8.1321	12.54	1.08	11.82
GLUTAMIC ACID	17440	0.0645	0.0645	116.60	9.4947	14.64	0.90	9.85
PROLINE	1785	0.0318	0.0318	57.44	3.6600	5.64	0.45	4.85
GLYCINE	23760	0.0871	0.0871	157.40	6.5396	10.08	1.22	13.30
ALANINE	16650	0.0605	0.0605	109.31	5.3901	8.31	0.85	9.24
CYSTINE (HALF)	0	0.	0.	25.92	1.7375	2.68	0.20	2.19
VALINE	6499	0.0227	0.0227	40.99	2.6574	4.10	0.32	3.46
METHIONINE	731	0.0026	0.0026	4.78	0.3949	0.61	0.04	0.40
ISOLEUCINE	4433	0.0156	0.0156	28.13	2.0422	3.15	0.22	2.38
LEUCINE	6954	0.0248	0.0248	44.83	3.2545	5.02	0.35	3.79
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	900	0.0030	0.0030	5.41	0.5422	0.84	0.04	0.46
PHENYLALANINE	1811	0.0065	0.0065	11.71	1.0703	1.65	0.09	0.99
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5876	0.0412	0.0412	74.37	6.0173	9.28	1.15	12.57
HISTIDINE	1192	0.0091	0.0091	16.53	1.4194	2.19	0.38	4.19
ARGININE	1769	0.0140	0.0140	25.29	2.4381	3.76	0.78	8.55
TOTALS		0.5579	0.5579	1000.00	64.8720	100.00	9.17	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	106	0.0007	0.0007		0.1305	0.01
GALACTOSAMINE	0	0.	0.		0.	0.
AMMONIA	77630	0.4685	0.4685		7.9645	6.56

TOTAL NITROGEN - MICROGRAMS 15.74

RUN NUMBER 1356A/1371B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE C IV
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1563	0.0065	0.0065	0.	0.	0.	0.	0.
TAURINE	600	0.0023	0.0023	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	9009	0.0309	0.0309	120.24	4.1107	13.61	0.43	10.43
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	3110	0.0111	0.0111	43.21	1.3221	4.38	0.16	3.75
SERINE	12070	0.0497	0.0497	193.42	5.2210	17.28	0.70	16.78
GLUTAMIC ACID	7736	0.0286	0.0286	111.45	4.2116	13.94	0.40	9.67
PROLINE	786	0.0140	0.0140	54.64	1.6157	5.35	0.20	4.74
GLYCINE	10840	0.0397	0.0397	154.73	2.9835	9.88	0.56	13.43
ALANINE	5321	0.0193	0.0193	75.28	1.7226	5.70	0.27	6.53
CYSTINE (HALF)	0	0.	0.	26.96	0.8386	2.78	0.10	2.34
VALINE	1725	0.0060	0.0060	23.44	0.7054	2.33	0.08	2.03
METHIONINE	450	0.0016	0.0016	6.34	0.2431	0.80	0.02	0.55
ISOLEUCINE	1810	0.0064	0.0064	24.75	0.8338	2.76	0.09	2.15
LEUCINE	2205	0.0079	0.0079	30.63	1.0319	3.42	0.11	2.66
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1005	0.0033	0.0033	13.01	0.6055	2.00	0.05	1.13
PHENYLALANINE	915	0.0033	0.0033	12.75	0.5408	1.79	0.05	1.11
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	3256	0.0197	0.0197	76.56	2.8748	9.52	0.55	13.29
HISTIDINE	730	0.0056	0.0056	21.81	0.8693	2.88	0.24	5.68
ARGININE	350	0.0028	0.0028	10.78	0.4824	1.60	0.16	3.74
TOTALS		0.2588	0.2588	1000.00	30.2128	100.00	4.14	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	610	0.0042	0.0042		0.7509		0.06	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	55130	0.3327	0.3327		5.6561		4.66	

TOTAL NITROGEN - MICROGRAMS 8.86

RUN NUMBER 1355A/1370B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE C V
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	750	0.0031	0.0031	0.	0.	0.	0.	0.
TAURINE	810	0.0031	0.0031	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	6347	0.0218	0.0218	69.02	2.8961	7.90	0.30	6.03
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	3954	0.0141	0.0141	44.76	1.6809	4.59	0.20	3.91
SERINE	12210	0.0503	0.0503	159.41	5.2815	14.41	0.70	13.92
GLUTAMIC ACID	10450	0.0387	0.0387	122.65	5.6892	15.53	0.54	10.71
PROLINE	790	0.0141	0.0141	44.63	1.6198	4.42	0.20	3.90
GLYCINE	14080	0.0516	0.0516	163.74	3.8753	10.58	0.72	14.30
ALANINE	9991	0.0363	0.0363	115.15	3.2344	8.83	0.51	10.06
CYSTINE (HALF)	0	0.	0.	16.73	0.6388	1.74	0.07	1.46
VALINE	3440	0.0120	0.0120	38.08	1.4066	3.84	0.17	3.33
METHIONINE	980	0.0035	0.0035	11.25	0.5294	1.44	0.05	0.98
ISOLEUCINE	2458	0.0086	0.0086	27.38	1.1324	3.09	0.12	2.39
LEUCINE	4276	0.0153	0.0153	48.39	2.0012	5.46	0.21	4.23
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	872	0.0029	0.0029	9.20	0.5253	1.43	0.04	0.80
PHENYLALANINE	940	0.0034	0.0034	10.67	0.5556	1.52	0.05	0.93
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5191	0.0311	0.0311	98.53	4.5414	12.39	0.87	17.21
HISTIDINE	609	0.0047	0.0047	14.82	0.7252	1.98	0.20	3.88
ARGININE	223	0.0018	0.0018	5.60	0.3073	0.84	0.10	1.95
TOTALS		0.3163	0.3163	1000.00	36.6404	100.00	5.05	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	1659	0.0114	0.0114		2.0422	0.16
GALACTOSAMINE	0	0.	0.		0.	0.
AMMONIA	72770	0.4392	0.4392		7.4658	6.15

TOTAL NITROGEN - MICROGRAMS 11.36

RUN NUMBER 1359A/1369B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE D I
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1584	0.0066	0.0066	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	19640	0.0673	0.0673	146.03	8.9615	15.94	0.94	11.73
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	6920	0.0247	0.0247	53.57	2.9419	5.23	0.35	4.30
SERINE	10130	0.0417	0.0417	90.44	4.3818	7.80	0.58	7.27
GLUTAMIC ACID	11930	0.0441	0.0441	95.75	6.4950	11.55	0.62	7.69
PROLINE	1441	0.0257	0.0257	55.66	2.9546	5.26	0.36	4.47
GLYCINE	15620	0.0573	0.0573	124.21	4.2992	7.65	0.80	9.98
ALANINE	13110	0.0476	0.0476	103.32	4.2441	7.55	0.67	8.30
CYSTINE (HALF)	0	0.	0.	10.29	0.5745	1.02	0.07	0.83
VALINE	7125	0.0249	0.0249	53.94	2.9134	5.18	0.35	4.33
METHIONINE	1310	0.0047	0.0047	10.29	0.7076	1.26	0.07	0.83
ISOLEUCINE	4405	0.0155	0.0155	33.54	2.0284	3.61	0.22	2.69
LEUCINE	7424	0.0265	0.0265	57.45	3.4744	6.18	0.37	4.62
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1790	0.0060	0.0060	12.91	1.0784	1.92	0.08	1.04
PHENYLALANINE	2603	0.0093	0.0093	20.20	1.5384	2.74	0.13	1.62
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5314	0.0318	0.0318	68.98	4.6490	8.27	0.89	11.08
HISTIDINE	876	0.0067	0.0067	14.58	1.0431	1.86	0.28	3.51
ARGININE	2847	0.0225	0.0225	48.55	3.9239	6.98	1.26	15.70
TOTALS		0.4629	0.4629	1000.00	56.2093	100.00	8.03	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	363	0.0025	0.0025	0.4468	0.03
GALACTOSAMINE	159	0.0012	0.0012	0.2145	0.02
AMMONIA	41970	0.2533	0.2533	4.3059	3.55

TOTAL NITROGEN - MICROGRAMS 11.63

RUN NUMBER 1358A/1380B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE D II
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	11230	0.0470	0.0470	0.	0.	0.	0.	0.
TAURINE	1010	0.0039	0.0039	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	2610	0.0110	0.0110	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	33800	0.1159	0.1159	114.07	15.4226	12.57	1.62	9.58
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	16470	0.0588	0.0588	57.87	7.0018	5.71	0.82	4.86
SERINE	16820	0.0692	0.0692	68.15	7.2756	5.93	0.97	5.73
GLUTAMIC ACID	21860	0.0809	0.0809	79.63	11.9011	9.70	1.13	6.69
PROLINE	7916	0.1410	0.1410	138.79	16.2310	13.23	1.97	11.66
GLYCINE	40880	0.1499	0.1499	147.55	11.2516	9.17	2.10	12.40
ALANINE	19370	0.0711	0.0711	70.01	6.3354	5.17	1.00	5.88
CYSTINE (HALF)	0	0.	0.	36.82	4.5307	3.69	0.52	3.09
VALINE	11730	0.0409	0.0409	40.31	4.7964	3.91	0.57	3.39
METHIONINE	1325	0.0048	0.0048	14.53	2.2030	1.80	0.21	1.22
ISOLEUCINE	8912	0.0313	0.0313	30.81	4.1056	3.35	0.44	2.59
LEUCINE	12980	0.0463	0.0463	45.59	6.0746	4.95	0.65	3.83
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	6105	0.0203	0.0203	19.98	3.6780	3.00	0.28	1.68
PHENYLALANINE	7850	0.0281	0.0281	27.65	4.6395	3.78	0.39	2.32
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	10930	0.0654	0.0654	64.39	9.5623	7.80	1.83	10.82
HISTIDINE	748	0.0057	0.0057	5.65	0.8907	0.73	0.24	1.42
ARGININE	4904	0.0388	0.0388	38.19	6.7589	5.51	2.17	12.84
TOTALS		1.0303	1.0303	1000.00	122.6588	100.00	16.93	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	995	0.0068	0.0068		1.2248	0.10
GALACTOSAMINE	710	0.0053	0.0053		0.9579	0.07
AMMONIA	53590	0.3234	0.3234		5.4981	4.53
				TOTAL NITROGEN - MICROGRAMS		21.63

RUN NUMBER 1360A/1364B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE E
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	6196	0.0259	0.0259	0.	0.	0.	0.	0.
TAURINE	1532	0.0059	0.0059	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	8339	0.0353	0.0353	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	119700	0.4104	0.4104	148.56	54.6180	15.76	5.74	11.61
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	40020	0.1428	0.1428	51.71	17.0135	4.91	2.00	4.04
SERINE	65780	0.2708	0.2708	98.02	28.4537	8.21	3.79	7.66
GLUTAMIC ACID	61980	0.2293	0.2293	83.03	33.7433	9.73	3.21	6.49
PROLINE	13430	0.2392	0.2392	86.59	27.5369	7.94	3.35	6.77
GLYCINE	79010	0.2897	0.2897	104.88	21.7462	6.27	4.06	8.20
ALANINE	53540	0.1945	0.1945	70.43	17.3324	5.00	2.72	5.50
CYSTINE [HALF]	0	0.	0.	8.79	2.9418	0.85	0.34	0.69
VALINE	34140	0.1192	0.1192	43.14	13.9599	4.03	1.67	3.37
METHIONINE	3516	0.0127	0.0127	16.14	6.6512	1.92	0.62	1.26
ISOLEUCINE	25620	0.0900	0.0900	32.57	11.8027	3.40	1.26	2.55
LEUCINE	35320	0.1260	0.1260	45.62	16.5297	4.77	1.76	3.57
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	25210	0.0838	0.0838	30.35	15.1880	4.38	1.17	2.37
PHENYLALANINE	24060	0.0861	0.0861	31.17	14.2199	4.10	1.21	2.44
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	53810	0.2023	0.2023	73.25	29.5792	8.53	5.67	11.45
HISTIDINE	7497	0.0575	0.0575	20.83	8.9274	2.58	2.42	4.88
ARGININE	19170	0.1517	0.1517	54.91	26.4209	7.62	8.49	17.16
TOTALS		2.7731	2.7731	1000.00	346.6647	100.00	49.48	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	3795	0.0261	0.0261		4.6716	0.37
GALACTOSAMINE	2446	0.0184	0.0184		3.3028	0.26
AMMONIA	130400	0.7870	0.7870		13.3784	11.02

TOTAL NITROGEN - MICROGRAMS 61.12

RUN NUMBER 1366A/1363B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE F
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4250	0.0178	0.0178	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	14570	0.0499	0.0499	96.81	6.6482	10.86	0.70	7.83
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	6130	0.0219	0.0219	42.40	2.6060	4.26	0.31	3.43
SERINE	8996	0.0370	0.0370	71.77	3.8913	6.36	0.52	5.80
GLUTAMIC ACID	9017	0.0334	0.0334	64.67	4.9091	8.02	0.47	5.23
PROLINE	2633	0.0469	0.0469	90.89	5.3987	8.82	0.66	7.35
GLYCINE	34110	0.1251	0.1251	242.40	9.388[illegible]	15.34	1.75	19.59
ALANINE	6944	0.0252	0.0252	48.91	2.248[illegible]	3.67	0.35	3.95
CYSTINE (HALF)	0	0.	0.	24.67	1.541[illegible]	2.52	0.18	1.99
VALINE	5312	0.0185	0.0185	35.94	2.172[illegible]	3.55	0.26	2.90
METHIONINE	2150	0.0078	0.0078	15.09	1.161[illegible]	1.90	0.11	1.22
ISOLEUCINE	4390	0.0154	0.0154	29.88	2.02[illegible]	3.30	0.22	2.42
LEUCINE	5158	0.0184	0.0184	35.67	2.[illegible]	3.94	0.26	2.88
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	5489	0.0183	0.0183	35.38	3.[illegible]	5.40	0.26	2.86
PHENYLALANINE	4810	0.0172	0.0172	33.36	2.[illegible]	4.64	0.24	2.70
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5653	0.0338	0.0338	65.57	4.9[illegible]	8.08	0.95	10.60
HISTIDINE	1895	0.0145	0.0145	28.19	2.[illegible]	3.69	0.61	6.84
ARGININE	2505	0.0198	0.0198	38.41	3.[illegible]	5.64	1.11	12.42
TOTALS		0.5210	0.5210	1000.00	61.[illegible]	100.00	8.94	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	594	0.0041	0.0041		0.7312		0.06	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	77820	0.4696	0.4696		7.9[illegible]39		6.58	

TOTAL NITROGEN - MICROGRAMS 15.57

RUN NUMBER 1377A/1372B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE G
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	6400	0.0268	0.0268	0.	0.	0.	0.	0.
TAURINE	1607	0.0062	0.0062	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	18350	0.0776	0.0776	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	111300	0.3816	0.3816	135.68	50.7852	14.51	5.34	10.65
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	42490	0.1516	0.1516	53.92	18.0636	5.16	2.12	4.23
SERINE	47930	0.1973	0.1973	70.15	20.7325	5.93	2.76	5.51
GLUTAMIC ACID	55860	0.2067	0.2067	73.50	30.4114	8.69	2.89	5.77
PROLINE	27360	0.4873	0.4873	173.27	56.0990	16.03	6.82	13.60
GLYCINE	76240	0.2795	0.2795	99.40	20.9838	6.00	3.91	7.80
ALANINE	57160	0.2077	0.2077	73.86	18.5043	5.29	2.91	5.80
CYSTINE [HALF]	0	0.	0.	8.95	3.0490	0.87	0.35	0.70
VALINE	28060	0.0979	0.0979	34.83	11.4737	3.28	1.37	2.73
METHIONINE	700	0.0025	0.0025	25.82	10.8349	3.10	1.02	2.03
ISOLEUCINE	19160	0.0673	0.0673	23.93	8.8267	2.52	0.94	1.88
LEUCINE	28140	0.1004	0.1004	35.70	13.1695	3.76	1.41	2.80
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	16140	0.0537	0.0537	19.08	9.7237	2.78	0.75	1.50
PHENYLALANINE	22350	0.0800	0.0800	28.43	13.2093	3.78	1.12	2.23
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	54780	0.2081	0.2081	74.01	30.4278	8.70	5.83	11.62
HISTIDINE	2994	0.0230	0.0230	8.17	3.5652	1.02	0.97	1.92
ARGININE	21790	0.1724	0.1724	61.30	30.0319	8.58	9.65	19.24
TOTALS		2.8275	2.8275	1000.00	349.8915	100.00	50.17	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	5322	0.0366	0.0366		6.5513		0.51	
GALACTOSAMINE	11440	0.0861	0.0861		15.4345		1.21	
AMMONIA	166100	1.1231	1.1231		19.0929		15.72	

TOTAL NITROGEN - MICROGRAMS 67.61

RUN NUMBER 1357A/1369B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE H
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	14410	0.0603	0.0603	0.	0.	0.	0.	0.
TAURINE	1800	0.0070	0.0070	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	24170	0.1022	0.1022	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	194700	0.6675	0.6675	215.76	88.8398	22.94	9.34	19.01
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	46430	0.1657	0.1657	53.56	19.7385	5.10	2.32	4.72
SERINE	49600	0.2050	0.2050	66.26	21.5414	5.56	2.87	5.84
GLUTAMIC ACID	60670	0.2252	0.2252	72.81	33.1390	8.56	3.15	6.41
PROLINE	25290	0.4504	0.4504	145.59	51.6546	13.39	6.31	12.83
GLYCINE	76010	0.2809	0.2809	90.79	21.0857	5.45	3.93	8.00
ALANINE	52200	0.1897	0.1897	61.31	16.8986	4.36	2.66	5.40
CYSTINE (HALF)	0	0.	0.	16.12	6.0418	1.56	0.70	1.42
VALINE	30050	0.1049	0.1049	33.90	12.2875	3.17	1.47	2.99
METHIONINE	4200	0.0152	0.0152	34.76	16.0452	4.14	1.51	3.06
ISOLEUCINE	21200	0.0745	0.0745	24.07	9.7665	2.52	1.04	2.12
LEUCINE	30210	0.1078	0.1078	34.84	14.1382	3.65	1.51	3.07
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	25650	0.0853	0.0853	27.57	15.4531	3.99	1.19	2.43
PHENYLALANINE	37640	0.1347	0.1347	43.53	22.2460	5.74	1.89	3.84
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	25520	0.1527	0.1527	49.37	22.3266	5.77	4.28	8.70
HISTIDINE	1452	0.0111	0.0111	3.60	1.7290	0.45	0.47	0.95
ARGININE	10230	0.0809	0.0809	26.16	14.0994	3.64	4.53	9.22
TOTALS		3.1208	3.1208	1000.00	387.2309	100.00	49.16	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	3757	0.0258	0.0258	4.6248	0.36
GALACTOSAMINE	6072	0.0457	0.0457	8.1922	0.64
AMMONIA	144400	0.8715	0.8715	14.8147	12.20

TOTAL NITROGEN - MICROGRAMS 62.36

RUN NUMBER 1301A/1890B
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOODS HOLE
TYPE 1
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	14500	0.0606	0.0606	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	26000	0.1920	0.1920	128.08	25.5523	14.67	2.69	11.02
METHIONINE SULFONE	4769	0.0197	0.0197	0.	0.	0.	0.	0.
THREONINE	15350	0.0548	0.0548	36.55	6.5257	3.75	0.77	3.15
SERINE	30010	0.1238	0.1238	82.60	13.0113	7.47	1.73	7.11
GLUTAMIC ACID	21550	0.0798	0.0798	53.22	11.7377	6.74	1.12	4.58
PROLINE	6075	0.1189	0.1189	79.31	13.6864	7.86	1.66	6.83
GLYCINE	104100	0.3890	0.3890	259.52	29.2023	16.77	5.45	22.34
ALANINE	22470	0.0816	0.0816	54.47	7.2742	4.18	1.14	4.69
CYSTINE (HALF)	0	0.	0.	28.97	5.2594	3.02	0.61	2.49
VALINE	17160	0.0599	0.0599	39.96	7.0167	4.03	0.84	3.44
METHIONINE	1150	0.0042	0.0042	13.63	3.0477	1.75	0.29	1.17
ISOLEUCINE	13690	0.0481	0.0481	32.07	6.3068	3.62	0.67	2.76
LEUCINE	13380	0.0477	0.0477	31.85	6.2618	3.60	0.67	2.74
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	18050	0.0620	0.0620	41.39	11.2419	6.45	0.87	3.56
PHENYLALANINE	10910	0.0390	0.0390	26.04	6.4480	3.70	0.55	2.24
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	13030	0.0760	0.0760	52.02	11.3995	6.54	2.18	8.96
HISTIDINE	2200	0.0169	0.0169	11.29	2.6269	1.51	0.71	2.92
ARGININE	5500	0.0435	0.0435	29.03	7.5803	4.35	2.44	10.00
TOTALS		1.5196	1.5196	1000.00	174.1790	100.00	24.38	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	1827	0.0126	0.0126	2.2490	0.18
GALACTOSAMINE	1616	0.0122	0.0122	2.1830	0.17
AMMONIA	39120	0.2361	0.2361	4.0135	3.31

TOTAL NITROGEN - MICROGRAMS 28.03

RUN NUMBER 1375/1378
SAMPLE MERCENARIA MERCENARIA
LOCALITY WOLLASTON
TYPE K
FACTOR 1.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	39600	0.1664	0.1664	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	42930	0.1815	0.1815	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	121100	0.5180	0.5180	106.85	68.9455	11.77	7.25	8.81
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	54460	0.1944	0.1944	40.09	23.1523	3.95	2.72	3.30
SERINE	73860	0.3041	0.3041	62.73	31.9574	5.46	4.26	5.17
GLUTAMIC ACID	60590	0.2962	0.2962	61.51	43.8750	7.49	4.17	5.07
PROLINE	33430	0.5954	0.5954	122.81	68.5449	11.70	8.34	10.12
GLYCINE	208100	0.9830	0.9830	202.76	73.7902	12.60	13.76	16.71
ALANINE	71620	0.2602	0.2602	53.68	23.1854	3.96	3.64	4.42
CYSTINE (HALF)	0	0.	0.	24.59	14.4362	2.46	1.67	2.03
VALINE	56990	0.1989	0.1989	41.03	23.3032	3.98	2.78	3.38
METHIONINE	16050	0.0581	0.0581	45.80	33.1333	5.66	3.11	3.78
ISOLEUCINE	40540	0.1424	0.1424	29.37	18.6762	3.19	1.99	2.42
LEUCINE	40560	0.1447	0.1447	29.85	18.9820	3.24	2.03	2.46
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	65920	0.2192	0.2192	45.21	39.7142	6.78	3.07	3.73
PHENYLALANINE	34760	0.1244	0.1244	25.65	20.5438	3.51	1.74	2.11
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	42570	0.2548	0.2548	52.55	37.2430	6.36	7.13	8.66
HISTIDINE	3781	0.0290	0.0290	5.99	4.5024	0.77	1.22	1.48
ARGININE	50360	0.2402	0.2402	49.54	41.8435	7.14	13.45	16.34
TOTALS		4.9128	4.9128	1000.00	585.8285	100.00	82.34	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	2530	0.0174	0.0174	3.1144	0.24	
GALACTOSAMINE	3144	0.0237	0.0237	4.2418	0.33	
AMMONIA	102300	0.6174	0.6174	10.4955	8.64	

TOTAL NITROGEN - MICROGRAMS 91.56

RUN NUMBER 552A/543B
SAMPLE MULINTA LATERALIS
LOCALITY SALEM,MASS.
TYPE SHELL NO. 4
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.3730	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			2.5000	152.21	332.7500	17.99	35.00	13.61
METHIONINE SULFONE			0.5800	0.	0.	0.	0.	0.
THREONINE			0.4100	24.96	48.8392	2.64	5.74	2.23
SERINE			0.6800	41.40	71.4612	3.86	9.52	3.70
GLUTAMIC ACID			0.6800	41.40	100.0484	5.41	9.52	3.70
PROLINE			1.0500	63.93	120.8865	6.53	14.70	5.72
GLYCINE			5.8000	353.13	435.4060	23.54	81.20	31.58
ALANINE			0.7700	46.88	68.5993	3.71	10.78	4.19
CYSTINE (HALF)			0.0800	21.14	42.0453	2.27	4.86	1.89
VALINE			0.6100	37.14	71.4615	3.86	8.54	3.32
METHIONINE			0.0800	33.95	83.2025	4.50	7.81	3.04
ISOLEUCINE			0.3600	21.92	47.2248	2.55	5.04	1.96
LEUCINE			0.5400	32.88	70.8372	3.83	7.56	2.94
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.7600	46.27	137.7044	7.44	10.64	4.14
PHENYLALANINE			0.4200	25.57	69.3798	3.75	5.88	2.29
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.3100	18.87	45.3189	2.45	8.68	3.38
HISTIDINE			0.2600	15.83	40.3416	2.18	10.92	4.25
ARGININE			0.3700	22.53	64.4577	3.48	20.72	8.06
TOTALS			16.6330	1000.00	1849.9643	100.00	257.11	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.0200	3.5834	0.28
GALACTOSAMINE	0.0300	5.3751	0.42
AMMONIA	5.0000	85.0000	70.00

TOTAL NITROGEN - MICROGRAMS 327.81

RUN NUMBER 629A/626B
SAMPLE MULINIA LATERALIS
LOCALITY HADLEY HARBOR WOODS HOLE, MASS.
TYPE SHELL NO. 6
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.4900	0.	0.	0.	0.	0.
TAURINE			0.0700	0.	0.	0.	0.	0.
METHIONINE SULFOXIDE			0.3000	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			4.1000	176.53	545.7100	20.60	57.40	15.53
METHIONINE SULFONE			0.2500	0.	0.	0.	0.	0.
THREONINE			0.6800	29.28	81.0016	3.06	9.52	2.58
SERINE			1.1100	47.79	116.6499	4.40	15.54	4.20
GLUTAMIC ACID			1.3000	55.97	191.2690	7.22	18.20	4.92
PROLINE			1.3000	55.97	149.6690	5.65	18.20	4.92
GLYCINE			6.6000	284.17	495.4620	18.70	92.40	24.99
ALANINE			1.8300	78.79	163.0347	6.15	25.62	6.93
CYSTINE (HALF)			0.0900	21.90	61.6130	2.33	7.12	1.93
VALINE			0.9600	41.33	112.4640	4.25	13.44	3.64
METHIONINE			0.2700	32.15	111.4379	4.21	10.46	2.83
ISOLEUCINE			0.5500	23.68	72.1490	2.72	7.70	2.08
LEUCINE			0.9500	40.90	124.6210	4.70	13.30	3.60
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.2500	10.76	45.2975	1.71	3.50	0.95
PHENYLALANINE			0.7900	34.01	130.5001	4.93	11.06	2.99
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.6100	26.26	89.1759	3.37	17.08	4.62
HISTIDINE			0.2500	10.76	38.7900	1.46	10.50	2.84
ARGININE			0.6900	29.71	120.2049	4.54	38.64	10.45
TOTALS			23.4400	1000.00	2649.0494	100.00	369.68	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.0400		7.1668		0.56	
GALACTOSAMINE			0.0500		8.9585		0.70	
AMMONIA			6.5000		110.5000		91.00	
				TOTAL NITROGEN - MICROGRAMS			461.94	

RUN NUMBER 541A/557B
SAMPLE MULINIA LATERALIS
LOCALITY NEW YORK HARBOR
TYPE SHELL NO. 10
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.2700	0.	0.	0.	0.	0.
TAURINE			0.0150	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			2.2200	159.52	295.4820	18.69	31.08	14.89
METHIONINE SULFONE			0.2900	0.	0.	0.	0.	0.
THREONINE			0.3000	21.56	35.7360	2.26	4.20	2.01
SERINE			0.4800	34.49	50.4432	3.19	6.72	3.22
GLUTAMIC ACID			0.4500	32.34	66.2085	4.19	6.30	3.02
PROLINE			0.9600	68.98	110.5248	6.99	13.44	6.44
GLYCINE			4.5000	323.35	337.8150	21.37	63.00	30.19
ALANINE			0.9000	64.67	80.1810	5.07	12.60	6.04
CYSTINE (HALF)			0.1000	22.12	37.2917	2.36	4.31	2.07
VALINE			0.6900	49.58	80.8335	5.11	9.66	4.63
METHIONINE			0.0800	22.91	47.5701	3.01	4.46	2.14
ISOLEUCINE			0.3300	23.71	43.2894	2.74	4.62	2.21
LEUCINE			0.5100	36.65	66.9018	4.23	7.14	3.42
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.7500	53.89	135.8925	8.60	10.50	5.03
PHENYLALANINE			0.6300	45.27	104.0697	6.58	8.82	4.23
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.3000	21.56	43.8570	2.77	8.40	4.03
HISTIDINE			0.1200	8.62	18.6192	1.18	5.04	2.42
ARGININE			0.1500	10.78	26.1315	1.65	8.40	4.03
TOTALS			14.0450	1000.00	1580.8469	100.00	208.69	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.0200	3.5834	0.28
GALACTOSAMINE	0.0300	5.3751	0.42
AMMONIA	4.5000	76.5000	63.00

TOTAL NITROGEN - MICROGRAMS 272.39

RUN NUMBER 545A/555B
SAMPLE MULINIA LATERALIS
LOCALITY GREAT SOUTH BAY
TYPE SHELL NO. 11
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.2200	0.	0.	0.	0.	0.
TAURINE			0.0180	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.2500	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			3.0000	200.52	399.3000	23.84	42.00	19.03
METHIONINE SULFONE			0.4500	0.	0.	0.	0.	0.
THREONINE			0.3600	24.06	42.8832	2.56	5.04	2.28
SERINE			0.7000	46.79	73.5630	4.39	9.80	4.44
GLUTAMIC ACID			0.5500	36.76	80.9215	4.83	7.70	3.49
PROLINE			0.8100	54.14	93.2553	5.57	11.34	5.14
GLYCINE			5.0500	337.54	379.1035	22.63	70.70	32.04
ALANINE			0.8500	56.81	75.7265	4.52	11.90	5.39
CYSTINE (HALF)			0.	11.70	21.1943	1.27	2.45	1.11
VALINE			0.6400	42.78	74.9760	4.48	8.96	4.06
METHIONINE			0.0300	41.86	93.4607	5.58	8.77	3.97
ISOLEUCINE			0.3500	23.39	45.9130	2.74	4.90	2.22
LEUCINE			0.4600	30.75	60.3428	3.60	6.44	2.92
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.4400	29.41	79.7236	4.76	6.16	2.79
PHENYLALANINE			0.5500	36.76	90.8545	5.42	7.70	3.49
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.1600	10.69	23.3904	1.40	4.48	2.03
HISTIDINE			0.0800	5.35	12.4128	0.74	3.36	1.52
ARGININE			0.1600	10.69	27.8736	1.66	8.96	4.06
TOTALS			15.1280	1000.00	1674.8947	100.00	220.66	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	3.9000	66.3000	54.60

TOTAL NITROGEN - MICROGRAMS 275.26

RUN NUMBER 558A/556B
SAMPLE MULINIA LATERALIS
LOCALITY SAPELO ISLAND,GEORGIA
TYPE SHELL NO. 13
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.2900	0.	0.	0.	0.	0.
TAURINE			0.0500	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.0150	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			5.2500	197.66	698.7750	22.71	73.50	18.15
METHIONINE SULFONE			0.6200	0.	0.	0.	0.	0.
THREONINE			0.5600	21.08	66.7072	2.17	7.84	1.94
SERINE			1.0000	37.65	105.0900	3.42	14.00	3.46
GLUTAMIC ACID			1.0200	38.40	150.0726	4.88	14.28	3.53
PROLINE			1.8500	69.65	212.9905	6.92	25.90	6.40
GLYCINE			8.0000	301.20	600.5600	19.52	112.00	27.66
ALANINE			1.6400	61.75	146.1076	4.75	22.96	5.67
CYSTINE (HALF)			0.	9.64	31.0183	1.01	3.59	0.89
VALINE			0.9500	35.77	111.2925	3.62	13.30	3.28
METHIONINE			0.0800	22.74	90.1389	2.93	8.46	2.09
ISOLEUCINE			0.5500	20.71	72.1490	2.35	7.70	1.90
LEUCINE			0.8600	32.38	112.8148	3.67	12.04	2.97
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			1.1000	41.42	199.3090	6.48	15.40	3.80
PHENYLALANINE			1.8500	69.65	305.6015	9.93	25.90	6.40
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.3800	14.31	55.5522	1.81	10.64	2.63
HISTIDINE			0.0900	3.39	13.9644	0.45	3.78	0.93
ARGININE			0.6000	22.59	104.5260	3.40	33.60	8.30
TOTALS			26.7550	1000.00	3076.6695	100.00	404.88	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	2.8000	47.6000	39.20

TOTAL NITROGEN - MICROGRAMS 444.08

RUN NUMBER 534A/533B
SAMPLE MULINIA LATERALIS
LOCALITY LAKE WORTH,FLORIDA
TYPE SHELL NO. 14
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.4500	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.0100	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			2.0800	208.11	276.8480	24.63	29.12	19.97
METHIONINE SULFONE			0.1500	0.	0.	0.	0.	0.
THREONINE			0.2600	26.01	30.9712	2.76	3.64	2.50
SERINE			0.4600	46.02	48.3414	4.30	6.44	4.42
GLUTAMIC ACID			0.3300	33.02	48.5529	4.32	4.62	3.17
PROLINE			0.3400	34.02	39.1442	3.48	4.76	3.26
GLYCINE			3.3300	333.17	249.9831	22.24	46.62	31.97
ALANINE			0.4700	47.02	41.8723	3.73	6.58	4.51
CYSTINE (HALF)			0.0600	38.25	46.3022	4.12	5.35	3.67
VALINE			0.4200	42.02	49.2030	4.38	5.88	4.03
METHIONINE			0.	13.26	19.7783	1.76	1.86	1.27
ISOLEUCINE			0.3800	38.02	49.8484	4.44	5.32	3.65
LEUCINE			0.3400	34.02	44.6012	3.97	4.76	3.26
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.3800	38.02	68.8522	6.13	5.32	3.65
PHENYLALANINE			0.4000	40.02	66.0760	5.88	5.60	3.84
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.1600	16.01	23.3904	2.08	4.48	3.07
HISTIDINE			0.1300	13.01	20.1708	1.79	5.46	3.74
ARGININE			0.	0.	0.	0.	0.	0.
TOTALS			10.3400	1000.00	1123.9356	100.00	145.81	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.		0.		0.	
GALACTOSAMINE			0.		0.		0.	
AMMONIA			4.4000		74.8000		61.60	

TOTAL NITROGEN - MICROGRAMS 207.41

RUN NUMBER 575A/582B
SAMPLE MULINIA LATERALIS
LOCALITY CHANDELEUR ISLAND,LUISIANA
TYPE SHELL NO. 15
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.9400	0.	0.	0.	0.	0.
TAURINE			0.0730	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.0510	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			2.9000	129.30	385.9900	14.92	40.60	10.53
METHIONINE SULFONE			0.8000	0.	0.	0.	0.	0.
THREONINE			0.7000	31.21	83.3840	3.22	9.80	2.54
SERINE			1.3000	57.96	136.6170	5.28	18.20	4.72
GLUTAMIC ACID			0.8900	39.68	130.9457	5.06	12.46	3.23
PROLINE			0.8900	39.68	102.4657	3.96	12.46	3.23
GLYCINE			6.8000	303.18	510.4760	19.73	95.20	24.70
ALANINE			1.3100	58.41	116.7079	4.51	18.34	4.76
CYSTINE (HALF)			0.0340	34.68	94.2170	3.64	10.89	2.83
VALINE			1.0000	44.59	117.1500	4.53	14.00	3.63
METHIONINE			0.0960	35.70	119.4948	4.62	11.21	2.91
ISOLEUCINE			0.5700	25.41	74.7726	2.89	7.98	2.07
LEUCINE			0.8600	38.34	112.8148	4.36	12.04	3.12
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.5100	22.74	92.4069	3.57	7.14	1.85
PHENYLALANINE			0.8100	36.11	133.8039	5.17	11.34	2.94
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.8100	36.11	118.4139	4.58	22.68	5.86
HISTIDINE			0.2100	9.36	32.5836	1.26	8.82	2.29
ARGININE			1.2900	57.52	224.7309	8.69	72.24	18.74
TOTALS			22.8440	1000.00	2586.9747	100.00	385.40	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.1100	19.7087	1.54
GALACTOSAMINE	0.1400	25.0838	1.96
AMMONIA	7.1000	120.7000	99.40

TOTAL NITROGEN - MICROGRAMS 488.30

RUN NUMBER 568A/563B
SAMPLE MULINIA LATERALIS
LOCALITY BARATARIA BAY,LUISIANA
TYPE SHELL NO. 16
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.3000	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			2.9600	214.42	393.9760	24.10	41.44	16.89
METHIONINE SULFONE			0.5100	0.	0.	0.	0.	0.
THREONINE			0.5400	39.12	64.3248	3.94	7.56	3.08
SERINE			0.7600	55.05	79.8684	4.89	10.64	4.34
GLUTAMIC ACID			0.7300	52.88	107.4049	6.57	10.22	4.17
PROLINE			0.8200	59.40	94.4066	5.78	11.48	4.68
GLYCINE			3.4800	252.09	261.2436	15.98	48.72	19.86
ALANINE			0.6600	47.81	58.7994	3.60	9.24	3.77
CYSTINE (HALF)			0.0900	22.08	36.9241	2.26	4.27	1.74
VALINE			0.2600	18.83	30.4590	1.86	3.64	1.48
METHIONINE			0.0700	35.49	73.1094	4.47	6.86	2.80
ISOLEUCINE			0.2600	18.83	34.1068	2.09	3.64	1.48
LEUCINE			0.4100	29.70	53.7838	3.29	5.74	2.34
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0500	3.62	9.0595	0.55	0.70	0.29
PHENYLALANINE			0.3400	24.63	56.1646	3.44	4.76	1.94
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.6200	44.91	90.6378	5.55	17.36	7.08
HISTIDINE			0.2600	18.83	40.3416	2.47	10.92	4.45
ARGININE			0.8600	62.30	149.8206	9.17	48.16	19.63
TOTALS			13.9800	1000.00	1634.4309	100.00	245.35	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.0800		14.3336		1.12	
GALACTOSAMINE			0.0900		16.1253		1.26	
AMMONIA			4.8000		81.6000		67.20	

TOTAL NITROGEN - MICROGRAMS 314.93

RUN NUMBER 554A/562B
SAMPLE MULINIA LATERALIS
LOCALITY MESQUITE BAY, TEXAS
TYPE SHELL NO. 18
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.3300	0.	0.	0.	0.	0.
TAURINE			0.0210	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.1100	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			4.0800	252.12	543.0480	28.70	57.12	20.80
METHIONINE SULFONE			0.1900	0.	0.	0.	0.	0.
THREONINE			0.4000	24.72	47.6480	2.52	5.60	2.04
SERINE			1.1200	69.21	117.7008	6.22	15.68	5.71
GLUTAMIC ACID			0.7100	43.87	104.4623	5.52	9.94	3.62
PROLINE			0.8500	52.53	97.8605	5.17	11.90	4.33
GLYCINE			4.1400	255.83	310.7898	16.43	57.96	21.11
ALANINE			0.9100	56.23	81.0719	4.29	12.74	4.64
CYSTINE (HALF)			0.0400	18.33	35.9327	1.90	4.15	1.51
VALINE			0.4100	25.34	48.0315	2.54	5.74	2.09
METHIONINE			0.	15.81	38.1701	2.02	3.58	1.30
ISOLEUCINE			0.3500	21.63	45.9130	2.43	4.90	1.78
LEUCINE			0.5300	32.75	69.5254	3.67	7.42	2.70
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.1800	11.12	32.6142	1.72	2.52	0.92
PHENYLALANINE			0.4400	27.19	72.6636	3.84	6.16	2.24
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.4300	26.57	62.8617	3.32	12.04	4.38
HISTIDINE			0.2400	14.83	37.2384	1.97	10.08	3.67
ARGININE			0.8400	51.91	146.3364	7.73	47.04	17.13
TOTALS			16.3210	1000.00	1891.8882	100.00	274.57	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.1400	25.0838	1.96
GALACTOSAMINE	0.1700	30.4589	2.38
AMMONIA	3.9000	66.3000	54.60

TOTAL NITROGEN - MICROGRAMS 333.51

RUN NUMBER 507A/586B
SAMPLE MULINIA LATERALIS
LOCALITY LAGUNA MADRE, TEXAS
TYPE SHELL NO. 21
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.3000	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.0800	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			2.2100	182.90	294.1510	21.63	30.94	16.75
METHIONINE SULFONE			0.3100	0.	0.	0.	0.	0.
THREONINE			0.3200	26.48	38.1184	2.80	4.48	2.43
SERINE			0.5400	44.69	56.7486	4.17	7.56	4.09
GLUTAMIC ACID			0.5200	43.03	76.5076	5.63	7.28	3.94
PROLINE			0.7300	60.41	84.0449	6.18	10.22	5.53
GLYCINE			3.7300	308.69	280.0111	20.59	52.22	28.27
ALANINE			0.8100	67.03	72.1629	5.31	11.34	6.14
CYSTINE (HALF)			0.0600	22.75	33.2905	2.45	3.85	2.08
VALINE			0.5400	44.69	63.2610	4.65	7.56	4.09
METHIONINE			0.4400	63.52	114.5282	8.42	10.75	5.82
ISOLEUCINE			0.2800	23.17	36.7304	2.70	3.92	2.12
LEUCINE			0.3700	30.62	48.5366	3.57	5.18	2.80
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.	0.	0.	0.	0.	0.
PHENYLALANINE			0.4700	38.90	77.6393	5.71	6.58	3.56
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.2000	16.55	29.2380	2.15	5.60	3.03
HISTIDINE			0.0510	4.22	7.9132	0.58	2.14	1.16
ARGININE			0.2700	22.34	47.0367	3.46	15.12	8.18
TOTALS			12.3510	1000.00	1359.9184	100.00	184.74	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.0100	1.7917	0.14
GALACTOSAMINE	0.0300	5.3751	0.42
AMMONIA	4.6000	78.2000	64.40

TOTAL NITROGEN - MICROGRAMS 249.70

RUN NUMBER 553A/556B
SAMPLE MULINIA LATERALIS
LOCALITY LAGUNA MADRE, TEXAS
TYPE SHELL NO. 23
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.4000	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			6.1200	172.78	814.5720	20.24	85.68	15.40
METHIONINE SULFONE			1.6200	0.	0.	0.	0.	0.
THREONINE			0.5400	15.25	64.3248	1.60	7.56	1.36
SERINE			1.4000	39.52	147.1260	3.66	19.60	3.52
GLUTAMIC ACID			1.1100	31.34	163.3143	4.06	15.54	2.79
PROLINE			2.1200	59.85	244.0756	6.07	29.68	5.34
GLYCINE			13.0000	367.01	975.9100	24.25	182.00	32.72
ALANINE			1.6100	45.45	143.4349	3.56	22.54	4.05
CYSTINE (HALF)			0.	8.09	34.6978	0.86	4.01	0.72
VALINE			1.0200	28.80	119.4930	2.97	14.28	2.57
METHIONINE			0.	37.66	199.0504	4.95	18.68	3.36
ISOLEUCINE			0.5400	15.25	70.8372	1.76	7.56	1.36
LEUCINE			0.9700	27.38	127.2446	3.16	13.58	2.44
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			2.1900	61.83	396.8061	9.86	30.66	5.51
PHENYLALANINE			1.2800	36.14	211.4432	5.25	17.92	3.22
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.6800	19.20	99.4092	2.47	19.04	3.42
HISTIDINE			0.0310	0.88	4.8100	0.12	1.30	0.23
ARGININE			1.1900	33.60	207.3099	5.15	66.64	11.98
TOTALS			35.8210	1000.00	4023.8589	100.00	556.27	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.0300		5.3751		0.42	
GALACTOSAMINE			0.0600		10.7502		0.84	
AMMONIA			4.6000		78.2000		64.40	

TOTAL NITROGEN - MICROGRAMS 621.93

RUN NUMBER 574A/572B
SAMPLE MULINIA LATERALIS
LOCALITY CAMPECHE,MEXICO
TYPE SHELL NO. 24
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.2800	0.	0.	0.	0.	0.
TAURINE			0.0600	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.0340	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			0.9100	130.83	121.1210	14.58	12.74	10.26
METHIONINE SULFONE			0.0620	0.	0.	0.	0.	0.
THREONINE			0.2200	31.63	26.2064	3.15	3.08	2.48
SERINE			0.6300	90.58	66.2067	7.97	8.82	7.11
GLUTAMIC ACID			0.3200	46.01	47.0816	5.67	4.48	3.61
PROLINE			0.2600	37.38	29.9338	3.60	3.64	2.93
GLYCINE			1.4700	211.35	110.3529	13.28	20.58	16.58
ALANINE			0.4100	58.95	36.5269	4.40	5.74	4.62
CYSTINE (HALF)			0.0530	44.80	37.7427	4.54	4.36	3.51
VALINE			0.4000	57.51	46.8600	5.64	5.60	4.51
METHIONINE			0.0320	16.36	16.9752	2.04	1.59	1.28
ISOLEUCINE			0.3000	43.13	39.3540	4.74	4.20	3.38
LEUCINE			0.3800	54.63	49.8484	6.00	5.32	4.29
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.1300	18.69	23.5547	2.84	1.82	1.47
PHENYLALANINE			0.2400	34.51	39.6456	4.77	3.36	2.71
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.2200	31.63	32.1618	3.87	6.16	4.96
HISTIDINE			0.2300	33.07	35.6868	4.30	9.66	7.78
ARGININE			0.4100	58.95	71.4261	8.60	22.96	18.50
TOTALS			7.0510	1000.00	830.6846	100.00	124.12	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	3.2000	54.4000	44.80

TOTAL NITROGEN - MICROGRAMS 168.92

RUN NUMBER 697A/722B
SAMPLE MULINIA LATERALIS
LOCALITY HADLEY HARBOR WOODS HOLE,MASS.
TYPE SHELL NO. 159
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.2000	0.	0.	0.	0.	0.
TAURINE			0.1400	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.4200	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			4.5200	270.69	601.6120	31.35	63.28	24.51
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.4700	28.15	55.9864	2.92	6.58	2.55
SERINE			0.8600	51.50	90.3774	4.71	12.04	4.66
GLUTAMIC ACID			0.6800	40.72	100.0484	5.21	9.52	3.69
PROLINE			1.3000	77.85	149.6690	7.80	18.20	7.05
GLYCINE			4.4100	264.10	331.0587	17.25	61.74	23.92
ALANINE			0.9200	55.10	81.9628	4.27	12.88	4.99
CYSTINE (HALF)			0.	16.69	33.7637	1.76	3.90	1.51
VALINE			0.5500	32.94	64.4325	3.36	7.70	2.98
METHIONINE			0.2300	36.49	90.9238	4.74	8.53	3.30
ISOLEUCINE			0.2900	17.37	38.0422	1.98	4.06	1.57
LEUCINE			0.4700	28.15	61.6546	3.21	6.58	2.55
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.1200	7.19	21.7428	1.13	1.68	0.65
PHENYLALANINE			0.3900	23.36	64.4241	3.36	5.46	2.12
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.3200	19.16	46.7808	2.44	8.96	3.47
HISTIDINE			0.1100	6.59	17.0676	0.89	4.62	1.79
ARGININE			0.4000	23.95	69.6840	3.63	22.40	8.68
TOTALS			16.8000	1000.00	1919.2308	100.00	258.13	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.		0.		0.	
GALACTOSAMINE			0.		0.		0.	
AMMONIA			2.5000		42.5000		35.00	

TOTAL NITROGEN - MICROGRAMS 293.13

RUN NUMBER 630A/632B
SAMPLE MULINIA LATERALIS
LOCALITY HADLEY HARBOR WOODS HOLE, MASS.
TYPE SHELL NO. 901
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.3000	0.	0.	0.	0.	0.
TAURINE			0.1000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.4800	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			4.3800	211.34	582.9780	24.75	61.32	18.71
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			0.6300	30.40	75.0456	3.19	8.82	2.69
SERINE			1.0000	48.25	105.0900	4.46	14.00	4.27
GLUTAMIC ACID			0.9100	43.91	133.8883	5.68	12.74	3.89
PROLINE			1.5100	72.86	173.8463	7.38	21.14	6.45
GLYCINE			6.3200	304.94	474.4424	20.14	88.48	27.00
ALANINE			1.2000	57.90	106.9080	4.54	16.80	5.13
CYSTINE (HALF)			0.	15.04	37.7482	1.60	4.36	1.33
VALINE			0.7000	33.78	82.0050	3.48	9.80	2.99
METHIONINE			0.	20.92	64.6893	2.75	6.07	1.85
ISOLEUCINE			0.3700	17.85	48.5366	2.06	5.18	1.58
LEUCINE			0.6700	32.33	87.8906	3.73	9.38	2.86
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.5000	24.13	90.5950	3.85	7.00	2.14
PHENYLALANINE			0.5600	27.02	92.5064	3.93	7.84	2.39
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.4300	20.75	62.8617	2.67	12.04	3.67
HISTIDINE			0.1500	7.24	23.2740	0.99	6.30	1.92
ARGININE			0.6500	31.36	113.2365	4.81	36.40	11.11
TOTALS			20.8600	1000.00	2355.5419	100.00	327.67	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.		0.		0.	
GALACTOSAMINE			0.		0.		0.	
AMMONIA			3.0000		51.0000		42.00	

TOTAL NITROGEN - MICROGRAMS 369.67

RUN NUMBER 611A/652B
SAMPLE MULINIA LATERALIS
LOCALITY HADLEY HARBOR WOODS HOLE,MASS.
TYPE SHELL NO. 902
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.2500	0.	0.	0.	0.	0.
TAURINE			0.1200	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.4000	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			4.5800	245.84	609.5980	28.37	64.12	22.06
METHIONINE SULFONE			0.1500	0.	0.	0.	0.	0.
THREONINE			0.5900	31.67	70.2808	3.27	8.26	2.84
SERINE			0.9000	48.31	94.5810	4.40	12.60	4.34
GLUTAMIC ACID			0.8000	42.94	117.7040	5.48	11.20	3.85
PROLINE			1.4700	78.91	169.2411	7.88	20.58	7.08
GLYCINE			5.1000	273.75	382.8570	17.82	71.40	24.57
ALANINE			0.9500	50.99	84.6355	3.94	13.30	4.58
CYSTINE (HALF)			0.	15.85	35.7560	1.66	4.13	1.42
VALINE			0.6800	36.50	79.6620	3.71	9.52	3.28
METHIONINE			0.	26.02	72.3384	3.37	6.79	2.34
ISOLEUCINE			0.3200	17.18	41.9776	1.95	4.48	1.54
LEUCINE			0.5800	31.13	76.0844	3.54	8.12	2.79
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.4300	23.08	77.9117	3.63	6.02	2.07
PHENYLALANINE			0.4600	24.69	75.9874	3.54	6.44	2.22
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.3600	19.32	52.6284	2.45	10.08	3.47
HISTIDINE			0.1200	6.44	18.6192	0.87	5.04	1.73
ARGININE			0.5100	27.38	88.8471	4.13	28.56	9.83
TOTALS			18.7700	1000.00	2148.7095	100.00	290.64	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	2.4000	40.8000	33.60

TOTAL NITROGEN - MICROGRAMS 324.24

RUN NUMBER 69GA7723B
SAMPLE MOLINIA LATERALIS
LOCALITY WOODS HOLE, MASS.
TYPE PERIOSTRACUM NO. 159
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			9.8000	0.	0.	0.	0.	0.
TAURINE			29.0000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			2.4000	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			242.0000	74.09	32210.2000	9.15	3388.00	6.40
METHIONINE SULFONE			50.0000	0.	0.	0.	0.	0.
THREONINE			71.0000	21.74	8457.5200	2.40	994.00	1.88
SERINE			132.0000	40.41	13871.8800	3.94	1848.00	3.49
GLUTAMIC ACID			119.0000	36.43	17508.4700	4.97	1666.00	3.15
PROLINE			167.0000	51.13	19226.7100	5.46	2338.00	4.42
GLYCINE			1420.0000	434.75	06599.3999	30.29	19880.00	37.57
ALANINE			173.0000	52.97	15412.5700	4.38	2422.00	4.58
CYSTINE [HALF]			36.0000	21.77	8610.6308	2.45	995.28	1.88
VALINE			104.0000	31.84	12183.6000	3.46	1456.00	2.75
METHIONINE			165.0000	63.79	31088.2761	8.83	2916.74	5.51
ISOLEUCINE			75.0000	22.96	9838.5000	2.80	1050.00	1.98
LEUCINE			111.0000	33.98	14560.9800	4.14	1554.00	2.94
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			28.0000	8.57	5073.3200	1.44	392.00	0.74
PHENYLALANINE			137.0000	41.94	22631.0300	6.43	1918.00	3.62
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			2.0000	0.61	324.3800	0.09	56.00	0.11
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			51.0000	15.61	7455.6900	2.12	1428.00	2.70
HISTIDINE			3.8000	1.16	589.6080	0.17	159.60	0.30
ARGININE			151.0000	46.23	26305.7100	7.47	8456.00	15.98
TOTALS			3279.0000	1000.00	351948.4727	100.00	52917.62	100.00

UREA	0.	0.	0.	
GLUCOSAMINE	4.3000	770.4310	60.20	
GALACTOSAMINE	0.	0.	0.	
AMMONIA	454.0000	7718.0000	6356.00	

TOTAL NITROGEN - MICROGRAMS 59333.82

RUN NUMBER 612A/634B
SAMPLE MULINIA LATERALIS
LOCALITY HADLEY HARBOR, WOODS HOLE, MAS
TYPE MANTLE NO. 902
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			6.4000	0.	0.	0.	0.	0.
TAURINE			89.4000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			190.0000	43.53	24914.7000	4.77	2660.00	4.02
ASPARTIC ACID			455.0000	104.25	60560.4999	11.59	6370.00	9.63
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			246.0000	56.37	29303.5200	5.61	3444.00	5.21
SERINE			293.0000	67.14	30791.3700	5.89	4102.00	6.20
GLUTAMIC ACID			542.0000	124.19	79744.4598	15.26	7588.00	11.47
PROLINE			228.0000	52.24	26249.6400	5.02	3192.00	4.83
GLYCINE			668.0000	153.06	50146.7599	9.59	9352.00	14.14
ALANINE			352.0000	80.65	31359.6800	6.00	4928.00	7.45
CYSTINE [HALF]			30.1000	27.78	14682.9195	2.81	1697.17	2.57
VALINE			254.0000	58.20	29756.1000	5.69	3556.00	5.38
METHIONINE			100.3000	22.98	14966.7660	2.86	1404.20	2.12
ISOLEUCINE			208.0000	47.66	27285.4399	5.22	2912.00	4.40
LEUCINE			298.0000	68.28	39091.6399	7.48	4172.00	6.31
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			5.6000	1.28	1014.6640	0.19	78.40	0.12
PHENYLALANINE			132.0000	30.25	21805.0800	4.17	1848.00	2.79
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			22.9000	5.25	3714.1510	0.71	641.20	0.97
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			180.0000	41.24	26314.2000	5.03	5040.00	7.62
HISTIDINE			47.3000	10.84	7339.0680	1.40	1986.60	3.00
ARGININE			21.0000	4.81	3658.4100	0.70	1176.00	1.78
TOTALS			4369.0000	1000.00	522699.0640	100.00	66147.57	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.	0.	0.
AMMONIA	550.0000	9350.0000	7700.00

TOTAL NITROGEN - MICROGRAMS 73847.57

RUN NUMBER 776A/773B
SAMPLE MYTILUS EDULIS-LARGE)
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 0.

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			9.4600	111.62	1259.1260	14.10	132.44	10.13
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			1.3300	15.69	156.4296	1.77	18.62	1.42
SERINE			8.2800	97.70	870.1452	9.74	115.92	8.87
GLUTAMIC ACID			3.2600	38.47	479.6438	5.37	45.64	3.49
PROLINE			1.1900	14.04	137.0047	1.53	16.66	1.27
GLYCINE			24.5000	289.09	1839.2150	20.59	343.00	26.25
ALANINE			20.4000	240.71	1817.4360	20.35	285.60	21.85
CYSTINE (HALF)			0.8900	10.50	107.7968	1.21	12.46	0.95
VALINE			2.2800	26.90	267.1020	2.99	31.92	2.44
METHIONINE			0.4900	5.78	73.1178	0.82	6.86	0.52
ISOLEUCINE			1.3200	15.58	173.1576	1.94	18.48	1.41
LEUCINE			4.0800	48.14	535.2144	5.99	57.12	4.37
DOPA			0.0900	1.06	17.7471	0.20	1.26	0.10
TYROSINE			1.6800	19.82	304.3992	3.41	23.52	1.80
PHENYLALANINE			1.4400	16.99	237.8736	2.66	20.16	1.54
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			1.5600	18.41	228.0564	2.55	43.68	3.34
HISTIDINE			0.4600	5.43	71.3736	0.80	19.32	1.48
ARGININE			2.0400	24.07	355.3884	3.98	114.24	8.74
TOTALS			84.7500	1000.00	8932.2271	100.00	1306.90	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.1400	25.0838	1.96
GALACTOSAMINE	0.0900	16.1253	1.26
AMMONIA	4.9000	83.3000	68.60

TOTAL NITROGEN - MICROGRAMS 1378.72

RUN NUMBER 780A/784B
SAMPLE MYTILUS EDULIS-SMALL
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 0.

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			10.0200	118.47	1333.6620	14.79	140.28	10.74
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			1.4600	17.26	173.9152	1.93	20.44	1.56
SERINE			8.3200	98.37	874.3488	9.70	116.48	8.92
GLUTAMIC ACID			3.4300	40.55	504.6559	5.60	48.02	3.68
PROLINE			1.2900	15.25	148.5177	1.65	18.06	1.38
GLYCINE			24.6100	290.97	1847.4727	20.49	344.54	26.38
ALANINE			18.2600	215.89	1626.7834	18.04	255.64	19.57
CYSTINE (HALF)			0.9200	10.88	111.4304	1.24	12.88	0.99
VALINE			2.4800	29.32	290.5320	3.22	34.72	2.66
METHIONINE			0.4900	5.79	73.1178	0.81	6.86	0.53
ISOLEUCINE			1.4900	17.62	195.4582	2.17	20.86	1.60
LEUCINE			4.0900	48.36	536.5262	5.95	57.26	4.38
DOPA			0.4600	5.44	90.7074	1.01	6.44	0.49
TYROSINE			1.6900	19.98	306.2111	3.40	23.66	1.81
PHENYLALANINE			1.4600	17.26	241.1774	2.67	20.44	1.56
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			1.5800	18.68	230.9802	2.56	44.24	3.39
HISTIDINE			0.4500	5.32	69.8220	0.77	18.90	1.45
ARGININE			2.0800	24.59	362.3568	4.02	116.48	8.92
TOTALS			84.5800	1000.00	9017.6751	100.00	1306.20	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.4200	75.2514	5.88
GALACTOSAMINE	0.2600	46.5842	3.64
AMMONIA	5.0100	85.1700	70.14

TOTAL NITROGEN - MICROGRAMS 1385.86

RUN NUMBER 1440A/1438B
SAMPLE MYTILUS EDULIS
LOCALITY WOODS HOLE
TYPE PERIOSTRACUM
FACTOR 2000.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1833	0.0077	15.3293	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	47850	0.1640	328.0768	51.66	43667.0208	6.44	4593.08	4.39
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	17060	0.0609	121.7702	19.18	14505.2619	2.14	1704.78	1.63
SERINE	46300	0.1906	381.1484	60.02	40054.8835	5.91	5336.08	5.10
GLUTAMIC ACID	12600	0.0466	93.2470	14.68	13719.4301	2.02	1305.46	1.25
PROLINE	4367	0.0778	155.5476	24.49	17908.1998	2.64	2177.67	2.08
GLYCINE	441800	1.6198	3239.5967	510.14	243196.5234	35.89	45354.35	43.38
ALANINE	32930	0.1197	239.3169	37.69	21320.7390	3.15	3350.44	3.20
CYSTINE (HALF)	0	0.	0.	1.73	1329.7306	0.20	153.70	0.15
VALINE	38840	0.1356	271.1344	42.70	31763.3926	4.69	3795.88	3.63
METHIONINE	2442	0.0088	17.6796	2.78	2638.1556	0.39	247.51	0.24
ISOLEUCINE	14100	0.0495	99.0342	15.59	12991.3116	1.92	1386.48	1.33
LEUCINE	24020	0.0857	171.3878	26.99	22482.6514	3.32	2399.43	2.29
DOPA	1450	0.0052	10.3757	1.63	2045.9785	0.30	145.26	0.14
TYROSINE	92570	0.3078	615.5943	96.94	111539.5396	16.46	8618.32	8.24
PHENYLALANINE	18640	0.0667	133.3810	21.00	22033.2135	3.25	1867.33	1.79
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	7982	0.0478	95.5356	15.04	13966.3504	2.06	2675.00	2.56
HISTIDINE	5041	0.0387	77.3753	12.18	12005.5496	1.77	3249.76	3.11
ARGININE	18280	0.1446	289.2405	45.55	50388.5884	7.44	16197.47	15.49
TOTALS		3.1774	6354.7713	1000.00	677556.5166	100.00	104558.00	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	355	0.0024	4.8780		874.0000		68.29	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	48400	0.2921	584.1883		9931.2009		8178.64	

TOTAL NITROGEN - MICROGRAMS 112804.92

RUN NUMBER 1439A/1451B
SAMPLE MYTILUS EDULIS
LOCALITY WOODS HOLE
TYPE MANTLE
FACTOR 400.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	84480	0.3533	141.3004	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	279100	0.9568	382.7220	79.73	50940.2947	8.58	5358.11	6.01
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	151700	0.5414	216.5596	45.12	25796.5795	4.35	3031.83	3.40
SERINE	198700	0.8179	327.1455	68.15	34379.7208	5.79	4580.04	5.13
GLUTAMIC ACID	362900	1.3428	537.1323	111.90	79028.2727	13.31	7519.85	8.43
PROLINE	38980	0.6942	277.6848	57.85	31969.8478	5.39	3887.59	4.36
GLYCINE	28512	2.0268	810.7058	168.89	60859.6823	10.25	11349.88	12.72
ALANINE	254900	0.9262	370.4942	77.18	33007.3269	5.56	5186.92	5.81
CYSTINE (HALF)	0	0.	0.	21.08	12257.0262	2.06	1416.76	1.59
VALINE	149800	0.5229	209.1449	43.57	24501.3193	4.13	2928.03	3.28
METHIONINE	62670	0.2269	90.7439	18.90	13540.8034	2.28	1270.41	1.42
ISOLEUCINE	119700	0.4204	168.1475	35.03	22057.5887	3.72	2354.06	2.64
LEUCINE	195200	0.6964	278.5587	58.03	36541.3284	6.16	3899.82	4.37
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	107400	0.3571	142.8429	29.76	25881.7036	4.36	1999.80	2.24
PHENYLALANINE	83360	0.2983	119.3274	24.86	19711.6882	3.32	1670.58	1.87
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	4572	0.0301	12.0593	2.51	1955.8992	0.33	337.66	0.38
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	125500	0.7510	300.4189	62.59	43918.2404	7.40	8411.73	9.43
HISTIDINE	34700	0.2663	106.5234	22.19	16528.1718	2.78	4473.98	5.02
ARGININE	110200	0.8718	348.7342	72.65	60752.9808	10.23	19529.11	21.89
TOTALS		12.1066	4840.2455	1000.00	593628.4717	100.00	89206.18	100.00

UREA	0	0.	0.	0.	
GLUCOSAMINE	10320	0.0709	28.3614	5081.5098	397.06
GALACTOSAMINE	1696	0.0128	5.1084	915.2781	71.52
AMMONIA	253900	1.5323	612.9149	10419.5534	8580.81

TOTAL NITROGEN - MICROGRAMS 98255.57

RUN NUMBER 1247A/1244B
SAMPLE MYTILUS EDULIS
LOCALITY WOODS HOLE
TYPE LIGAMENT
FACTOR 833.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	8397	0.0351	29.2598	0.	0.	0.	0.	0.
TAURINE	76740	0.2964	246.9579	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	151300	0.5187	432.2346	82.69	57530.4233	9.84	6051.28	8.01
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	68030	0.2428	202.3249	38.71	24100.9433	4.12	2832.55	3.75
SERINE	75110	0.3092	257.6309	49.29	27074.4265	4.63	3606.83	4.78
GLUTAMIC ACID	224000	0.8289	690.7157	132.14	01625.0018	17.38	9670.02	12.80
PROLINE	12990	0.2313	192.7864	36.88	22195.4989	3.80	2699.01	3.57
GLYCINE	504100	1.8482	1540.1710	294.64	15620.6403	19.77	21562.39	28.55
ALANINE	153300	0.5570	464.2060	88.81	41356.1117	7.07	6498.88	8.61
CYSTINE (HALF)	7438	0.0496	41.3496	57.65	36501.9046	6.24	4219.18	5.59
VALINE	72000	0.2513	209.4232	40.06	24533.9332	4.20	2931.93	3.88
METHIONINE	37480	0.1357	113.0614	21.63	16871.0202	2.89	1582.86	2.10
ISOLEUCINE	61680	0.2166	180.5085	34.53	23679.1045	4.05	2527.12	3.35
LEUCINE	121900	0.4349	362.4079	69.33	47540.6647	8.13	5073.71	6.72
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	21960	0.0730	60.8476	11.64	11024.9833	1.89	851.87	1.13
PHENYLALANINE	37930	0.1357	113.0884	21.63	18681.0722	3.19	1583.24	2.10
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	14640	0.0876	73.0099	13.97	10673.3145	1.83	2044.28	2.71
HISTIDINE	986	0.0076	6.3059	1.21	978.4289	0.17	264.85	0.35
ARGININE	4115	0.0326	27.1360	5.19	4727.3569	0.81	1519.61	2.01
TOTALS		6.2921	5243.4255	1000.00	584714.8242	100.00	75519.61	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	0	0.	0.	0.	0.
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	88160	0.5320	443.3698	7537.2863	6207.18

TOTAL NITROGEN - MICROGRAMS 81726.78

RUN NUMBER 1431A/1430B
SAMPLE MYTILUS EDULIS
LOCALITY WOODS HOLE
TYPE BRISTLE
FACTOR 800.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	715	0.0030	2.3918	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	1196	0.0598	47.8400	7.88	6273.2592	0.90	669.76	0.61
ASPARTIC ACID	159000	0.5451	436.0644	71.81	58040.1781	8.30	6104.90	5.52
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	82700	0.2951	236.1171	38.89	28126.2640	4.02	3305.64	2.99
SERINE	143300	0.5898	471.8666	77.71	49588.4650	7.09	6606.13	5.97
GLUTAMIC ACID	121200	0.4485	358.7789	59.09	52787.1406	7.55	5022.90	4.54
PROLINE	27080	0.4823	385.8237	63.54	44419.8809	6.35	5401.53	4.88
GLYCINE	10312	1.9600	1568.0293	258.24	117711.9614	16.84	21952.41	19.84
ALANINE	247200	0.8983	718.6046	118.35	64020.4882	9.16	10060.47	9.09
CYSTINE (HALF)	0	0.	0.	0.28	207.4757	0.03	23.98	0.02
VALINE	85060	0.2969	237.5148	39.12	27824.8627	3.98	3325.21	3.01
METHIONINE	15560	0.0556	44.4814	7.33	6637.5216	0.95	622.74	0.56
ISOLEUCINE	45860	0.1611	128.8428	21.22	16901.6043	2.42	1803.80	1.63
LEUCINE	85400	0.3047	243.7389	40.14	31973.6624	4.57	3412.34	3.08
DOPA	3132	0.0112	8.9646	1.48	1767.7254	0.25	125.50	0.11
TYROSINE	57650	0.1917	153.3500	25.26	27785.4789	3.97	2146.90	1.94
PHENYLALANINE	47160	0.1687	134.9839	22.23	22297.9903	3.19	1889.77	1.71
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	64340	0.3850	308.0311	50.73	45031.0691	6.44	8624.87	7.80
HISTIDINE	38910	0.2986	238.8949	39.34	37066.9260	5.30	10033.58	9.07
ARGININE	55050	0.4355	348.4177	57.38	60697.8511	8.68	19511.39	17.63
TOTALS		7.5909	6072.7366	1000.00	699159.8008	100.00	110643.84	100.00

UREA	0	0.	0.		0.	
GLUCOSAMINE	5831	0.0401	32.0495		5742.3031	448.69
GALACTOSAMINE	1585	0.0119	9.5482		1710.7497	133.67
AMMONIA	132000	0.7966	637.2963		10834.0374	8922.15

TOTAL NITROGEN - MICROGRAMS 120148.36

RUN NUMBER 1513A/1511B
SAMPLE MYTILUS VIRIDIS
LOCALITY VIETNAM
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3079.	0.0129	0.1287	0.	0.	0.	0.	0.
TAURINE	0.	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	758.	0.0032	0.0321	0.	0.	0.	0.	0.
OH - PROLINE	0.	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	246100.	0.8437	8.4368	80.93	1122.9314	10.74	118.11	7.94
METHIONINE SULFONE	0.	0.	0.	0.	0.	0.	0.	0.
THREONINE	30160.	0.1076	1.0764	10.33	128.2177	1.23	15.07	1.01
SERINE	272900.	1.1233	11.2328	107.75	1180.4512	11.29	157.26	10.57
GLUTAMIC ACID	92530.	0.3424	3.4239	32.84	503.7535	4.82	47.93	3.22
PROLINE	10050.	0.1790	1.7898	17.17	206.0653	1.97	25.06	1.68
GLYCINE	961400.	3.5248	35.2484	338.13	2646.0971	25.30	493.48	33.18
ALANINE	734600.	2.6693	26.6933	256.06	2378.1073	22.74	373.71	25.13
CYSTINE (HALF)	0.	0.	0.	0.88	11.1681	0.11	1.29	0.09
VALINE	46460.	0.1622	1.6216	15.56	189.9752	1.82	22.70	1.53
METHIONINE	15970.	0.0578	0.5781	5.82	90.5835	0.87	8.50	0.57
ISOLEUCINE	51640.	0.1814	1.8135	17.40	237.8976	2.27	25.39	1.71
LEUCINE	213800.	0.7628	7.6275	73.17	1000.5809	9.57	106.79	7.18
DOPA	600.	0.0021	0.0215	0.21	4.2331	0.04	0.30	0.02
TYROSINE	29280.	0.0974	0.9736	9.34	176.4004	1.69	13.63	0.92
PHENYLALANINE	69310.	0.2480	2.4798	23.79	409.6357	3.92	34.72	2.33
BETA - ALANINE	0.	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0.	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0.	0.	0.	0.	0.	0.	0.	0.
LYSINE	9180.	0.0549	0.5494	5.27	80.3126	0.77	15.38	1.03
HISTIDINE	3116.	0.0239	0.2391	2.29	37.1050	0.35	10.04	0.68
ARGININE	4029.	0.0319	0.3187	3.06	55.5294	0.53	17.85	1.20
TOTALS		10.4285	104.2850	1000.00	10459.0451	100.00	1487.21	100.00

UREA	0.	0.	0.	0.	0.
GLUCOSAMINE	800.	0.0055	0.0550	9.8479	0.77
GALACTOSAMINE	4000.	0.0301	0.3012	53.9669	4.22
AMMONIA	26830.	0.1619	1.6192	27.5263	22.67

TOTAL NITROGEN - MICROGRAMS 1514.86

RUN NUMBER 1514A/1515B
SAMPLE MYTILUS VIRIDIS
LOCALITY VIETNAM
TYPE PERIOSTRACUM
FACTOR 956.938

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4767.	0.0199	19.0747	0.	0.	0.	0.	0.
TAURINE	0.	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	118.	0.0005	0.4775	0.	0.	0.	0.	0.
OH - PROLINE	0.	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	30830.	0.1057	101.1395	27.24	13461.6647	3.42	1415.95	2.65
METHIONINE SULFONE	0.	0.	0.	0.	0.	0.	0.	0.
THREONINE	15380.	0.0549	52.5257	14.15	6256.8610	1.59	735.36	1.38
SERINE	25570.	0.1052	100.7158	27.13	10584.2194	2.69	1410.02	2.64
GLUTAMIC ACID	25460.	0.0942	90.1522	24.29	13264.0927	3.37	1262.13	2.36
PROLINE	11410.	0.2032	194.4552	52.38	22387.6241	5.68	2722.37	5.09
GLYCINE	528000.	1.9358	1852.4768	499.02	39065.4343	35.30	25934.68	48.51
ALANINE	54480.	0.1980	189.4403	51.03	16877.2330	4.28	2652.16	4.96
CYSTINE (HALF)	3880.	0.0259	24.7693	10.35	4654.6840	1.18	538.02	1.01
VALINE	55260.	0.1929	184.5737	49.72	21622.8116	5.49	2584.03	4.83
METHIONINE	1773.	0.0064	6.1417	1.77	980.8142	0.25	92.02	0.17
ISOLEUCINE	36780.	0.1292	123.6037	33.30	16214.3385	4.12	1730.45	3.24
LEUCINE	58780.	0.2097	200.6735	54.06	26324.3543	6.68	2809.43	5.25
DOPA	17940.	0.0642	61.4220	16.55	12111.8123	3.07	859.91	1.61
TYROSINE	116700.	0.3880	371.3204	100.03	67279.5475	17.08	5198.49	9.72
PHENYLALANINE	21680.	0.0776	74.2269	20.00	12261.5348	3.11	1039.18	1.94
BETA - ALANINE	0.	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0.	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0.	0.	0.	0.	0.	0.	0.	0.
LYSINE	6000.	0.0359	34.3604	9.26	5023.1493	1.27	962.09	1.80
HISTIDINE	4920.	0.0378	36.1330	9.73	5606.3999	1.42	1517.59	2.84
ARGININE	0.	0.	0.	0.	0.	0.	0.	0.
TOTALS		3.8850	3717.6823	1000.00	393976.5737	100.00	53463.88	100.00

UREA	0.	0.	0.	0.	0.
GLUCOSAMINE	0.	0.	0.	0.	0.
GALACTOSAMINE	0.	0.	0.	0.	0.
AMMONIA	23510.	0.1419	135.7731	2308.1427	1900.82

TOTAL NITROGEN - MICROGRAMS 55364.71

RUN NUMBER 1422A/1414B
SAMPLE NEOTRIGONIA MARGARITACEA
LOCALITY MELBOURNE, AUSTRALIA
TYPE SHELL
FACTOR 6.660

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	12250	0.0512	0.3411	0.	0.	0.	0.	0.
TAURINE	5099	0.0197	0.1311	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	274900	0.9424	6.2764	76.19	835.3925	9.69	87.87	6.57
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	52400	0.1870	1.2455	15.12	148.3618	1.72	17.44	1.30
SERINE	377280	1.5529	10.3424	125.55	1086.8823	12.61	144.79	10.82
GLUTAMIC ACID	141700	0.5243	3.4920	42.39	513.7829	5.96	48.89	3.65
PROLINE	19590	0.3489	2.3236	28.21	267.5146	3.10	32.53	2.43
GLYCINE	439219	4.3549	29.0035	352.08	2177.2955	25.27	406.05	30.34
ALANINE	57412	2.1137	14.0775	170.89	1254.1625	14.55	197.08	14.73
CYSTINE (HALF)	0	0.	0.	4.51	44.9688	0.52	5.20	0.39
VALINE	58190	0.2031	1.3527	16.42	158.4675	1.84	18.94	1.42
METHIONINE	64310	0.2328	1.5504	18.82	231.3543	2.68	21.71	1.62
ISOLEUCINE	52610	0.1848	1.2305	14.94	161.4159	1.87	17.23	1.29
LEUCINE	132500	0.4727	3.1482	38.22	412.9853	4.79	44.08	3.29
DOPA	6324	0.0226	0.1507	1.83	29.7146	0.34	2.11	0.16
TYROSINE	1308	0.0043	0.0290	0.35	5.2482	0.06	0.41	0.03
PHENYLALANINE	96220	0.3443	2.2928	27.83	378.7403	4.40	32.10	2.40
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	3482	0.0229	0.1528	1.86	24.7855	0.29	4.28	0.32
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	29930	0.1791	1.1929	14.48	174.3902	2.02	33.40	2.50
HISTIDINE	11160	0.0856	0.5704	6.92	88.5062	1.03	23.96	1.79
ARGININE	67670	0.5369	3.5761	43.41	622.9857	7.23	200.26	14.96
TOTALS		12.3843	82.4797	1000.00	8616.9546	100.00	1338.31	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	10820	0.0743	0.4951		88.7063		6.93	
GALACTOSAMINE	2149	0.0162	0.1076		19.2739		1.51	
AMMONIA	120800	0.7290	4.8553		82.5406		67.97	

TOTAL NITROGEN - MICROGRAMS 1414.72

RUN NUMBER 1256A/1250B
SAMPLE NUCULA PROXIMA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 12.560

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	21070	0.0881	1.1083	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	111300	0.3816	4.8000	68.91	638.8773	8.95	67.20	6.13
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	25490	0.0910	1.1444	16.43	136.3223	1.91	16.02	1.46
SERINE	98500	0.4054	5.1003	73.22	535.9958	7.51	71.40	6.52
GLUTAMIC ACID	53820	0.1991	2.5053	35.97	368.6038	5.17	35.07	3.20
PROLINE	7893	0.1406	1.7684	25.39	203.5924	2.85	24.76	2.26
GLYCINE	159112	2.5056	31.5203	452.51	2366.2317	33.16	441.28	40.27
ALANINE	163500	0.6668	8.3882	120.42	747.3039	10.47	117.43	10.72
CYSTINE (HALF)	1186	0.0079	0.0995	12.82	108.1981	1.52	12.51	1.14
VALINE	31110	0.1086	1.3660	19.61	160.0289	2.24	19.12	1.75
METHIONINE	31140	0.1127	1.4181	20.36	211.6041	2.97	19.85	1.81
ISOLEUCINE	18840	0.0662	0.8323	11.95	109.1856	1.53	11.65	1.06
LEUCINE	50520	0.1802	2.2674	32.55	297.4326	4.17	31.74	2.90
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	6800	0.0226	0.2844	4.08	51.5369	0.72	3.98	0.36
PHENYLALANINE	73760	0.2639	3.3199	47.66	548.4076	7.68	46.48	4.24
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	586	0.0039	0.0486	0.70	7.8790	0.11	1.36	0.12
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	17650	0.1056	1.3288	19.08	194.2525	2.72	37.21	3.39
HISTIDINE	7932	0.0609	0.7658	10.99	118.8225	1.67	32.16	2.93
ARGININE	19140	0.1514	1.9049	27.35	331.8552	4.65	106.68	9.73
TOTALS		5.5621	69.9710	1000.00	7136.1300	100.00	1095.92	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	1391	0.0096	0.1202	21.5408	1.68
GALACTOSAMINE	225	0.0017	0.0213	3.8188	0.30
AMMONIA	192600	1.1623	14.6223	248.5784	204.71

TOTAL NITROGEN - MICROGRAMS 1302.61

RUN NUMBER 942A/944B
SAMPLE NUCULA PROXIMA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 20.833

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3394	0.0140	0.2907	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	7000	0.0312	0.6509	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	70230	0.2978	6.2036	83.62	825.7012	11.28	86.85	8.16
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	20000	0.0827	1.7239	23.29	205.3507	2.80	24.13	2.27
SERINE	56190	0.2295	4.7820	64.61	502.5359	6.86	66.95	6.29
GLUTAMIC ACID	33020	0.1367	2.8479	38.48	419.0148	5.72	39.87	3.75
PROLINE	9230	0.1620	3.3754	45.60	388.6052	5.31	47.26	4.44
GLYCINE	403400	1.6861	35.1271	474.61	2636.9897	36.01	491.78	46.22
ALANINE	105900	0.4508	9.3923	126.90	836.7582	11.43	131.49	12.36
CYSTINE (HALF)	0	0.	0.	2.81	25.2202	0.34	2.92	0.27
VALINE	25230	0.0967	2.0154	27.23	236.1076	3.22	28.22	2.65
METHIONINE	1000	0.0040	0.0840	9.08	100.2535	1.37	9.41	0.88
ISOLEUCINE	11360	0.0448	0.9323	12.60	122.3001	1.67	13.05	1.23
LEUCINE	29680	0.1176	2.4508	33.11	321.4936	4.39	34.31	3.22
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	200	0.0009	0.0185	0.25	3.3531	0.05	0.26	0.02
PHENYLALANINE	34230	0.1566	3.2630	44.09	539.0113	7.36	45.68	4.29
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5132	0.0239	0.4977	6.73	72.7659	0.99	13.94	1.31
HISTIDINE	200	0.0010	0.0215	0.29	3.3325	0.05	0.90	0.08
ARGININE	4000	0.0231	0.4817	6.51	83.9161	1.15	26.97	2.54
TOTALS		3.5596	74.1587	1000.00	7322.7095	100.00	1063.98	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	500	0.0027	0.0567	10.1625	0.79
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	52550	0.1618	3.3713	57.3125	47.20

TOTAL NITROGEN - MICROGRAMS 1111.98

RUN NUMBER 1174A/1176B
SAMPLE NUCULA PROXIMA
LOCALITY WOODS HOLE
TYPE MANTLE
FACTOR 952.380

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1292	0.0062	5.9486	0.	0.	0.	0.	0.
TAURINE	7021	0.0320	30.4423	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1290	0.0063	6.0239	0.	0.	0.	0.	0.
OH - PROLINE	650	0.0382	36.4145	6.17	4775.0372	0.65	509.80	0.52
ASPARTIC ACID	161300	0.6909	658.0377	111.45	87584.8135	11.91	9212.53	9.40
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	86890	0.4028	383.6453	64.97	45699.8318	6.22	5371.03	5.48
SERINE	86260	0.3947	375.8970	63.66	39503.0201	5.37	5262.56	5.37
GLUTAMIC ACID	179500	0.8283	788.8888	133.61	116069.2134	15.79	11044.44	11.27
PROLINE	16370	0.4307	410.1673	69.47	47222.5657	6.42	5742.34	5.86
GLYCINE	137400	0.6264	596.5672	101.04	44784.2984	6.09	8351.94	8.52
ALANINE	117500	0.4905	467.1453	79.12	41617.9722	5.66	6540.03	6.67
CYSTINE (HALF)	17180	0.1303	124.0477	26.72	19109.9932	2.60	2208.88	2.25
VALINE	81760	0.3361	320.1093	54.21	37500.8051	5.10	4481.53	4.57
METHIONINE	33510	0.1442	137.2951	24.17	21299.0146	2.90	1998.30	2.04
ISOLEUCINE	65570	0.2880	274.2537	46.45	35976.5939	4.89	3839.55	3.92
LEUCINE	113800	0.5089	484.7086	82.09	63584.0745	8.65	6785.92	6.92
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	7169	0.0311	29.6337	5.02	5369.3362	0.73	414.87	0.42
PHENYLALANINE	52280	0.2222	211.6490	35.85	34962.2975	4.76	2963.09	3.02
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	1622	0.0078	7.4662	1.26	1210.9458	0.16	209.05	0.21
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	63340	0.2845	270.9962	45.90	39616.9311	5.39	7587.89	7.74
HISTIDINE	8459	0.0504	47.9963	8.13	7447.1091	1.01	2015.85	2.06
ARGININE	39136	0.2525	240.4667	40.73	41891.7095	5.70	13466.14	13.74
TOTALS		6.2120	5916.1612	1000.00	735225.5576	100.00	98005.76	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	4181	0.0226	21.5296	3857.4596	301.41
GALACTOSAMINE	2000	0.0111	10.5615	1892.2975	147.86
AMMONIA	218100	0.5953	566.9826	9638.7043	7937.76

TOTAL NITROGEN - MICROGRAMS 106392.79

RUN NUMBER 1385A/1411B
SAMPLE NUCULA PROXIMA
LOCALITY QUISSETT
TYPE SHELL
FACTOR 20.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	14240.	0.0595	1.1909	0.	0.	0.	0.	0.
TAURINE	0.	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	2400.	0.0101	0.2030	0.	0.	0.	0.	0.
OH - PROLINE	0.	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	73890.	0.2533	5.0662	72.47	674.3064	9.58	70.93	6.51
METHIONINE SULFONE	0.	0.	0.	0.	0.	0.	0.	0.
THREONINE	16420.	0.0586	1.1720	16.77	139.6110	1.98	16.41	1.51
SERINE	53090.	0.2185	4.3704	62.52	459.2902	6.52	61.19	5.62
GLUTAMIC ACID	34250.	0.1267	2.5347	36.26	372.9290	5.30	35.49	3.26
PROLINE	5410.	0.0963	1.9270	27.57	221.8534	3.15	26.98	2.48
GLYCINE	439800.	1.6125	32.2493	461.32	2420.9559	34.39	451.49	41.44
ALANINE	138700.	0.5040	10.0799	144.19	898.0220	12.76	141.12	12.95
CYSTINE (HALF)	0.	0.	0.	12.20	103.3026	1.47	11.94	1.10
VALINE	16630.	0.0580	1.1609	16.61	136.0003	1.93	16.25	1.49
METHIONINE	14440.	0.0523	1.0454	17.58	183.3518	2.60	17.20	1.58
ISOLEUCINE	8267.	0.0290	0.5806	8.31	76.1696	1.08	8.13	0.75
LEUCINE	31790.	0.1134	2.2683	32.45	297.5535	4.23	31.76	2.91
DOPA	0.	0.	0.	0.	0.	0.	0.	0.
TYROSINE	4066.	0.0135	0.2704	3.87	48.9921	0.70	3.79	0.35
PHENYLALANINE	35500.	0.1270	2.5403	36.34	419.6240	5.96	35.56	3.26
BETA - ALANINE	0.	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0.	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0.	0.	0.	0.	0.	0.	0.	0.
LYSINE	11850.	0.0709	1.4183	20.29	207.3431	2.95	39.71	3.64
HISTIDINE	367.	0.0028	0.0563	0.81	8.7404	0.12	2.37	0.22
ARGININE	13460.	0.1065	2.1297	30.47	371.0232	5.27	119.27	10.95
TOTALS		3.5132	70.2637	1000.00	7039.0684	100.00	1089.57	100.00

UREA	0.	0.	0.	0.	0.
GLUCOSAMINE	5635.	0.0387	0.7743	138.7321	10.84
GALACTOSAMINE	452.	0.0034	0.0681	12.1965	0.95
AMMONIA	47580.	0.2871	5.7429	97.6295	80.40

TOTAL NITROGEN - MICROGRAMS 1181.76

RUN NUMBER 1195A/1194B
SAMPLE NUCULA TRUNCULA
LOCALITY BUZZARDS BAY
TYPE SHELL
FACTOR 15.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3748	0.0181	0.2778	0.	0.	0.	0.	0.
TAURINE	2425	0.0110	0.1692	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	105300	0.4511	6.9148	68.68	920.3536	8.80	96.81	5.99
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	28040	0.1300	1.9928	19.85	237.3858	2.27	27.90	1.73
SERINE	82280	0.3765	5.7715	57.49	606.5226	5.80	80.80	5.00
GLUTAMIC ACID	61780	0.2851	4.3705	43.53	643.0317	6.15	61.19	3.79
PROLINE	9500	0.2499	3.8315	38.16	441.1196	4.22	53.64	3.32
GLYCINE	127912	2.9733	45.5812	454.03	3421.7772	32.72	638.14	39.49
ALANINE	152000	0.6345	9.7272	96.89	866.5997	8.29	136.18	8.43
CYSTINE (HALF)	4679	0.0355	0.5438	9.03	109.8059	1.05	12.69	0.79
VALINE	36590	0.1504	2.3060	22.97	270.1432	2.58	32.28	2.00
METHIONINE	25280	0.1088	1.6672	16.61	248.7807	2.38	23.34	1.44
ISOLEUCINE	18530	0.0814	1.2475	12.43	163.6523	1.57	17.47	1.08
LEUCINE	57400	0.2567	3.9353	39.20	516.2379	4.94	55.09	3.41
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	15060	0.0654	1.0020	9.98	181.5595	1.74	14.03	0.87
PHENYLALANINE	68720	0.2921	4.4781	44.61	739.7405	7.07	62.69	3.88
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	840	0.0041	0.0622	0.62	10.0945	0.10	1.74	0.11
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	32430	0.1457	2.2334	22.25	326.4988	3.12	62.53	3.87
HISTIDINE	4015	0.0239	0.3667	3.65	56.8966	0.54	15.40	0.95
ARGININE	40430	0.2608	3.9987	39.83	696.6061	6.66	223.92	13.86
TOTALS		6.5543	100.4774	1000.00	10456.8061	100.00	1615.85	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	4930	0.0267	0.4086	73.2150	5.72
GALACTOSAMINE	1000	0.0055	0.0850	15.2297	1.19
AMMONIA	174700	0.4769	7.3104	124.2761	102.35

TOTAL NITROGEN - MICROGRAMS 1725.11

RUN NUMBER 1400A/1395B
SAMPLE PERIPLOMA LEANUM
LOCALITY MARTHA'S VINEYARD
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1993	0.0063	0.0833	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	52650	0.1805	1.8049	41.07	240.2371	4.94	25.27	3.49
METHIONINE SULFONE	1210	0.0050	0.0499	0.	0.	0.	0.	0.
THREONINE	25220	0.0900	0.9001	20.48	107.2165	2.20	12.60	1.74
SERINE	63600	0.2618	2.6178	59.57	275.1070	5.65	36.65	5.07
GLUTAMIC ACID	41970	0.1553	1.5530	35.34	228.4938	4.69	21.74	3.01
PROLINE	1582	0.0282	0.2817	6.41	32.4373	0.67	3.94	0.55
GLYCINE	45612	2.0895	20.8946	475.47	1568.5570	32.22	292.52	40.44
ALANINE	55220	0.2007	2.0065	45.66	178.7627	3.67	28.09	3.88
CYSTINE (HALF)	0	0.	0.	1.36	7.2290	0.15	0.84	0.12
VALINE	17910	0.0625	0.6251	14.23	73.2341	1.50	8.75	1.21
METHIONINE	26380	0.0955	0.9549	22.66	148.6258	3.05	13.94	1.93
ISOLEUCINE	25380	0.0891	0.8913	20.28	116.9218	2.40	12.48	1.73
LEUCINE	29700	0.1060	1.0596	24.11	138.9956	2.86	14.83	2.05
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	116200	0.3864	3.8637	87.92	700.0591	14.38	54.09	7.48
PHENYLALANINE	85220	0.3049	3.0490	69.38	503.6670	10.35	42.69	5.90
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	16330	0.0977	0.9773	22.24	142.8655	2.93	27.36	3.78
HISTIDINE	4612	0.0354	0.3540	8.05	54.9193	1.13	14.87	2.06
ARGININE	25420	0.2011	2.0111	45.76	350.3495	7.20	112.62	15.57
TOTALS		4.3978	43.9779	1000.00	4867.6781	100.00	723.29	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	17470	0.1200	1.2003	215.0532	16.80	
GALACTOSAMINE	1041	0.0078	0.0784	14.0449	1.10	
AMMONIA	60370	0.3643	3.6433	61.9366	51.01	

TOTAL NITROGEN - MICROGRAMS 792.20

RUN NUMBER 992A/994B
SAMPLE PETRICOLA PHOLADIFORMIS
LOCALITY W. FALMOUTH
TYPE MANTLE
FACTOR 1041.666

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	200	0.0008	0.8566	0.	0.	0.	0.	0.
TAURINE	1716	0.0073	7.5918	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	7000	0.2920	304.1995	53.53	39889.6801	5.53	4258.79	4.42
ASPARTIC ACID	140100	0.5572	580.3834	102.12	77249.0304	10.71	8125.37	8.43
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	71520	0.2739	285.3311	50.21	33988.6414	4.71	3994.64	4.15
SERINE	73590	0.2932	305.4032	53.74	32094.8212	4.45	4275.64	4.44
GLUTAMIC ACID	163500	0.6679	695.7205	122.42	102361.3643	14.20	9740.09	10.11
PROLINE	15060	0.2692	280.3841	49.34	32280.6204	4.48	3925.38	4.07
GLYCINE	126800	0.5190	540.6600	95.13	40587.3494	5.63	7569.24	7.85
ALANINE	101400	0.4290	446.9005	78.64	39814.3651	5.52	6256.61	6.49
CYSTINE (HALF)	7856	0.0627	65.2838	12.89	8871.6198	1.23	1025.45	1.06
VALINE	80440	0.3199	333.2337	58.64	39038.3274	5.41	4665.27	4.84
METHIONINE	28920	0.1200	124.9999	21.99	18652.4880	2.59	1750.00	1.82
ISOLEUCINE	68280	0.2718	283.1407	49.82	37142.4023	5.15	3963.97	4.11
LEUCINE	104200	0.4163	433.6460	76.30	56885.6837	7.89	6071.04	6.30
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	36440	0.1544	160.8744	28.31	29148.8281	4.04	2252.24	2.34
PHENYLALANINE	41250	0.1775	184.8515	32.53	30535.6130	4.23	2587.92	2.69
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	300	0.0013	1.3395	0.24	217.2496	0.03	37.51	0.04
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	78250	0.3340	347.8889	61.21	50857.8751	7.05	9740.89	10.11
HISTIDINE	10000	0.0497	51.7469	9.11	8029.0559	1.11	2173.37	2.26
ARGININE	39820	0.2392	249.1689	43.84	43407.7069	6.02	13953.46	14.48
TOTALS		5.4563	5683.6050	1000.00	721052.7168	100.00	96366.87	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	500	0.0023	2.3902	428.2591	33.46
GALACTOSAMINE	300	0.0015	1.5536	278.3524	21.75
AMMONIA	241300	0.7608	792.5398	13473.1770	11095.56

TOTAL NITROGEN - MICROGRAMS 107517.64

RUN NUMBER 991A/993B
SAMPLE PETRICOLA PHOLADIFORMIS/
LOCALITY W. FALMOUTH
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	300	0.0012	0.0123	0.	0.	0.	0.	0.
TAURINE	830	0.0035	0.0353	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	13030	0.0556	0.5555	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	95020	0.3779	3.7789	86.49	502.9693	9.73	52.90	7.85
METHIONINE SULFONE	5073	0.0203	0.2031	0.	0.	0.	0.	0.
THREONINE	42480	0.1627	1.6270	37.24	193.8038	3.75	22.78	3.38
SERINE	55860	0.2225	2.2255	50.94	233.8776	4.52	31.16	4.62
GLUTAMIC ACID	78560	0.3209	3.2092	73.45	472.1623	9.13	44.93	6.66
PROLINE	14220	0.2542	2.5416	58.17	292.6092	5.66	35.58	5.28
GLYCINE	302400	1.2378	12.3782	283.31	929.2332	17.97	173.30	25.70
ALANINE	55730	0.2358	2.3579	53.97	210.0692	4.06	33.01	4.90
CYSTINE (HALF)	7367	0.0588	0.5877	14.43	76.3872	1.48	8.83	1.31
VALINE	48140	0.1914	1.9145	43.82	224.2832	4.34	26.80	3.97
METHIONINE	43410	0.1801	1.8012	56.54	368.6083	7.13	34.58	5.13
ISOLEUCINE	40590	0.1616	1.6158	36.98	211.9664	4.10	22.62	3.35
LEUCINE	51140	0.2043	2.0431	46.76	268.0202	5.18	28.60	4.24
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	74690	0.3166	3.1655	72.45	573.5572	11.09	44.32	6.57
PHENYLALANINE	41110	0.1769	1.7686	40.48	292.1472	5.65	24.76	3.67
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	16000	0.0683	0.6829	15.63	99.8310	1.93	19.12	2.84
HISTIDINE	1000	0.0050	0.0497	1.14	7.7079	0.15	2.09	0.31
ARGININE	20500	0.1231	1.2315	28.19	214.5314	4.15	68.96	10.23
TOTALS		4.3785	43.7850	1000.00	5171.7646	100.00	674.34	100.00

UREA	0	0.	0.		0.	0.
GLUCOSAMINE	1500	0.0069	0.0688		12.3339	0.96
GALACTOSAMINE	0	0.	0.		0.	0.
AMMONIA	107500	0.3390	3.3896		57.6226	47.45

TOTAL NITROGEN - MICROGRAMS 722.76

RUN NUMBER 1345A/1342B
SAMPLE PITAR CORDATA
LOCALITY PORT ISOBEL, TEXAS
TYPE SHELL
FACTOR 2.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	11480	0.0480	0.1200	0.	0.	0.	0.	0.
TAURINE	7471	0.0289	0.0721	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	215400	0.7364	1.8461	252.46	245.7125	26.91	25.85	18.54
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	35450	0.1265	0.3163	43.25	37.6767	4.13	4.43	3.18
SERINE	47620	0.1960	0.4900	67.01	51.4960	5.64	6.86	4.92
GLUTAMIC ACID	48910	0.1810	0.4525	61.88	66.5692	7.29	6.33	4.54
PROLINE	13100	0.2333	0.5833	79.76	67.1506	7.35	8.17	5.86
GLYCINE	99630	0.3653	0.9132	124.89	68.5538	7.51	12.78	9.17
ALANINE	50770	0.1845	0.4612	63.07	41.0892	4.50	6.46	4.63
CYSTINE (HALF)	0	0.	0.	21.30	18.8670	2.07	2.18	1.56
VALINE	29590	0.1033	0.2582	35.31	30.2484	3.31	3.61	2.59
METHIONINE	5378	0.0195	0.0487	6.66	7.2625	0.80	0.68	0.49
ISOLEUCINE	17620	0.0619	0.1547	21.16	20.2932	2.22	2.17	1.55
LEUCINE	27200	0.0970	0.2426	33.18	31.8239	3.48	3.40	2.44
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1559	0.0052	0.0130	1.77	2.3481	0.26	0.18	0.13
PHENYLALANINE	19530	0.0699	0.1747	23.89	28.8565	3.16	2.45	1.75
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	27490	0.1645	0.4113	56.25	60.1251	6.58	11.52	8.26
HISTIDINE	7224	0.0554	0.1386	18.95	21.5057	2.35	5.82	4.18
ARGININE	32980	0.2609	0.6523	89.21	113.6362	12.44	36.53	26.20
TOTALS		2.9395	7.3486	1000.00	913.2147	100.00	139.41	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	4767	0.0328	0.0819		14.6703		1.15	
GALACTOSAMINE	1100	0.0083	0.0207		3.7102		0.29	
AMMONIA	67180	0.5261	1.3153		22.3606		18.41	

TOTAL NITROGEN - MICROGRAMS 159.26

RUN NUMBER 584A/716B
SAMPLE PITAR MORRHUANA
LOCALITY HADLEY HARBOR WOODS HOLE,MASS.
TYPE SHELL NO. 189
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.7900	0.	0.	0.	0.	0.
TAURINE			0.0240	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.1000	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			10.0600	320.90	1338.9860	35.74	140.84	26.99
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			1.1000	35.09	131.0320	3.50	15.40	2.95
SERINE			1.6000	51.04	168.1440	4.49	22.40	4.29
GLUTAMIC ACID			1.6200	51.68	238.3506	6.36	22.68	4.35
PROLINE			1.8200	58.06	209.5366	5.59	25.48	4.88
GLYCINE			6.8000	216.91	510.4760	13.63	95.20	18.25
ALANINE			1.2200	38.92	108.6898	2.90	17.08	3.27
CYSTINE [HALF]			0.	18.79	71.3421	1.90	8.25	1.58
VALINE			1.1400	36.36	133.5510	3.56	15.96	3.06
METHIONINE			0.	2.88	13.4769	0.36	1.26	0.24
ISOLEUCINE			0.7900	25.20	103.6322	2.77	11.06	2.12
LEUCINE			0.6700	21.37	87.8906	2.35	9.38	1.80
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.1300	4.15	23.5547	0.63	1.82	0.35
PHENYLALANINE			1.0200	32.54	168.4938	4.50	14.28	2.74
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			1.0200	32.54	149.1138	3.98	28.56	5.47
HISTIDINE			0.1400	4.47	21.7224	0.58	5.88	1.13
ARGININE			1.5400	49.12	268.2834	7.16	86.24	16.53
TOTALS			31.5840	1000.00	3746.2759	100.00	521.77	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.	0.	0.
GALACTOSAMINE	0.4400	78.8348	6.16
AMMONIA	6.2000	105.4000	86.80

TOTAL NITROGEN - MICROGRAMS 614.73

RUN NUMBER 628A/627B
SAMPLE PITAR MORRHUANA
LOCALITY HADLEY HARBOR WOODS HOLE,MASS.
TYPE SHELL NO. 162
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.8000	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.1000	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			9.2600	327.40	1232.5060	36.32	129.64	27.35
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			1.2800	45.26	152.4736	4.49	17.92	3.78
SERINE			1.4800	52.33	155.5332	4.58	20.72	4.37
GLUTAMIC ACID			1.4700	51.97	216.2811	6.37	20.58	4.34
PROLINE			1.5600	55.16	179.6028	5.29	21.84	4.61
GLYCINE			5.8300	206.13	437.6581	12.90	81.62	17.22
ALANINE			1.0400	36.77	92.6536	2.73	14.56	3.07
CYSTINE (HALF)			0.	20.26	69.3955	2.05	8.02	1.69
VALINE			1.1000	38.89	128.8650	3.80	15.40	3.25
METHIONINE			0.	3.19	13.4769	0.40	1.26	0.27
ISOLEUCINE			0.6400	22.63	83.9552	2.47	8.96	1.89
LEUCINE			0.5200	18.39	68.2136	2.01	7.28	1.54
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			0.0900	3.18	16.3071	0.48	1.26	0.27
PHENYLALANINE			0.7900	27.93	130.5001	3.85	11.06	2.33
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.9900	35.00	144.7281	4.27	27.72	5.85
HISTIDINE			0.1300	4.60	20.1708	0.59	5.46	1.15
ARGININE			1.4400	50.91	250.8624	7.39	80.64	17.01
TOTALS			28.5200	1000.00	3393.1832	100.00	473.95	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			0.		0.		0.	
GALACTOSAMINE			0.3000		53.7510		4.20	
AMMONIA			5.1900		88.2300		72.66	

TOTAL NITROGEN - MICROGRAMS 550.81

RUN NUMBER 6094/6336
SAMPLE PITAR MORRHUANA
LOCALITY HADLEY HARBOR, WOODS HOLE, MASS.
TYPE PERIOSTRACUM NO. 165
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			38.0000	0.	0.	0.	0.	0.
TAURINE			9.1000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			425.0000	91.46	56567.4999	10.71	5950.00	7.38
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			216.0000	46.91	25968.1600	4.91	3052.00	3.79
SERINE			250.0000	53.80	26272.5000	4.97	3500.00	4.34
GLUTAMIC ACID			270.0000	58.11	39725.0999	7.52	3780.00	4.69
PROLINE			220.0000	47.35	25328.6000	4.79	3080.00	3.82
GLYCINE			1550.0000	333.57	16358.4999	22.02	21700.00	26.93
ALANINE			283.0000	60.90	25212.4700	4.77	3962.00	4.92
CYSTINE (HALF)			8.3000	9.54	5368.5485	1.02	620.54	0.77
VALINE			226.0000	49.07	26710.2000	5.05	3192.00	3.96
METHIONINE			15.3000	3.29	2283.0660	0.43	214.20	0.27
ISOLEUCINE			133.0000	28.62	17446.9400	3.30	1862.00	2.31
LEUCINE			195.0000	41.97	25580.0999	4.84	2730.00	3.39
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			140.0000	30.13	25366.5999	4.80	1960.00	2.43
PHENYLALANINE			160.0000	34.43	26430.4000	5.00	2240.00	2.78
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			23.3000	5.01	3779.0270	0.72	652.40	0.81
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			173.0000	37.23	25290.8700	4.79	4844.00	6.01
HISTIDINE			43.8000	9.43	6796.0080	1.29	1839.60	2.28
ARGININE			275.0000	59.18	47907.7499	9.07	15400.00	19.11
TOTALS			4657.8000	1000.00	528392.3350	100.00	80578.74	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			8.4000		1505.0280		117.60	
GALACTOSAMINE			0.		0.		0.	
AMMONIA			2825.0000		48025.0000		39550.00	

TOTAL NITROGEN - MICROGRAMS 120246.34

RUN NUMBER 613A7635b
SAMPLE PILAR MORRHUANA
LOCALITY WOODS HOLE, MASS.
TYPE PERIOSTRACUM NO. 169
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			13.0000	0.	0.	0.	0.	0.
TAURINE			21.0000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			483.0000	105.35	64287.2999	12.23	6762.00	8.46
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			248.0000	54.09	29541.7599	5.62	3472.00	4.35
SERINE			296.0000	64.56	31106.6400	5.92	4144.00	5.19
GLUTAMIC ACID			310.0000	67.61	45610.2999	8.68	4340.00	5.43
PROLINE			221.0000	48.20	25443.7300	4.84	3094.00	3.87
GLYCINE			1310.0000	285.72	98341.6998	18.71	18340.00	22.95
ALANINE			363.0000	79.17	32339.6700	6.15	5082.00	6.36
CYSTINE (HALF)			7.5000	8.10	4498.3025	0.86	519.95	0.65
VALINE			231.0000	50.38	27061.6500	5.15	3234.00	4.05
METHIONINE			15.8000	3.45	2357.6760	0.45	221.20	0.28
ISOLEUCINE			135.0000	29.44	17709.3000	3.37	1890.00	2.37
LEUCINE			198.0000	43.19	25973.6400	4.94	2772.00	3.47
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			55.0000	12.00	9965.4500	1.90	770.00	0.96
PHENYLALANINE			160.0000	34.90	26430.4000	5.03	2240.00	2.80
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			25.0000	5.45	4054.7500	0.77	700.00	0.88
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			174.0000	37.95	25437.0600	4.84	4872.00	6.10
HISTIDINE			44.9000	9.79	6966.6840	1.33	1885.80	2.36
ARGININE			278.0000	60.63	48430.3799	9.22	15568.00	19.48
TOTALS			4589.2000	1000.00	525556.3887	100.00	79906.95	100.00

UREA	0.	0.	0.
GLUCOSAMINE	12.5000	2239.6250	175.00
GALACTOSAMINE	0.	0.	0.
AMMONIA	2900.0000	49300.0000	40600.00

TOTAL NITROGEN - MICROGRAMS 120681.95

RUN NUMBER 1191A/1189B
SAMPLE PITAR MORRHUANA
LOCALITY WOODS HOLE
TYPE MANTLE
FACTOR 1000.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	500	0.0024	2.4172	0.	0.	0.	0.	0.
TAURINE	2000	0.0091	9.1054	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	1800	0.1059	105.8824	17.21	13884.3529	1.80	1482.35	1.42
ASPARTIC ACID	141700	0.6070	606.9822	98.66	80789.3337	10.45	8497.75	8.12
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	86510	0.4011	401.0663	65.19	47775.0170	6.18	5614.93	5.37
SERINE	103000	0.4713	471.2880	76.61	49527.6594	6.41	6598.03	6.31
GLUTAMIC ACID	164800	0.7605	760.4984	123.62	111892.1270	14.47	10646.98	10.18
PROLINE	13590	0.3575	357.5375	58.12	41163.2911	5.32	5005.52	4.79
GLYCINE	156500	0.7135	713.4716	115.97	53560.3144	6.93	9988.60	9.55
ALANINE	92630	0.3867	386.6834	62.85	34449.6208	4.46	5413.57	5.18
CYSTINE (HALF)	9289	0.0704	70.4246	13.16	9807.0994	1.27	1133.58	1.08
VALINE	87850	0.3612	361.1511	58.70	42308.8488	5.47	5056.12	4.83
METHIONINE	33710	0.1450	145.0204	23.57	21639.9492	2.80	2030.29	1.94
ISOLEUCINE	64440	0.2830	283.0040	46.00	37124.4584	4.80	3962.06	3.79
LEUCINE	89530	0.4004	400.4025	65.08	52524.8004	6.79	5605.64	5.36
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	45030	0.1954	195.4427	31.77	35412.2642	4.58	2736.20	2.62
PHENYLALANINE	48090	0.2044	204.4208	33.23	33768.2766	4.37	2861.89	2.74
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	1500	0.0072	7.2499	1.18	1175.8579	0.15	203.00	0.19
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	62910	0.2826	282.6146	45.94	41315.4216	5.34	7913.21	7.57
HISTIDINE	22860	0.1362	136.1930	22.14	21131.7104	2.73	5720.11	5.47
ARGININE	39090	0.2522	252.1935	40.99	43934.6379	5.68	14122.84	13.50
TOTALS		6.1530	6153.0494	1000.00	773185.0352	100.00	104592.65	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	5839	0.0316	31.5707	5656.5214	441.99
GALACTOSAMINE	1200	0.0067	6.6537	1192.1486	93.15
AMMONIA	145900	0.3983	398.2530	6770.3016	5575.54

TOTAL NITROGEN - MICROGRAMS 110703.33

RUN NUMBER 585A/646B
SAMPLE PITAR MORRHUANA
LOCALITY WOODS HOLE, MASS.
TYPE MANTLE NO. 189
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			77.0000	0.	0.	0.	0.	0.
TAURINE			83.0000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			113.0000	25.28	14817.6900	2.67	1582.00	2.09
ASPARTIC ACID			547.0000	122.39	72805.6998	13.13	7658.00	10.13
METHIONINE SULFONE			76.0000	0.	0.	0.	0.	0.
THREONINE			284.0000	63.54	33830.0800	6.10	3976.00	5.26
SERINE			316.0000	70.70	33208.4399	5.99	4424.00	5.85
GLUTAMIC ACID			548.0000	122.61	80627.2399	14.54	7672.00	10.15
PROLINE			205.0000	45.87	23601.6500	4.26	2870.00	3.80
GLYCINE			485.0000	108.52	36408.9500	6.57	6790.00	8.98
ALANINE			334.0000	74.73	29756.0600	5.37	4676.00	6.18
CYSTINE (HALF)			0.	30.32	16410.9720	2.96	1896.91	2.51
VALINE			283.0000	63.32	33153.4500	5.98	3962.00	5.24
METHIONINE			0.	14.00	9338.1648	1.68	876.12	1.16
ISOLEUCINE			214.0000	47.88	28072.5200	5.06	2996.00	3.96
LEUCINE			316.0000	70.70	41452.8799	7.48	4424.00	5.85
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			8.3000	1.86	1503.8770	0.27	116.20	0.15
PHENYLALANINE			148.0000	33.11	24448.1200	4.41	2072.00	2.74
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			20.0000	4.47	3243.8000	0.59	560.00	0.74
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			172.0000	38.48	25144.6800	4.53	4816.00	6.37
HISTIDINE			94.0000	21.03	14585.0400	2.63	3948.00	5.22
ARGININE			184.0000	41.17	32054.6400	5.78	10304.00	13.63
TOTALS			4507.3000	1000.00	554463.9492	100.00	75619.23	100.00

UREA	0.	0.	0.
GLUCOSAMINE	9.5000	1702.1150	133.00
GALACTOSAMINE	12.3000	2203.7910	172.20
AMMONIA	627.0000	10659.0000	8778.00

TOTAL NITROGEN - MICROGRAMS 84702.43

RUN NUMBER 1283A/1280B
SAMPLE PITAR MORRHUANA
LOCALITY BUZZARDS BAY.
TYPE LIGAMENT
FACTOR 487.800

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	22460	0.0939	45.8122	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	69790	0.2951	143.9474	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	102400	0.3510	171.2400	56.19	22792.0494	6.79	2397.36	5.26
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	27480	0.0981	47.8399	15.70	5698.6906	1.70	669.76	1.47
SERINE	31820	0.1310	63.8888	20.96	6714.0792	2.00	894.44	1.96
GLUTAMIC ACID	32310	0.1196	58.3194	19.14	8580.5334	2.56	816.47	1.79
PROLINE	28090	0.5003	244.0303	80.07	28095.2097	8.37	3416.42	7.50
GLYCINE	209912	2.6918	1313.0807	430.87	98572.9675	29.35	18383.13	40.35
ALANINE	58316	0.2119	103.3668	33.92	9208.9487	2.74	1447.14	3.18
CYSTINE (HALF)	0	0.	0.	10.77	3973.9534	1.18	459.34	1.01
VALINE	37010	0.1292	63.0139	20.68	7382.0766	2.20	882.19	1.94
METHIONINE	280700	1.0161	495.6578	205.30	93361.7655	27.80	8759.31	19.23
ISOLEUCINE	21900	0.0769	37.5165	12.31	4921.4129	1.47	525.23	1.15
LEUCINE	16870	0.0602	29.3585	9.63	3851.2473	1.15	411.02	0.90
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	58450	0.1943	94.8027	31.11	17177.2999	5.11	1327.24	2.91
PHENYLALANINE	19590	0.0701	34.1896	11.22	5647.7852	1.68	478.65	1.05
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	29780	0.1782	86.9341	28.53	12708.8924	3.78	2434.15	5.34
HISTIDINE	1256	0.0096	4.7020	1.54	729.5697	0.22	197.49	0.43
ARGININE	9530	0.0754	36.7780	12.07	6407.0882	1.91	2059.57	4.52
TOTALS		6.3027	3074.4787	1000.00	335823.5669	100.00	45558.92	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	1150	0.0079	3.8541	690.5462	53.96
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	27040	0.1632	79.6024	1353.2402	1114.43

TOTAL NITROGEN - MICROGRAMS 46727.31

RUN NUMBER 1383A/1412B
SAMPLE SAXIDOMUS NUTTALLI
LOCALITY GULF OF GEORGIA
TYPE SHELL
FACTOR 5.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	5142	0.0215	0.1075	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1234	0.0052	0.0261	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	134300	0.4604	2.3020	224.46	306.3992	24.45	32.23	19.67
METHIONINE SULFONE	1350	0.0056	0.0278	0.	0.	0.	0.	0.
THREONINE	25630	0.0915	0.4574	44.60	54.4798	4.35	6.40	3.91
SERINE	44370	0.1826	0.9132	89.04	95.9630	7.66	12.78	7.80
GLUTAMIC ACID	47010	0.1740	0.8698	84.81	127.9664	10.21	12.18	7.43
PROLINE	9279	0.1653	0.8263	80.57	95.1283	7.59	11.57	7.06
GLYCINE	73690	0.2702	1.3509	131.72	101.4099	8.09	18.91	11.54
ALANINE	48320	0.1756	0.8779	85.60	78.2127	6.24	12.29	7.50
CYSTINE (HALF)	0	0.	0.	7.51	9.3255	0.74	1.08	0.66
VALINE	18730	0.0654	0.3269	31.87	38.2935	3.06	4.58	2.79
METHIONINE	4840	0.0175	0.0876	13.07	20.0080	1.60	1.88	1.15
ISOLEUCINE	17800	0.0625	0.3126	30.48	41.0009	3.27	4.38	2.67
LEUCINE	25100	0.0895	0.4477	43.66	58.7338	4.69	6.27	3.83
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	16930	0.0563	0.2815	27.44	50.9983	4.07	3.94	2.41
PHENYLALANINE	21370	0.0765	0.3823	37.28	63.1505	5.04	5.35	3.27
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	10370	0.0621	0.3103	30.26	45.3618	3.62	8.69	5.30
HISTIDINE	546	0.0042	0.0210	2.04	3.2509	0.26	0.88	0.54
ARGININE	9229	0.0730	0.3651	35.60	63.5991	5.07	20.44	12.48
TOTALS		2.0587	10.2936	1000.00	1253.2815	100.00	163.84	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	4623	0.0318	0.1588	28.4542	2.22
GALACTOSAMINE	2315	0.0174	0.0872	15.6167	1.22
AMMONIA	50780	0.3065	1.5323	26.0489	21.45

TOTAL NITROGEN - MICROGRAMS 188.74

RUN NUMBER 662A/659B
SAMPLE SOLEMYA VELUM
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 0.

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.6000	0.	0.	0.	0.	0.
TAURINE			1.4000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.7000	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			23.2000	29.06	3087.9200	3.68	324.80	2.59
METHIONINE SULFONE			2.5000	0.	0.	0.	0.	0.
THREONINE			11.4000	14.28	1357.9680	1.62	159.60	1.27
SERINE			56.5000	70.76	5937.5850	7.07	791.00	6.31
GLUTAMIC ACID			22.1000	27.68	3251.5730	3.87	309.40	2.47
PROLINE			63.0000	78.90	7253.1900	8.63	882.00	7.03
GLYCINE			354.0000	443.34	26574.7800	31.64	4956.00	39.53
ALANINE			43.1000	53.98	3839.7790	4.57	603.40	4.81
CYSTINE (HALF)			0.3000	2.61	252.5310	0.30	29.19	0.23
VALINE			49.0000	61.37	5740.3500	6.83	686.00	5.47
METHIONINE			43.7000	58.10	6922.4291	8.24	649.47	5.18
ISOLEUCINE			22.0000	27.55	2885.9600	3.44	308.00	2.46
LEUCINE			20.9000	26.17	2741.6620	3.26	292.60	2.33
DOPA			1.1000	1.38	216.9090	0.26	15.40	0.12
TYROSINE			6.5000	8.14	1177.7350	1.40	91.00	0.73
PHENYLALANINE			37.0000	46.34	6112.0300	7.28	518.00	4.13
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			9.3000	11.65	1359.5670	1.62	260.40	2.08
HISTIDINE			4.9000	6.14	760.2840	0.91	205.80	1.64
ARGININE			26.0000	32.56	4529.4600	5.39	1456.00	11.61
TOTALS			799.2000	1000.00	84001.7113	100.00	12538.06	100.00

UREA	0.	0.	0.
GLUCOSAMINE	5.3000	949.6010	74.20
GALACTOSAMINE	0.4000	71.6680	5.60
AMMONIA	51.0000	867.0000	714.00

TOTAL NITROGEN - MICROGRAMS 13331.86

RUN NUMBER 661A/658B
SAMPLE SOLEMYA VELUM
LOCALITY WOODS HOLE
TYPE PERIOSTRACUM
FACTOR 0.

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			1.4000	0.	0.	0.	0.	0.
TAURINE			10.1000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			6.9000	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			121.0000	29.05	16105.1000	3.76	1694.00	2.75
METHIONINE SULFONE			20.0000	0.	0.	0.	0.	0.
THREONINE			47.0000	11.28	5598.6400	1.31	658.00	1.07
SERINE			369.0000	88.58	38778.2100	9.06	5166.00	8.38
GLUTAMIC ACID			81.0000	19.44	11917.5300	2.78	1134.00	1.84
PROLINE			226.0000	54.25	26019.3800	6.08	3164.00	5.13
GLYCINE			2059.0000	494.27	154569.1296	36.10	28826.00	46.74
ALANINE			172.0000	41.29	15323.4800	3.58	2408.00	3.90
CYSTINE (HALF)			5.1000	3.81	1923.3671	0.45	222.32	0.36
VALINE			175.0000	42.01	20501.2500	4.79	2450.00	3.97
METHIONINE			277.0000	71.94	44721.2609	10.45	4195.80	6.80
ISOLEUCINE			113.0000	27.13	14823.3400	3.46	1582.00	2.56
LEUCINE			88.0000	21.12	11543.8400	2.70	1232.00	2.00
DOPA			6.8000	1.63	1340.8920	0.31	95.20	0.15
TYROSINE			50.0000	12.00	9059.5000	2.12	700.00	1.13
PHENYLALANINE			223.0000	53.53	36837.3699	8.60	3122.00	5.06
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			53.0000	12.72	7748.0700	1.81	1484.00	2.41
HISTIDINE			12.4000	2.98	1923.9840	0.45	520.80	0.84
ARGININE			54.0000	12.96	9407.3400	2.20	3024.00	4.90
TOTALS			4170.7000	1000.00	428141.6802	100.00	61678.12	100.00

UREA	0.	0.	0.
GLUCOSAMINE	55.0000	9854.3500	770.00
GALACTOSAMINE	9.6000	1720.0320	134.40
AMMONIA	111.3000	1892.1000	1558.20

TOTAL NITROGEN - MICROGRAMS 64140.72

RUN NUMBER 656A/718B
SAMPLE SOLENYA VELUM
LOCALITY WOODS HOLE, MASS.
TYPE MANTLE NO. 177
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			4.4000	0.	0.	0.	0.	0.
TAURINE			16.0000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			9.5000	0.	0.	0.	0.	0.
OH - PROLINE			18.0000	4.27	2360.3400	0.44	252.00	0.33
ASPARTIC ACID			423.0000	100.33	56301.2999	10.59	5922.00	7.79
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			261.0000	61.91	31090.3199	5.85	3654.00	4.81
SERINE			285.0000	67.60	29950.6500	5.63	3990.00	5.25
GLUTAMIC ACID			582.0000	138.05	85629.6599	16.10	8148.00	10.72
PROLINE			211.0000	50.05	24292.4300	4.57	2954.00	3.89
GLYCINE			424.0000	100.57	31829.6800	5.99	5936.00	7.81
ALANINE			355.0000	84.20	31626.9500	5.95	4970.00	6.54
CYSTINE (HALF)			0.	4.42	2257.6564	0.42	260.96	0.34
VALINE			205.0000	48.63	24015.7500	4.52	2870.00	3.78
METHIONINE			103.0000	26.47	16649.9697	3.13	1562.12	2.06
ISOLEUCINE			198.0000	46.96	25973.6400	4.88	2772.00	3.65
LEUCINE			368.0000	87.29	48274.2399	9.08	5152.00	6.78
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			4.1000	0.97	742.8790	0.14	57.40	0.08
PHENYLALANINE			133.0000	31.55	21970.2700	4.13	1862.00	2.45
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			12.6000	2.99	2043.5940	0.38	352.80	0.46
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			289.0000	68.55	42248.9099	7.95	8092.00	10.65
HISTIDINE			39.0000	9.25	6051.2400	1.14	1638.00	2.15
ARGININE			278.0000	65.94	48430.3799	9.11	15568.00	20.48
TOTALS			4218.6000	1000.00	531739.8555	100.00	76013.28	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			12.3000		2203.7910		172.20	
GALACTOSAMINE			0.		0.		0.	
AMMONIA			519.0000		8823.0000		7266.00	

TOTAL NITROGEN - MICROGRAMS 83451.48

RUN NUMBER 1409A/1426B
SAMPLE TAGELUS DIVISUS
LOCALITY BERMUDA
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1020	0.0043	0.0427	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	13150	0.0451	0.4506	92.96	60.0022	11.37	6.31	8.78
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	4513	0.0161	0.1611	33.21	19.1859	3.64	2.25	3.14
SERINE	12050	0.0496	0.4960	102.28	52.1233	9.88	6.94	9.66
GLUTAMIC ACID	9119	0.0337	0.3374	69.58	49.6458	9.41	4.72	6.57
PROLINE	2662	0.0474	0.4741	97.76	54.5817	10.34	6.64	9.23
GLYCINE	46210	0.1694	1.6942	349.37	127.1855	24.10	23.72	32.99
ALANINE	7674	0.0279	0.2789	57.50	24.8429	4.71	3.90	5.43
CYSTINE (HALF)	0	0.	0.	6.30	3.6997	0.70	0.43	0.59
VALINE	3983	0.0139	0.1390	28.67	16.2865	3.09	1.95	2.71
METHIONINE	2829	0.0102	0.1024	21.12	15.2812	2.90	1.43	1.99
ISOLEUCINE	1964	0.0069	0.0690	14.22	9.0478	1.71	0.97	1.34
LEUCINE	4826	0.0172	0.1722	35.50	22.5856	4.28	2.41	3.35
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	3914	0.0130	0.1301	26.84	23.5803	4.47	1.82	2.53
PHENYLALANINE	3610	0.0129	0.1292	26.63	21.3358	4.04	1.81	2.51
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	2106	0.0126	0.1260	25.99	18.4247	3.49	3.53	4.91
HISTIDINE	196	0.0015	0.0150	3.10	2.3339	0.44	0.63	0.88
ARGININE	549	0.0043	0.0434	8.96	7.5666	1.43	2.43	3.38
TOTALS		0.4861	4.8615	1000.00	527.7095	100.00	71.90	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	502	0.0034	0.0345		6.1795		0.48	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	21530	0.1299	1.2993		22.0887		18.19	

TOTAL NITROGEN - MICROGRAMS 90.57

RUN NUMBER 1406A/1425B
SAMPLE TAGELUS DIVISUS
LOCALITY ORIENT, LONG ISLAND, NEW YORK
TYPE SHELL
FACTOR 7.500

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1347	0.0056	0.0422	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	16910	0.0580	0.4348	101.44	57.8691	12.35	6.09	9.22
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	5623	0.0201	0.1505	35.12	17.9286	3.83	2.11	3.19
SERINE	15410	0.0634	0.4757	110.99	49.9929	10.67	6.66	10.09
GLUTAMIC ACID	11820	0.0437	0.3280	76.53	48.2630	10.30	4.59	6.96
PROLINE	2829	0.0504	0.3779	88.16	43.5044	9.28	5.29	8.01
GLYCINE	53220	0.1951	1.4634	341.43	109.8595	23.44	20.49	31.03
ALANINE	9530	0.0346	0.2597	60.60	23.1385	4.94	3.64	5.51
CYSTINE (HALF)	0	0.	0.	7.06	3.6644	0.78	0.42	0.64
VALINE	4850	0.0169	0.1270	29.62	14.8738	3.17	1.78	2.69
METHIONINE	2681	0.0097	0.0728	16.98	10.8613	2.32	1.02	1.54
ISOLEUCINE	2010	0.0071	0.0529	12.35	6.9448	1.48	0.74	1.12
LEUCINE	4375	0.0156	0.1171	27.31	15.3562	3.28	1.64	2.48
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	3050	0.0101	0.0761	17.75	13.7813	2.94	1.06	1.61
PHENYLALANINE	4905	0.0175	0.1316	30.71	21.7421	4.64	1.84	2.79
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	1351	0.0081	0.0606	14.15	8.8646	1.89	1.70	2.57
HISTIDINE	251	0.0019	0.0144	3.37	2.2417	0.48	0.61	0.92
ARGININE	1910	0.0151	0.1133	26.44	19.7433	4.21	6.35	9.61
TOTALS		0.5731	4.2981	1000.00	468.6294	100.00	66.02	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	525	0.0036	0.0271	4.8470	0.38
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	19870	0.1199	0.8994	15.2892	12.59

TOTAL NITROGEN - MICROGRAMS 78.99

RUN NUMBER 1259A/1258B
SAMPLE TAGELUS DIVISUS
LOCALITY BERMUDA
TYPE PERIOSTRACUM
FACTOR 1111.110

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	468	0.0020	2.1744	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	22300	0.0764	84.9426	23.11	11305.8584	2.94	1189.20	2.09
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	20960	0.0748	83.1152	22.62	9900.6769	2.58	1163.61	2.05
SERINE	15890	0.0654	72.6715	19.78	7637.0466	1.99	1017.40	1.79
GLUTAMIC ACID	21070	0.0780	86.6275	23.57	12745.5072	3.31	1212.79	2.13
PROLINE	6845	0.1219	135.4110	36.85	15589.8644	4.05	1895.75	3.33
GLYCINE	496400	1.8200	2022.1998	550.29	151806.5405	39.48	28310.80	49.78
ALANINE	38070	0.1383	153.7062	41.83	13693.6890	3.56	2151.89	3.78
CYSTINE (HALF)	0	0.	0.	0.42	188.6141	0.05	21.80	0.04
VALINE	31980	0.1116	124.0255	33.75	14529.5840	3.78	1736.36	3.05
METHIONINE	54900	0.1987	220.8143	60.09	32949.9036	8.57	3091.40	5.44
ISOLEUCINE	7245	0.0265	29.4410	8.01	3862.0705	1.00	412.17	0.72
LEUCINE	15040	0.0537	59.6186	16.22	7820.7683	2.03	834.66	1.47
DOPA	533	0.0019	2.1189	0.58	417.8182	0.11	29.66	0.05
TYROSINE	69000	0.2294	254.9180	69.37	46188.5931	12.01	3568.85	6.28
PHENYLALANINE	38280	0.1380	153.3690	41.74	25335.0181	6.59	2147.17	3.78
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	13020	0.0779	86.5748	23.56	12656.3727	3.29	2424.09	4.26
HISTIDINE	1221	0.0094	10.4119	2.83	1615.5041	0.42	437.30	0.77
ARGININE	10010	0.0839	93.2664	25.38	16247.9452	4.23	5222.92	9.18
TOTALS		3.3079	3675.4064	1000.00	384491.3726	100.00	56867.82	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	6200	0.0447	49.6202		8890.4449		694.68	
GALACTOSAMINE	6794	0.0512	56.8440		10184.7369		795.82	
AMMONIA	23240	0.3231	359.0153		6103.2595		5026.21	

TOTAL NITROGEN - MICROGRAMS 63384.53

RUN NUMBER 1192A/1193B
SAMPLE TAGELUS DIVISUS
LOCALITY NANTUCKET ISLAND
TYPE PERIOSTRACUM
FACTOR 1851.850

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	500	0.0024	4.4763	0.	0.	0.	0.	0.
TAURINE	700	0.0032	5.9016	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1400	0.0069	12.7119	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	9293	0.0398	73.7170	9.79	9811.7374	1.30	1032.04	0.95
METHIONINE SULFONE	1665	0.0080	14.7422	0.	0.	0.	0.	0.
THREONINE	21500	0.0997	184.5840	24.52	21987.6494	2.90	2584.18	2.37
SERINE	23230	0.1063	196.8359	26.15	20685.4796	2.73	2755.70	2.53
GLUTAMIC ACID	12910	0.0596	110.3248	14.66	16232.0873	2.14	1544.55	1.42
PROLINE	8335	0.2193	406.0818	53.95	46752.1992	6.17	5685.15	5.22
GLYCINE	509100	2.3209	4298.0480	571.03	22654.4644	42.59	60172.67	55.25
ALANINE	47800	0.1995	369.5196	49.09	32920.5046	4.35	5173.27	4.75
CYSTINE (HALF)	3019	0.0229	42.3862	6.82	6214.0675	0.82	718.27	0.66
VALINE	51990	0.2137	395.7973	52.58	46367.6479	6.12	5541.16	5.09
METHIONINE	22170	0.0954	176.6208	26.60	29879.9185	3.94	2803.37	2.57
ISOLEUCINE	4014	0.0203	37.5250	4.99	4922.5257	0.65	525.35	0.48
LEUCINE	11170	0.0500	92.5097	12.29	12135.4198	1.60	1295.14	1.19
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	41570	0.1804	334.1207	44.39	60539.3256	7.99	4677.69	4.30
PHENYLALANINE	78660	0.3344	619.1988	82.26	02285.4517	13.50	8668.78	7.96
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	12530	0.0563	104.2394	13.85	15238.7513	2.01	2918.70	2.68
HISTIDINE	1000	0.0060	11.0328	1.47	1711.8442	0.23	463.38	0.43
ARGININE	3500	0.0226	41.8160	5.56	7284.7597	0.96	2341.69	2.15
TOTALS		4.0674	7532.1897	1000.00	757623.8291	100.00	108901.09	100.00

UREA	0	0.	0.	0.	
GLUCOSAMINE	500	0.0027	5.0064	896.9883	70.09
GALACTOSAMINE	500	0.0028	5.1340	919.8668	71.88
AMMONIA	170800	0.4662	863.3710	14677.3076	12087.19

TOTAL NITROGEN - MICROGRAMS 121130.25

RUN NUMBER 1260A/1265B
SAMPLE TAGELUS DIVISUS
LOCALITY ORIENT, LONG ISLAND, NEW YORK
TYPE PERIOSTRACUM
FACTOR 1111.110

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1964	0.0062	9.1249	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	600	0.0025	2.8189	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	11580	0.0397	44.1092	6.51	5870.9346	0.84	617.53	0.60
METHIONINE SULFONE	600	0.0025	2.7491	0.	0.	0.	0.	0.
THREONINE	41320	0.1475	163.8511	24.17	19517.9374	2.81	2293.91	2.23
SERINE	41420	0.1705	189.4306	27.94	19907.2668	2.86	2652.03	2.57
GLUTAMIC ACID	21700	0.0803	89.2177	13.16	13126.6021	1.89	1249.05	1.21
PROLINE	18500	0.3295	366.0825	54.00	42147.0834	6.06	5125.16	4.97
GLYCINE	386301	3.3385	3709.4942	547.13	278471.7285	40.07	51932.92	50.38
ALANINE	91050	0.3309	367.6111	54.22	32750.4698	4.71	5146.55	4.99
CYSTINE (HALF)	5326	0.0355	39.4781	6.79	5573.1255	0.80	644.19	0.62
VALINE	99160	0.3461	384.5643	56.72	45051.7057	6.48	5383.90	5.22
METHIONINE	30240	0.1095	121.6288	18.65	18867.1427	2.71	1770.14	1.72
ISOLEUCINE	7793	0.0274	30.4087	4.49	3989.0146	0.57	425.72	0.41
LEUCINE	17540	0.0626	69.5286	10.26	9120.7630	1.31	973.40	0.94
DOPA	11980	0.0429	47.6247	7.02	9391.1104	1.35	666.75	0.65
TYROSINE	70900	0.2357	261.9375	38.63	47460.4529	6.83	3667.12	3.56
PHENYLALANINE	144000	0.5152	572.4502	84.43	94563.0535	13.61	8014.30	7.78
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	24200	0.1448	160.9148	23.73	23524.1335	3.39	4505.61	4.37
HISTIDINE	3400	0.0261	28.9929	4.28	4498.5373	0.65	1217.70	1.18
ARGININE	13790	0.1091	121.2200	17.88	21117.7346	3.04	6788.32	6.59
TOTALS		6.1049	6783.2379	1000.00	694948.7930	100.00	103074.30	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	2291	0.0157	17.4892	3133.5399	244.85
GALACTOSAMINE	1687	0.0127	14.1148	2528.9448	197.61
AMMONIA	67660	0.4063	453.6977	7712.8602	6351.77

TOTAL NITROGEN - MICROGRAMS 109868.53

RUN NUMBER 525A/516B
SAMPLE YOLDIA LIMATULA
LOCALITY HADLEY HARBOR WOODS HOLE,MASS.
TYPE SHELL NO. 26/A
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.4700	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.3300	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			5.2900	194.45	704.0990	21.72	74.06	15.91
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			1.3100	48.15	156.0472	4.81	18.34	3.94
SERINE			1.8000	66.17	189.1620	5.84	25.20	5.41
GLUTAMIC ACID			1.7100	62.86	251.5923	7.76	23.94	5.14
PROLINE			2.5300	93.00	291.2789	8.99	35.42	7.61
GLYCINE			5.8100	213.57	436.1567	13.46	81.34	17.47
ALANINE			1.5300	56.24	136.3077	4.21	21.42	4.60
CYSTINE (HALF)			0.0300	13.48	44.4035	1.37	5.13	1.10
VALINE			1.4000	51.46	164.0100	5.06	19.60	4.21
METHIONINE			0.	10.96	44.4739	1.37	4.17	0.90
ISOLEUCINE			0.3700	13.60	48.5366	1.50	5.18	1.11
LEUCINE			0.8500	31.24	111.5030	3.44	11.90	2.56
DOPA			0.0800	2.94	15.7752	0.49	1.12	0.24
TYROSINE			0.5400	19.85	97.8426	3.02	7.56	1.62
PHENYLALANINE			0.8500	31.24	140.4115	4.33	11.90	2.56
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.5200	19.11	76.0188	2.35	14.56	3.13
HISTIDINE			0.3200	11.76	49.6512	1.53	13.44	2.89
ARGININE			1.6300	59.92	283.9623	8.76	91.28	19.61
TOTALS			27.3700	1000.00	3241.2324	100.00	465.57	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.0300	5.3751	0.42
GALACTOSAMINE	0.0750	13.4377	1.05
AMMONIA	2.7000	45.9000	37.80

TOTAL NITROGEN - MICROGRAMS 504.84

RUN NUMBER 524A/511B
SAMPLE YOLDIA LIMATULA
LOCALITY HADLEY HARBOR WOODS HOLE,MASS.
TYPE SHELL NO. 2678
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			0.4300	0.	0.	0.	0.	0.
TAURINE			0.0300	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.3400	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			6.1100	197.33	813.2410	22.01	85.54	16.14
METHIONINE SULFONE			0.	0.	0.	0.	0.	0.
THREONINE			1.4000	45.21	166.7680	4.51	19.60	3.70
SERINE			1.9100	61.68	200.7219	5.43	26.74	5.05
GLUTAMIC ACID			1.9800	63.95	291.3174	7.88	27.72	5.23
PROLINE			3.1000	100.12	356.9030	9.66	43.40	8.19
GLYCINE			6.5300	210.89	490.2071	13.27	91.42	17.25
ALANINE			1.8000	58.13	160.3620	4.34	25.20	4.76
CYSTINE (HALF)			0.0500	12.50	46.8736	1.27	5.42	1.02
VALINE			1.5800	51.03	185.0970	5.01	22.12	4.17
METHIONINE			0.	9.92	45.8216	1.24	4.30	0.81
ISOLEUCINE			0.3800	12.27	49.8484	1.35	5.32	1.00
LEUCINE			0.9800	31.65	128.5564	3.48	13.72	2.59
DOPA			0.0900	2.91	17.7471	0.48	1.26	0.24
TYROSINE			0.6300	20.35	114.1497	3.09	8.82	1.66
PHENYLALANINE			0.9900	31.97	163.5381	4.43	13.86	2.62
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			0.	0.	0.	0.	0.	0.
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			0.5700	18.41	83.3283	2.26	15.96	3.01
HISTIDINE			0.3400	10.98	52.7544	1.43	14.28	2.69
ARGININE			1.8800	60.72	327.5148	8.86	105.28	19.87
TOTALS			31.1200	1000.00	3694.7497	100.00	529.96	100.00

UREA	0.	0.	0.
GLUCOSAMINE	0.0300	5.3751	0.42
GALACTOSAMINE	0.0800	14.3336	1.12
AMMONIA	2.6700	45.3900	37.38

TOTAL NITROGEN - MICROGRAMS 568.88

RUN NUMBER 580A/520B
SAMPLE YOLDIA LIMATULA
LOCALITY HADLEY HARBOR WOODS HOLE, MASS.
TYPE PERIOSTRACUM NO. 267A
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			23.0000	0.	0.	0.	0.	0.
TAURINE			2.7000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			159.0000	32.39	21162.9000	4.36	2226.00	2.81
METHIONINE SULFONE			104.0000	0.	0.	0.	0.	0.
THREONINE			44.0000	8.96	5241.2800	1.08	616.00	0.78
SERINE			143.0000	29.13	15027.8700	3.10	2002.00	2.53
GLUTAMIC ACID			46.0000	9.37	6767.9800	1.39	644.00	0.81
PROLINE			166.0000	33.82	19111.5800	3.94	2324.00	2.93
GLYCINE			3183.0000	648.44	238947.8096	49.24	44562.00	56.22
ALANINE			81.0000	16.50	7216.2900	1.49	1134.00	1.43
CYSTINE (HALF)			0.	3.89	2311.6937	0.48	267.20	0.34
VALINE			86.0000	17.52	10074.9000	2.08	1204.00	1.52
METHIONINE			0.	17.45	12778.5414	2.63	1198.90	1.51
ISOLEUCINE			25.0000	5.09	3279.5000	0.68	350.00	0.44
LEUCINE			31.0000	6.32	4066.5800	0.84	434.00	0.55
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			65.0000	13.24	11777.3500	2.43	910.00	1.15
PHENYLALANINE			416.0000	84.75	68719.0399	14.16	5824.00	7.35
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			57.0000	11.61	9244.8300	1.90	1596.00	2.01
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			96.0000	19.56	14034.2400	2.89	2688.00	3.39
HISTIDINE			18.0000	3.67	2792.8800	0.58	756.00	0.95
ARGININE			188.0000	38.30	32751.4799	6.75	10528.00	13.28
TOTALS			5092.7000	1000.00	485306.7397	100.00	79264.10	100.00
UREA			0.		0.		0.	
GLUCOSAMINE			1.6000		286.6720		22.40	
GALACTOSAMINE			3.8000		680.8460		53.20	
AMMONIA			484.0000		8228.0000		6776.00	

TOTAL NITROGEN - MICROGRAMS 86115.70

RUN NUMBER 515A/511B
SAMPLE YOLDIA LIMATULA
LOCALITY HADLEY HARBOR WOODS HOLE, MASS.
TYPE PERIOSTRACUM NO. 267B
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			28.0000	0.	0.	0.	0.	0.
TAURINE			0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			0.	0.	0.	0.	0.	0.
OH - PROLINE			0.	0.	0.	0.	0.	0.
ASPARTIC ACID			189.0000	35.29	25155.9000	4.80	2646.00	3.11
METHIONINE SULFONE			111.0000	0.	0.	0.	0.	0.
THREONINE			47.0000	8.78	5598.6400	1.07	658.00	0.77
SERINE			141.0000	26.33	14817.6900	2.83	1974.00	2.32
GLUTAMIC ACID			49.0000	9.15	7209.3700	1.38	686.00	0.81
PROLINE			172.0000	32.12	19802.3600	3.78	2408.00	2.83
GLYCINE			3541.0000	661.20	65822.8696	50.73	49574.00	58.29
ALANINE			95.0000	17.74	8463.5500	1.62	1330.00	1.56
CYSTINE (HALF)			0.	3.74	2428.8441	0.46	280.74	0.33
VALINE			84.0000	15.68	9840.6000	1.88	1176.00	1.38
METHIONINE			0.	17.07	13638.6355	2.60	1279.59	1.50
ISOLEUCINE			25.0000	4.67	3279.5000	0.63	350.00	0.41
LEUCINE			33.0000	6.16	4328.9400	0.83	462.00	0.54
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			67.0000	12.51	12139.7300	2.32	938.00	1.10
PHENYLALANINE			462.0000	86.27	76317.7799	14.57	6468.00	7.61
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			20.0000	3.73	3243.8000	0.62	560.00	0.66
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			119.0000	22.22	17396.6100	3.32	3332.00	3.92
HISTIDINE			20.0000	3.73	3103.2000	0.59	840.00	0.99
ARGININE			180.0000	33.61	31357.8000	5.98	10080.00	11.85
TOTALS			5383.0000	1000.00	523945.8159	100.00	85042.34	100.00

UREA	0.	0.	0.
GLUCOSAMINE	1.7000	304.5890	23.80
GALACTOSAMINE	3.9000	698.7630	54.60
AMMONIA	582.0000	9894.0000	8148.00

TOTAL NITROGEN - MICROGRAMS 93266.74

RUN NUMBER 510A/581B
SAMPLE YOLDIA LIMATULA
LOCALITY HADLEY HARBOR WOODS HOLE, MASS.
TYPE MANTLE NO. 2678
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			56.0000	0.	0.	0.	0.	0.
TAURINE			3.9000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			5.4000	0.	0.	0.	0.	0.
OH - PROLINE			212.0000	39.66	27799.5600	4.20	2968.00	2.97
ASPARTIC ACID			577.0000	107.96	76798.6998	11.60	8078.00	8.08
METHIONINE SULFONE			48.0000	0.	0.	0.	0.	0.
THREONINE			254.0000	47.52	30256.4799	4.57	3556.00	3.56
SERINE			385.0000	72.03	40459.6500	6.11	5390.00	5.39
GLUTAMIC ACID			365.0000	68.29	53702.4500	8.11	5110.00	5.11
PROLINE			753.0000	140.89	86692.8899	13.09	10542.00	10.55
GLYCINE			889.0000	166.33	66737.2299	10.08	12446.00	12.45
ALANINE			0.	0.	0.	0.	0.	0.
CYSTINE (HALF)			0.	8.21	5314.9585	0.80	614.34	0.61
VALINE			204.0000	38.17	23898.6000	3.61	2856.00	2.86
METHIONINE			0.	8.31	6625.5433	1.00	621.62	0.62
ISOLEUCINE			194.0000	36.30	25448.9200	3.84	2716.00	2.72
LEUCINE			381.0000	71.28	49979.5799	7.55	5334.00	5.34
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			2.5000	0.47	452.9750	0.07	35.00	0.04
PHENYLALANINE			117.0000	21.89	19327.2299	2.92	1638.00	1.64
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			121.0000	22.64	19624.9900	2.96	3386.00	3.39
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			330.0000	61.74	48242.6999	7.29	9240.00	9.24
HISTIDINE			72.0000	13.47	11171.5200	1.69	3024.00	3.03
ARGININE			400.0000	74.84	69683.9999	10.52	22400.00	22.41
TOTALS			5369.8000	1000.00	662217.9697	100.00	99956.96	100.00

UREA	0.	0.	0.
GLUCOSAMINE	5.1000	913.7670	71.40
GALACTOSAMINE	7.3000	1307.9410	102.20
AMMONIA	742.0000	12614.0000	10388.00

TOTAL NITROGEN - MICROGRAMS 110518.56

RUN NUMBER 509A/522B
SAMPLE YOLDIA LIMATULA
LOCALITY HADLEY HARBOR WOODS HOLE,MASS.
TYPE MANTLE NO. 267A
FACTOR 999999.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID			49.0000	0.	0.	0.	0.	0.
TAURINE			5.6000	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES			4.9000	0.	0.	0.	0.	0.
OH - PROLINE			212.0000	39.51	27799.5600	4.18	2968.00	3.03
ASPARTIC ACID			521.0000	97.11	69345.0999	10.43	7294.00	7.45
METHIONINE SULFONE			45.0000	0.	0.	0.	0.	0.
THREONINE			277.0000	51.63	32996.2399	4.96	3878.00	3.96
SERINE			393.0000	73.25	41300.3699	6.21	5502.00	5.62
GLUTAMIC ACID			660.0000	123.01	97105.7998	14.61	9240.00	9.44
PROLINE			310.0000	57.78	35690.3000	5.37	4340.00	4.43
GLYCINE			766.0000	142.77	57503.6199	8.65	10724.00	10.95
ALANINE			390.0000	72.69	34745.0999	5.23	5460.00	5.58
CYSTINE (HALF)			0.	7.55	4907.0704	0.74	567.20	0.58
VALINE			214.0000	39.89	25070.1000	3.77	2996.00	3.06
METHIONINE			0.	7.73	6189.5468	0.93	580.71	0.59
ISOLEUCINE			188.0000	35.04	24661.8400	3.71	2632.00	2.69
LEUCINE			371.0000	69.15	48667.7799	7.32	5194.00	5.31
DOPA			0.	0.	0.	0.	0.	0.
TYROSINE			2.3000	0.43	416.7370	0.06	32.20	0.03
PHENYLALANINE			136.0000	25.35	22465.8400	3.38	1904.00	1.94
BETA - ALANINE			0.	0.	0.	0.	0.	0.
OH - LYSINE			119.0000	22.18	19300.6100	2.90	3332.00	3.40
ORNITHINE			0.	0.	0.	0.	0.	0.
LYSINE			304.0000	56.66	44441.7599	6.69	8512.00	8.70
HISTIDINE			56.0000	10.44	8688.9600	1.31	2352.00	2.40
ARGININE			364.0000	67.84	63412.4399	9.54	20384.00	20.82
TOTALS			5387.8000	1000.00	664708.7695	100.00	97892.11	100.00

UREA	0.	0.	0.
GLUCOSAMINE	5.0000	895.8500	70.00
GALACTOSAMINE	7.1000	1272.1070	99.40
AMMONIA	641.0000	10897.0000	8974.00

TOTAL NITROGEN - MICROGRAMS 107035.51

RUN NUMBER 940A/943B
SAMPLE THALASSIOSIRA
LOCALITY LONG ISLAND
TYPE DIATOM
FACTOR 595.240

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	0	0.	0.	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	39510	0.1675	99.7156	132.90	13272.1509	14.74	1396.02	12.73
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	24850	0.1028	61.1987	81.56	7289.9833	8.09	856.78	7.81
SERINE	35690	0.1458	86.7815	115.66	9119.8697	10.13	1214.94	11.08
GLUTAMIC ACID	33270	0.1377	81.9857	109.27	12062.5493	13.39	1147.80	10.46
PROLINE	2000	0.0351	20.8856	27.84	2404.5607	2.67	292.40	2.67
GLYCINE	34550	0.1444	85.9584	114.56	6452.8954	7.17	1203.42	10.97
ALANINE	31230	0.1330	79.1373	105.47	7050.3395	7.83	1107.92	10.10
CYSTINE (HALF)	2426	0.0191	11.3526	15.13	1375.0284	1.53	158.94	1.45
VALINE	19810	0.0760	45.2136	60.26	5295.7721	5.88	632.99	5.77
METHIONINE	8122	0.0327	19.4902	25.98	2903.3247	3.23	272.86	2.49
ISOLEUCINE	13900	0.0548	32.5934	43.44	4275.6029	4.75	456.31	4.16
LEUCINE	28640	0.1143	68.0409	90.68	8925.6065	9.91	952.57	8.68
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	5972	0.0265	15.7885	21.04	2860.7123	3.18	221.04	2.02
PHENYLALANINE	8834	0.0404	24.0602	32.07	3974.4995	4.41	336.84	3.07
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	300	0.0013	0.7935	1.06	104.8659	0.12	22.22	0.20
LYSINE	1330	0.0062	3.6856	4.91	538.7994	0.60	103.20	0.94
HISTIDINE	4000	0.0206	12.2730	16.36	1904.2771	2.11	515.47	4.70
ARGININE	400	0.0023	1.3763	1.83	239.7613	0.27	77.07	0.70
TOTALS		1.2606	750.3304	1000.00	90056.5983	100.00	10968.78	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	341700	1.5736	936.6498	167819.5471	13113.10
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	140100	0.4331	257.7840	4392.3280	3608.98

TOTAL NITROGEN - MICROGRAMS 27690.85

RUN NUMBER 1393A/1366B
SAMPLE CLIONA CELATA WOODS HO
LOCALITY LF
TYPE SI02-SPONGE
FACTOR 8.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1592.	0.0067	0.0555	8.	0.	0.	0.	0.
TAURINE	0.	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0.	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0.	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	25390.	0.0888	0.7393	116.74	98.4053	13.16	10.35	9.96
METHIONINE SULFONE	0.	0.	0.	0.	0.	0.	0.	0.
THREONINE	9500.	0.0339	0.2824	44.59	33.6423	4.50	3.95	3.80
SERINE	50102.	0.1239	1.0321	162.97	108.4638	14.50	14.45	13.90
GLUTAMIC ACID	13950.	0.0516	0.4300	67.89	63.2637	8.46	6.02	5.79
PROLINE	1996.	0.0355	0.2961	46.76	34.0914	4.56	4.15	3.99
GLYCINE	27720.	0.1016	0.8466	133.67	63.5536	8.50	11.85	11.40
ALANINE	23879.	0.0867	0.7225	114.08	64.3692	8.61	10.12	9.73
CYSTINE (HALF)	0.	0.	0.	6.27	4.8102	0.64	0.56	0.53
VALINE	12020.	0.0420	0.3495	55.18	40.9418	5.47	4.89	4.71
METHIONINE	689.	0.0025	0.0208	3.28	3.1002	0.41	0.29	0.28
ISOLEUCINE	6583.	0.0235	0.1956	30.88	25.6537	3.43	2.74	2.63
LEUCINE	14580.	0.0520	0.4333	68.42	56.8391	7.60	6.07	5.84
DOPA	0.	0.	0.	0.	0.	0.	0.	0.
TYROSINE	6197.	0.0206	0.1716	27.10	31.0996	4.16	2.40	2.31
PHENYLALANINE	2983.	0.0107	0.0889	14.04	14.6859	1.96	1.24	1.20
BETA - ALANINE	0.	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0.	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0.	0.	0.	0.	0.	0.	0.	0.
LYSINE	8146.	0.0487	0.4061	64.12	59.3650	7.94	11.37	10.94
HISTIDINE	2377.	0.0182	0.1520	23.99	23.5781	3.15	6.38	6.14
ARGININE	1923.	0.0152	0.1267	20.01	22.0775	2.95	7.10	6.83
TOTALS		0.7622	6.3489	1000.00	747.9404	100.00	103.93	100.00

UREA	0.	0.	0.	0.	0.	
GLUCOSAMINE	6092.	0.0419	0.3488	62.4988	4.88	
GALACTOSAMINE	1219.	0.0092	0.0765	13.6999	1.07	
AMMONIA	98520.	0.5946	4.9528	84.1968	69.34	

TOTAL NITROGEN - MICROGRAMS 179.22

RUN NUMBER 1405A/1330B
SAMPLE RECENT SPONGE-2387
LOCALITY BLAKE PLATEAU, OFF FLORIDA
TYPE STOR-SPONGE, F
FACTOR 6.250

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	24325	0.1017	0.6357	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	121812	2.2149	13.8434	110.90	1842.5589	11.81	193.81	9.52
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	425300	1.5178	9.4865	76.00	1131.0352	7.24	132.81	6.52
SERINE	276400	1.1377	7.1105	56.96	747.2442	4.79	99.55	4.89
GLUTAMIC ACID	27512	2.0418	12.7613	102.23	1877.5748	12.03	178.66	8.77
PROLINE	37280	1.2344	9.7150	77.83	1118.4936	7.17	136.01	6.68
GLYCINE	17112	1.9850	12.4060	99.38	931.3221	5.97	173.68	8.53
ALANINE	499000	1.8132	11.3327	90.79	1009.6273	6.47	158.66	7.79
CYSTINE (HALF)	0	0.	0.	3.65	55.1447	0.35	6.37	0.31
VALINE	397400	1.0888	8.6802	69.54	1016.8845	6.52	121.52	5.97
METHIONINE	112900	0.4087	2.5543	20.46	381.1524	2.44	35.76	1.76
ISOLEUCINE	356000	1.2512	7.8139	62.60	1025.0237	6.57	109.39	5.37
LEUCINE	412000	1.4699	9.1866	73.59	1205.0963	7.72	128.61	6.32
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	193200	0.6424	4.0150	32.16	727.4711	4.66	56.21	2.76
PHENYLALANINE	258600	1.0326	6.4535	51.70	1066.0517	6.83	90.35	4.44
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	67050	0.4013	2.5079	20.09	336.6233	2.35	70.22	3.45
HISTIDINE	29570	0.2269	1.4184	11.36	220.0730	1.41	59.57	2.93
ARGININE	102900	0.8141	5.0880	40.76	886.3830	5.68	284.93	13.99
TOTALS		20.0014	125.0089	1000.00	15606.7596	100.00	2036.12	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	201300	1.3830	8.6439	1548.7342	121.02	
GALACTOSAMINE	0	0.	0.	0.	0.	
AMMONIA	208200	1.2565	7.8530	133.5018	109.94	

TOTAL NITROGEN - MICROGRAMS 2267.08

RUN NUMBER 1406A/1407B
SAMPLE SIPHONOCHALINA PAPYRACEA
LOCALITY FLORIDA
TYPE SPONGE
FACTOR 92.590

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	250	0.0010	0.0968	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	4668	0.0160	1.4817	144.79	197.2135	16.37	20.74	12.52
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	945	0.0034	0.3123	30.51	37.1974	3.09	4.37	2.64
SERINE	3044	0.0125	1.1601	113.36	121.9139	10.12	16.24	9.80
GLUTAMIC ACID	2453	0.0091	0.8404	82.12	123.6509	10.27	11.77	7.10
PROLINE	450	0.0080	0.7420	72.51	85.4310	7.09	10.39	6.27
GLYCINE	5395	0.0198	1.8314	178.96	137.4856	11.41	25.64	15.47
ALANINE	2460	0.0089	0.8277	80.88	73.7360	6.12	11.59	6.99
CYSTINE (HALF)	0	0.	0.	6.77	8.3961	0.70	0.97	0.59
VALINE	1950	0.0068	0.6302	61.58	73.8272	6.13	8.82	5.32
METHIONINE	200	0.0007	0.0670	6.55	10.0027	0.83	0.94	0.57
ISOLEUCINE	1015	0.0036	0.3300	32.25	43.2946	3.59	4.62	2.79
LEUCINE	2110	0.0075	0.6970	68.11	91.4305	7.59	9.76	5.89
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	500	0.0017	0.1539	15.04	27.8909	2.32	2.16	1.30
PHENYLALANINE	620	0.0022	0.2054	20.07	33.9280	2.82	2.88	1.74
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	886	0.0053	0.4909	47.97	71.7694	5.96	13.75	8.29
HISTIDINE	98	0.0008	0.0696	6.80	10.8050	0.90	2.92	1.76
ARGININE	443	0.0035	0.3245	31.71	56.5319	4.69	18.17	10.97
TOTALS		0.1108	10.2610	1000.00	1204.5045	100.00	165.72	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	725	0.0050	0.4612	82.6333	6.46
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	22310	0.1346	12.4664	211.9288	174.53

TOTAL NITROGEN - MICROGRAMS 346.71

RUN NUMBER 1415A/1413B
SAMPLE ARBACIA PUNCTULATA
LOCALITY WOODS HOLE
TYPE ARISTOTLES
FACTOR 4.170

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3591	0.0150	0.0626	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	984	0.0492	0.2052	9.23	26.9032	1.01	2.87	0.70
ASPARTIC ACID	130700	0.4481	1.8684	84.08	248.6871	9.32	26.16	6.40
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	63490	0.2266	0.9449	42.52	112.5532	4.22	13.23	3.24
SERINE	97030	0.3994	1.6654	74.95	175.0196	6.56	23.32	5.70
GLUTAMIC ACID	156200	0.5780	2.4102	108.46	354.6113	13.30	33.74	8.25
PROLINE	23720	0.4224	1.7616	79.28	202.8101	7.60	24.66	6.03
GLYCINE	305200	1.1190	4.6661	209.99	350.2856	13.13	65.33	15.98
ALANINE	122400	0.4448	1.8547	83.47	165.2335	6.20	25.97	6.35
CYSTINE (HALF)	0	0.	0.	2.02	5.4315	0.20	0.63	0.15
VALINE	50080	0.1748	0.7289	32.80	85.3922	3.20	10.20	2.50
METHIONINE	33080	0.1197	0.4993	22.47	74.5120	2.79	6.99	1.71
ISOLEUCINE	34750	0.1220	0.5089	22.90	66.7567	2.50	7.12	1.74
LEUCINE	74310	0.2651	1.1055	49.75	145.0200	5.44	15.48	3.79
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	27000	0.0898	0.3744	16.85	67.8310	2.54	5.24	1.28
PHENYLALANINE	30940	0.1107	0.4616	20.77	76.2532	2.86	6.46	1.58
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	1804	0.0119	0.0496	2.23	8.0402	0.30	1.39	0.34
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	39780	0.2381	0.9927	44.67	145.1249	5.44	27.80	6.80
HISTIDINE	9226	0.0708	0.2953	13.29	45.8126	1.72	12.40	3.03
ARGININE	54060	0.4277	1.7835	80.26	310.6977	11.65	99.87	24.43
TOTALS		5.3330	22.2387	1000.00	2666.9756	100.00	408.86	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	4197	0.0288	0.1202	21.5441	1.68
GALACTOSAMINE	1474	0.0111	0.0463	8.2928	0.65
AMMONIA	116200	0.7013	2.9243	49.7128	40.94

TOTAL NITROGEN - MICROGRAMS 452.13

RUN NUMBER 1391A/1386B
SAMPLE ARBACIA PUNCTULATA
LOCALITY WOODS HOLE
TYPE SPINES
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	707	0.0030	0.0296	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	142700	0.4892	4.8920	102.50	651.1268	10.84	68.49	8.04
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	80070	0.2858	2.8576	59.87	340.3975	5.67	40.01	4.70
SERINE	95930	0.3949	3.9485	82.73	414.9530	6.91	55.28	6.49
GLUTAMIC ACID	144000	0.5328	5.3284	111.64	783.9674	13.05	74.60	8.76
PROLINE	16550	0.2947	2.9475	61.76	339.3413	5.65	41.26	4.84
GLYCINE	132700	0.4865	4.8653	101.94	365.2352	6.08	68.11	8.00
ALANINE	122600	0.4462	4.4622	93.50	397.5382	6.62	62.47	7.33
CYSTINE (HALF)	0	0.	0.	0.44	2.5644	0.04	0.30	0.03
VALINE	66450	0.2319	2.3194	48.60	271.7144	4.52	32.47	3.81
METHIONINE	31420	0.1137	1.1374	23.83	169.7192	2.83	15.92	1.87
ISOLEUCINE	47140	0.1655	1.6555	34.69	217.1668	3.62	23.18	2.72
LEUCINE	102300	0.3650	3.6497	76.47	478.7625	7.97	51.10	6.00
DOPA	848	0.0030	0.0303	0.64	5.9827	0.10	0.42	0.05
TYROSINE	38380	0.1276	1.2761	26.74	231.2243	3.85	17.87	2.10
PHENYLALANINE	47430	0.1697	1.6970	35.56	280.3206	4.67	23.76	2.79
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	48260	0.2869	2.8893	60.54	422.3850	7.03	80.90	9.50
HISTIDINE	13300	0.1021	1.0207	21.39	158.3751	2.64	42.87	5.03
ARGININE	34490	0.2729	2.7286	57.17	475.3562	7.91	152.80	17.94
TOTALS		4.7735	47.7350	1000.00	6006.1309	100.00	851.81	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	32460	0.2230	2.2302	399.5780	31.22
GALACTOSAMINE	14360	0.1081	1.0813	193.7411	15.14
AMMONIA	80160	0.4838	4.8377	82.2402	67.73

TOTAL NITROGEN - MICROGRAMS 965.89

RUN NUMBER 1416A/1436B
SAMPLE ARBACIA PUNCTULATA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2879	0.0120	0.1204	0.	0.	0.	0.	0.
TAURINE	1178	0.0045	0.0455	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	1040	0.0520	0.5200	3.58	68.1876	0.39	7.28	0.28
ASPARTIC ACID	331200	1.1354	11.3541	78.22	1511.2348	8.73	158.96	6.14
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	198900	0.7099	7.0985	48.90	845.5734	4.88	99.38	3.84
SERINE	289300	1.1908	11.9078	82.04	1251.3907	7.23	166.71	6.44
GLUTAMIC ACID	438500	1.6226	16.2257	111.78	2387.2897	13.79	227.16	8.77
PROLINE	73490	1.3088	13.0882	90.17	1506.8395	8.70	183.23	7.08
GLYCINE	299412	3.0200	30.1998	208.05	2267.1002	13.09	422.80	16.33
ALANINE	321900	1.1697	11.6969	80.58	1042.0811	6.02	163.76	6.32
CYSTINE (HALF)	0	0.	0.	0.90	15.7765	0.09	1.82	0.07
VALINE	148600	0.5187	5.1867	35.73	607.6262	3.51	72.61	2.80
METHIONINE	91060	0.3297	3.2970	22.71	491.9804	2.84	46.16	1.78
ISOLEUCINE	102700	0.3667	3.6067	24.85	473.1233	2.73	50.49	1.95
LEUCINE	217400	0.7756	7.7560	53.43	1017.4289	5.88	108.58	4.19
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	74550	0.2479	2.4788	17.08	449.1343	2.59	34.70	1.34
PHENYLALANINE	85070	0.3044	3.0436	20.97	502.7804	2.90	42.61	1.65
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	9041	0.0596	0.5958	4.10	96.6300	0.56	16.68	0.64
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	81590	0.4883	4.8827	33.64	713.8026	4.12	136.72	5.28
HISTIDINE	24800	0.1903	1.9033	13.11	295.3160	1.71	79.94	3.09
ARGININE	128700	1.0182	10.1820	70.15	1773.7996	10.24	570.19	22.02
TOTALS		14.5190	145.1895	1000.00	17317.0952	100.00	2589.79	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	13200	0.0907	0.9069	162.4901	12.70	
GALACTOSAMINE	3841	0.0289	0.2892	51.8217	4.05	
AMMONIA	192600	1.1623	11.6234	197.5981	162.73	

TOTAL NITROGEN - MICROGRAMS 2769.26

RUN NUMBER 1433A/1420B
SAMPLE ECHINORACHNIUS PARMA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 6.660

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2645	0.0111	0.0737	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	950	0.0475	0.3163	9.62	41.4830	1.05	4.43	0.74
ASPARTIC ACID	126900	0.4350	2.8973	88.13	385.6359	9.73	40.56	6.80
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	60910	0.2174	1.4478	44.04	172.4564	4.35	20.27	3.40
SERINE	104100	0.4285	2.8537	86.81	299.8952	7.56	39.95	6.69
GLUTAMIC ACID	139600	0.5166	3.4403	104.65	506.1686	12.77	48.16	8.07
PROLINE	23420	0.4171	2.7779	84.50	319.8158	8.07	38.89	6.52
GLYCINE	256400	0.9401	6.2608	190.45	469.9957	11.86	87.65	14.69
ALANINE	111200	0.4041	2.6911	81.86	239.7505	6.05	37.68	6.31
CYSTINE (HALF)	0	0.	0.	1.60	6.3896	0.16	0.74	0.12
VALINE	49160	0.1716	1.1428	34.76	133.8763	3.38	16.00	2.68
METHIONINE	23320	0.0844	0.5622	17.10	83.8933	2.12	7.87	1.32
ISOLEUCINE	32040	0.1125	0.7494	22.80	98.3039	2.48	10.49	1.76
LEUCINE	74520	0.2659	1.7706	53.86	232.2692	5.86	24.79	4.15
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	29740	0.0989	0.6586	20.03	119.3284	3.01	9.22	1.54
PHENYLALANINE	33120	0.1185	0.7892	24.01	130.3666	3.29	11.05	1.85
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	1394	0.0092	0.0612	1.86	9.9228	0.25	1.71	0.29
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	37290	0.2232	1.4862	45.21	217.2740	5.48	41.61	6.97
HISTIDINE	10555	0.0810	0.5395	16.41	83.7082	2.11	22.66	3.80
ARGININE	45100	0.3568	2.3763	72.29	413.9775	10.44	133.07	22.30
TOTALS		4.9392	32.8948	1000.00	3964.5108	100.00	596.81	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	5580	0.0383	0.2553		45.7469		3.57	
GALACTOSAMINE	1894	0.0143	0.0950		17.0185		1.33	
AMMONIA	89400	0.5395	3.5933		61.0855		50.31	

TOTAL NITROGEN - MICROGRAMS 652.02

RUN NUMBER 1402A/1429B
SAMPLE LINGULA ANATINA
LOCALITY VICINITY OF ENOSHIMA
TYPE PERIOSTRACUM
FACTOR 952.380

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1713	0.0072	6.8218	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	99820	0.3422	325.9053	89.09	43377.9932	10.43	4562.67	6.70
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	33460	0.1194	113.7282	31.09	13547.3002	3.26	1592.19	2.34
SERINE	45130	0.1858	176.9126	48.36	18591.7421	4.47	2476.78	3.64
GLUTAMIC ACID	51510	0.1906	181.5249	49.62	26707.7527	6.42	2541.35	3.73
PROLINE	10470	0.1865	177.5854	48.55	20445.4037	4.92	2486.20	3.65
GLYCINE	179400	0.6577	626.4234	171.25	47025.6016	11.31	8769.93	12.88
ALANINE	321900	1.1697	1113.9939	304.54	99245.7164	23.87	15595.91	22.90
CYSTINE (HALF)	0	0.	0.	1.34	591.7508	0.14	68.40	0.10
VALINE	42470	0.1482	141.1783	38.59	16539.0360	3.98	1976.50	2.90
METHIONINE	5047	0.0183	17.3997	4.76	2596.3804	0.62	243.60	0.36
ISOLEUCINE	11600	0.0407	38.7976	10.61	5089.4652	1.22	543.17	0.80
LEUCINE	28250	0.1008	95.9855	26.24	12591.3775	3.03	1343.80	1.97
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	36340	0.1208	115.0773	31.46	20850.8506	5.01	1611.08	2.37
PHENYLALANINE	17240	0.0617	58.7443	16.06	9703.9705	2.33	822.42	1.21
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	16010	0.0958	91.2484	24.94	13339.6002	3.21	2554.95	3.75
HISTIDINE	2885	0.0221	21.0868	5.76	3271.8353	0.79	885.65	1.30
ARGININE	47450	0.3754	357.5192	97.74	62283.4252	14.98	20021.08	29.40
TOTALS		3.8429	3659.9323	1000.00	415799.1992	100.00	68095.66	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	111400	0.7654	728.9257		30601.6128		10204.96	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	60090	0.3626	345.3743		5871.3[illegible]		4835.24	

TOTAL NITROGEN - MICROGRAMS 83135.86

RUN NUMBER 1313A/1310B
SAMPLE TEREBRATULINA SEPTEN.
LOCALITY CROWE NECK, N. TRESCOTT, MAINE
TYPE SHELL
FACTOR 6.660

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	5212	0.0213	0.1451	0.	0.	0.	0.	0.
TAURINE	4951	0.0191	0.1273	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	900	0.0038	0.0253	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	125200	0.4292	2.8585	97.08	380.4698	11.43	40.02	7.81
METHIONINE SULFONE	1100	0.0045	0.0302	0.	0.	0.	0.	0.
THREONINE	48600	0.1734	1.1552	39.23	137.5027	4.13	16.17	3.16
SERINE	75250	0.3097	2.0628	70.06	216.7830	6.51	28.88	5.64
GLUTAMIC ACID	91530	0.3367	2.2557	76.60	331.9740	9.97	31.58	6.16
PROLINE	9043	0.1611	1.0726	36.43	123.4882	3.71	15.02	2.93
GLYCINE	363500	1.3327	8.8759	301.43	666.3161	20.01	124.26	24.25
ALANINE	92100	0.3347	2.2289	75.69	198.5703	5.96	31.20	6.09
CYSTINE (HALF)	0	0.	0.	7.72	27.5207	0.83	3.18	0.62
VALINE	94140	0.3286	2.1884	74.32	256.3693	7.70	30.64	5.98
METHIONINE	13340	0.0483	0.3216	12.54	55.3181	1.66	5.17	1.01
ISOLEUCINE	46780	0.1643	1.0941	37.16	143.5286	4.31	15.32	2.99
LEUCINE	57770	0.2061	1.3726	46.62	180.0616	5.41	19.22	3.75
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	5291	0.0176	0.1172	3.98	21.2295	0.64	1.64	0.32
PHENYLALANINE	23820	0.0852	0.5676	19.28	93.7601	2.82	7.95	1.55
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	90	0.0006	0.0039	0.13	0.6406	0.02	0.11	0.02
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	62950	0.1373	0.9147	31.06	133.7205	4.02	25.61	5.00
HISTIDINE	151	0.0012	0.0077	0.26	1.1975	0.04	0.32	0.06
ARGININE	39350	0.3113	2.0733	70.41	361.1977	10.85	116.11	22.66
TOTALS		4.4293	29.4988	1000.00	3329.4484	100.00	512.40	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	2339	0.0161	0.1070	19.1760	1.50
GALACTOSAMINE	1197	0.0090	0.0600	10.7556	0.84
AMMONIA	122000	0.7363	4.9036	83.3605	68.65

TOTAL NITROGEN - MICROGRAMS 583.39

RUN NUMBER 1136A/11548
SAMPLE BUGULA SIMPLEX
LOCALITY WOODS HOLE
TYPE BRYOZOA CALCIUM CARBONATE
FACTOR 80.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1965	0.0054	0.6712	0.	0.	0.	0.	0.
TAURINE	1276	0.0052	0.4176	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	2483	0.1461	11.6847	13.05	1532.2155	1.41	163.59	1.03
ASPARTIC ACID	26040	1.1109	88.8748	99.25	11829.2361	10.87	1244.25	7.81
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	145200	0.5769	46.3158	51.72	5517.1368	5.07	648.42	4.07
SERINE	153100	0.6553	52.4227	58.54	5509.0973	5.06	733.92	4.61
GLUTAMIC ACID	300300	1.2373	99.0272	110.59	14569.8727	13.39	1386.38	8.70
PROLINE	40510	0.7549	60.3895	67.44	6952.6446	6.39	845.45	5.31
GLYCINE	452800	1.9625	157.0081	175.34	11785.6003	10.83	2198.11	13.80
ALANINE	253800	1.0601	84.8061	94.71	7555.3762	6.94	1187.29	7.45
CYSTINE (HALF)	37520	0.2719	21.7507	25.28	2741.6344	2.52	316.90	1.99
VALINE	109600	0.4160	33.2815	37.17	3898.9227	3.58	465.94	2.92
METHIONINE	41150	0.1657	13.2582	14.81	1978.3820	1.82	185.61	1.17
ISOLEUCINE	70760	0.2704	21.6350	24.16	2838.0804	2.61	302.89	1.90
LEUCINE	126200	0.4958	39.6621	44.29	5202.8807	4.78	555.27	3.49
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	65190	0.2726	21.8072	24.35	3951.2527	3.63	305.30	1.92
PHENYLALANINE	69660	0.2847	22.7740	25.43	3762.0385	3.46	316.84	2.00
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	3705	0.0179	1.4324	1.60	232.3131	0.21	40.11	0.25
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	112600	0.6338	50.7064	56.63	7412.7752	6.81	1419.78	8.91
HISTIDINE	30040	0.1629	13.0325	14.55	2022.1286	1.86	547.37	3.44
ARGININE	117990	0.6840	54.7200	61.11	9532.7712	8.76	3064.32	19.24
TOTALS		11.1960	895.6776	1000.00	108825.3582	100.00	15929.73	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	67370	0.3108	24.8655	4455.1540	348.12
GALACTOSAMINE	5465	0.0292	2.3324	417.8946	32.65
AMMONIA	205700	0.7036	56.2887	956.9078	788.04

TOTAL NITROGEN - MICROGRAMS 17098.54

RUN NUMBER 1404A/14558
SAMPLE PARISMITTINA TRISPINOSA
LOCALITY QUISSETT HOLE
TYPE BRYOZOA ARAGON.
FACTOR 25.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2054	0.0086	0.2147	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	68040	0.2333	5.8313	134.98	776.1505	14.67	81.64	10.83
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	30950	0.1105	2.7614	63.92	328.9404	6.22	38.66	5.13
SERINE	33740	0.1389	3.4719	80.36	364.8628	6.90	48.61	6.45
GLUTAMIC ACID	48600	0.1806	4.5143	104.49	664.1946	12.55	63.20	8.38
PROLINE	4788	0.0853	2.1318	49.34	245.4330	4.64	29.85	3.96
GLYCINE	56250	0.2429	6.0724	140.56	455.8559	8.62	85.01	11.27
ALANINE	44180	0.1605	4.0134	92.90	357.5578	6.76	56.19	7.45
CYSTINE (HALF)	0	0.	0.	3.56	18.6257	0.35	2.15	0.29
VALINE	25770	0.0899	2.2487	52.05	263.4342	4.98	31.48	4.18
METHIONINE	7212	0.0261	0.6527	15.11	97.3914	1.84	9.14	1.21
ISOLEUCINE	15690	0.0551	1.3775	31.89	180.7036	3.42	19.29	2.56
LEUCINE	32520	0.1160	2.9005	67.14	380.4828	7.19	40.61	5.39
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	10990	0.0365	0.9135	21.15	165.5260	3.13	12.79	1.70
PHENYLALANINE	11810	0.0423	1.0564	24.45	174.4986	3.30	14.79	1.96
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	10960	0.0656	1.6397	37.95	239.7131	4.53	45.91	6.09
HISTIDINE	7155	0.0549	1.3728	31.78	213.0026	4.03	57.66	7.65
ARGININE	10570	0.0836	2.0906	48.39	364.2009	6.88	117.07	15.53
TOTALS		1.7305	43.2637	1000.00	5290.5738	100.00	754.04	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	14570	0.1001	2.5026	448.3866	35.04
GALACTOSAMINE	2813	0.0212	0.5296	94.8805	7.41
AMMONIA	35565	0.2146	5.3659	91.2198	75.12

TOTAL NITROGEN - MICROGRAMS 871.61

RUN NUMBER 1135A/1133B
SAMPLE TUBULIPORA
LOCALITY WOODS HOLE
TYPE BRYOZOA CALCIUM CARBONATE
FACTOR 41.666

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3321	0.0142	0.5908	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	94600	0.3756	15.6495	118.42	2082.9500	12.86	219.09	9.82
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	49370	0.1969	8.2020	62.06	977.0169	6.03	114.83	5.15
SERINE	75670	0.3040	12.6672	95.85	1331.1961	8.22	177.34	7.95
GLUTAMIC ACID	70040	0.2867	12.0292	91.02	1769.8578	10.93	168.41	7.55
PROLINE	6180	0.1157	4.8220	36.49	555.1592	3.43	67.51	3.03
GLYCINE	102500	0.4167	17.3608	131.37	1303.2778	8.05	243.05	10.90
ALANINE	70030	0.2814	11.7254	88.73	1044.6174	6.45	164.16	7.36
CYSTINE (HALF)	9053	0.0656	2.7333	23.88	382.3147	2.36	44.19	1.98
VALINE	46660	0.1771	7.3795	55.84	864.5112	5.34	103.31	4.63
METHIONINE	14730	0.0593	2.4718	18.70	363.8373	2.28	34.60	1.55
ISOLEUCINE	32190	0.1230	5.1260	38.79	672.4340	4.15	71.76	3.22
LEUCINE	56890	0.2235	9.3120	70.46	1221.5529	7.54	130.37	5.85
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	18330	0.0756	3.1936	24.17	578.6395	3.57	44.71	2.00
PHENYLALANINE	26010	0.1063	4.4288	33.51	731.5970	4.52	62.00	2.78
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	1934	0.0093	0.3891	2.94	63.1077	0.39	10.89	0.49
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	31020	0.1746	7.2754	55.05	1063.5944	6.57	203.71	9.13
HISTIDINE	6241	0.0338	1.4102	10.67	218.8038	1.35	59.23	2.66
ARGININE	23000	0.1333	5.5555	42.04	967.8178	5.98	311.11	13.95
TOTALS		3.1758	132.3222	1000.00	16197.2856	100.00	2230.28	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	14430	0.0666	2.7739	496.9976	38.83	
GALACTOSAMINE	5671	0.0302	1.2599	225.7302	17.64	
AMMONIA	133900	0.4560	19.0836	324.4204	267.17	

TOTAL NITROGEN - MICROGRAMS 2553.92

RUN NUMBER 1111A/1155B
SAMPLE CHAETAPLEURA APICULATA
LOCALITY WOODS HOLE
TYPE SHELL
FACTOR 10.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	8940	0.0362	0.3817	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	100	0.0004	0.0045	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	61000	0.2417	2.4168	127.74	321.6759	13.75	33.84	10.24
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	28580	0.1140	1.1396	60.23	135.7436	5.80	15.95	4.83
SERINE	32060	0.1288	1.2881	68.08	135.3530	5.79	18.03	5.46
GLUTAMIC ACID	46060	0.1857	1.8574	98.17	273.2761	11.68	26.00	7.87
PROLINE	9418	0.1764	1.7637	93.22	203.0514	8.68	24.69	7.47
GLYCINE	61150	0.2486	2.4858	131.39	186.6069	7.98	34.80	10.53
ALANINE	41280	0.1659	1.6588	87.68	147.7852	6.32	23.22	7.03
CYSTINE [HALF]	0	0.	0.	14.45	33.1125	1.42	3.83	1.16
VALINE	22330	0.0848	0.8476	44.80	99.2962	4.24	11.87	3.59
METHIONINE	5315	0.0214	0.2141	11.53	32.5472	1.39	3.05	0.92
ISOLEUCINE	14720	0.0563	0.5626	29.74	73.7997	3.15	7.88	2.38
LEUCINE	25230	0.0991	0.9912	52.39	130.0205	5.56	13.88	4.20
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	13810	0.0577	0.5775	30.52	104.6303	4.47	8.08	2.45
PHENYLALANINE	16900	0.0691	0.6906	36.50	114.0871	4.88	9.67	2.93
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	13710	0.0772	0.7717	40.79	112.8210	4.82	21.61	6.54
HISTIDINE	4000	0.0217	0.2169	11.47	33.6573	1.44	9.11	2.76
ARGININE	20000	0.1159	1.1594	61.28	201.9826	8.63	64.93	19.65
TOTALS		1.9028	19.0279	1000.00	2339.4566	100.00	330.44	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	299800	1.3364	13.3839	2397.9985	187.37	
GALACTOSAMINE	2600	0.0124	0.1238	22.1830	1.73	
AMMONIA	150400	0.5145	5.1445	87.4568	72.02	

TOTAL NITROGEN - MICROGRAMS 591.57

RUN NUMBER 1067A/1066B
SAMPLE CHAETAPLEURA APICULATA
LOCALITY WOODS HOLE
TYPE MANTLE
FACTOR 1333.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1000	0.0043	5.6931	0.	0.	0.	0.	0.
TAURINE	1500	0.0061	8.1816	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	3300	0.1941	258.8229	57.85	33939.4444	6.74	3623.52	4.72
ASPARTIC ACID	42700	0.1692	225.5673	50.42	30023.0099	5.96	3157.94	4.12
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	17670	0.0705	93.9392	21.00	11191.0326	2.22	1315.15	1.71
SERINE	28830	0.1158	154.4391	34.52	16231.0100	3.22	2162.15	2.82
GLUTAMIC ACID	56250	0.2319	309.1501	69.10	45485.2530	9.04	4328.10	5.64
PROLINE	17790	0.3331	444.1936	99.29	51140.0143	10.16	6218.71	8.10
GLYCINE	218000	0.8862	1181.5689	264.10	88700.3743	17.62	16541.96	21.56
ALANINE	113300	0.4553	607.0576	135.69	54082.7633	10.74	8498.81	11.08
CYSTINE (HALF)	0	0.	0.	2.68	1453.1311	0.29	167.96	0.22
VALINE	42060	0.1597	212.8672	47.58	24937.3906	4.95	2980.14	3.88
METHIONINE	6030	0.0243	32.4123	7.24	4836.5669	0.96	453.77	0.59
ISOLEUCINE	24280	0.0928	123.7273	27.56	16230.5493	3.22	1732.18	2.26
LEUCINE	95710	0.2189	291.8083	65.23	38279.4186	7.60	4085.32	5.32
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	500	0.0021	2.7876	0.62	505.0932	0.10	39.03	0.05
PHENYLALANINE	15320	0.0626	83.4762	18.66	13789.4263	2.74	1168.67	1.52
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	2600	0.0126	16.7391	3.74	2714.9071	0.54	468.69	0.61
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	18460	0.1039	138.5492	30.97	20254.5128	4.02	3879.38	5.06
HISTIDINE	300	0.0016	2.1692	0.48	336.5718	0.07	91.11	0.12
ARGININE	36560	0.2119	282.5887	63.16	49229.7712	9.78	15824.97	20.62
TOTALS		3.3568	4475.7385	1000.00	503358.2378	100.00	76737.55	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	6700	0.0309	41.2148		7384.4582		577.01	
GALACTOSAMINE	2800	0.0149	19.9058		3566.5138		278.68	
AMMONIA	104000	0.6294	839.1747		14265.9697		11748.45	

TOTAL NITROGEN - MICROGRAMS 89341.69

RUN NUMBER 1305A/1308B
SAMPLE NEOPILINA GALATHEAE
LOCALITY CAPE SAN LUCAS, MEXICO-BAJA, CALIFORNIA
TYPE SHELL WITH PERIOSTRACUM
FACTOR 33.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1650	0.0069	0.2300	0.	0.	0.	0.	0.
TAURINE	1050	0.0041	0.1351	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	1531	0.0065	0.2158	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	78790	0.2701	9.0026	61.37	1198.2517	7.51	126.04	5.21
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	28360	0.1012	3.3734	23.00	401.8446	2.52	47.23	1.95
SERINE	62690	0.2580	8.6004	58.63	903.8119	5.66	120.41	4.98
GLUTAMIC ACID	45920	0.1699	5.6633	38.61	833.2450	5.22	79.29	3.28
PROLINE	14620	0.2604	8.6783	59.16	999.1287	6.26	121.50	5.02
GLYCINE	450800	1.5528	55.0877	375.52	4135.4319	25.92	771.23	31.88
ALANINE	61060	0.2219	7.3951	50.41	658.8289	4.13	103.53	4.28
CYSTINE (HALF)	0	0.	0.	2.01	35.7935	0.22	4.14	0.17
VALINE	93600	0.3267	10.8890	74.23	1275.6421	7.99	152.45	6.30
METHIONINE	16940	0.0613	2.0438	15.26	334.0599	2.09	31.34	1.30
ISOLEUCINE	51990	0.1826	6.0854	41.48	798.2869	5.00	85.20	3.52
LEUCINE	121200	0.4324	14.4117	98.24	1890.5252	11.85	201.76	8.34
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1300	0.0043	0.1441	0.98	26.1040	0.16	2.02	0.08
PHENYLALANINE	36000	0.1268	4.2930	29.26	709.1527	4.44	60.10	2.48
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	220	0.0014	0.0483	0.33	7.8371	0.05	1.35	0.06
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	11870	0.0710	2.3676	16.14	346.1204	2.17	66.29	2.74
HISTIDINE	2781	0.0213	0.7114	4.85	110.3752	0.69	29.88	1.24
ARGININE	28110	0.2224	7.4122	50.53	1291.2852	8.09	415.09	17.16
TOTALS		4.4041	146.7881	1000.00	15955.7247	100.00	2418.82	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	2105	0.0145	0.4820	86.3655	6.75
GALACTOSAMINE	314	0.0024	0.0788	14.1199	1.10
AMMONIA	137800	0.8316	27.7180	471.2061	388.05

TOTAL NITROGEN - MICROGRAMS 2814.73

RUN NUMBER 1257A/1253B
SAMPLE ARGONAUTA HIANS
LOCALITY TROPICAL ATLANTIC
TYPE SHELL
FACTOR 33.330

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	23330	0.0976	3.2515	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	345000	1.1827	39.4201	125.05	5246.8184	14.08	551.88	11.16
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	175500	0.6263	20.8759	66.22	2486.7320	6.67	292.26	5.91
SERINE	382600	1.5748	52.4884	166.51	5516.0065	14.80	734.84	14.86
GLUTAMIC ACID	178500	0.6605	22.0144	69.84	3238.9860	8.69	308.20	6.23
PROLINE	9567	0.1757	5.8569	18.58	674.3094	1.81	82.00	1.66
GLYCINE	492800	1.8068	60.2201	191.03	4520.7206	12.13	843.08	17.05
ALANINE	84060	0.3055	10.1807	32.30	906.9957	2.43	142.53	2.88
CYSTINE (HALF)	97380	0.6496	21.6523	76.07	2904.5699	7.80	335.73	6.79
VALINE	124400	0.4342	14.4721	45.91	1695.4046	4.55	202.61	4.10
METHIONINE	14050	0.0509	1.6952	5.38	252.9510	0.68	23.73	0.48
ISOLEUCINE	134300	0.4716	15.7198	49.87	2062.1261	5.53	220.08	4.45
LEUCINE	38330	0.1367	4.5578	14.46	597.8864	1.60	63.81	1.29
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	81680	0.2716	9.0520	28.72	1640.1351	4.40	126.73	2.56
PHENYLALANINE	102500	0.3667	12.2230	38.77	2019.1153	5.42	171.12	3.46
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	3281	0.0216	0.7206	2.29	116.8791	0.31	20.18	0.41
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	61670	0.3703	12.3407	39.15	1804.0835	4.84	345.54	6.99
HISTIDINE	13020	0.0999	3.3304	10.56	516.7514	1.39	139.88	2.83
ARGININE	23080	0.1826	6.0859	19.31	1060.2228	2.85	340.81	6.89
TOTALS		9.4857	316.1577	1000.00	37260.6934	100.00	4945.01	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	1940	0.0133	0.4442		79.5958		6.22	
GALACTOSAMINE	5883	0.0443	1.4765		264.5461		20.67	
AMMONIA	165600	0.9994	33.3099		566.2680		466.34	
				TOTAL NITROGEN - MICROGRAMS			5438.24	

RUN NUMBER [illegible]
SAMPLE [illegible]
LOCALITY [illegible]
TYPE [illegible]
FACTOR [illegible]

AC[illegible]	[illegible]	MICROMOLES	MICROMOLES PER GRAM	RES PER [illegible]	[illegible]	[illegible]	NITROGEN MICROGRAMS	[illegible]
CYSTEIC ACID		[illegible]	[illegible]					
TAURINE		[illegible]	[illegible]					
METHIONINE [illegible]		[illegible]						
OH - PROLI[illegible]		[illegible]						
ASPARTIC ACID		[illegible]	[illegible]			25	[illegible]	[illegible]
METHIONINE [illegible]		[illegible]						
THREONINE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
SERINE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
GLUTAMIC ACID		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
PROLINE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GLYCINE		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ALANINE		[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
CYSTINE [illegible]		[illegible]			[illegible]	[illegible]	[illegible]	
VALINE	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
METHIONINE	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	
I[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]		[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	
DOPA		[illegible]			[illegible]			
TYROSINE		[illegible]	[illegible]	[illegible]	[illegible] 40	[illegible]	[illegible]	[illegible]
PHENYLALANINE		[illegible]	[illegible]		[illegible] 60	[illegible]	[illegible]	[illegible]
BETA - ALANINE		[illegible]			[illegible]			
OH - LYSINE		[illegible]	[illegible]		[illegible] 20	[illegible]	[illegible]	
ORNITHINE		[illegible]					0.	0.
LYSINE		[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
HISTIDINE	[illegible]	0.0468	31.2826	[illegible]	[illegible]	1.01	1313.[illegible]	2.09
ARGININE	[illegible]	0.0490	31.4060	[illegible]	[illegible]	1.13	1758.[illegible]	2.79
TOTALS		6.3182	4049.9570	100[illegible]	[illegible]	100.00	62926.30	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	[illegible]	2.1392	1371.2027	[illegible]	19196.84
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	[illegible]	0.1792	114.8539	[illegible]	1607.95

TOTAL NITROGEN - [illegible]ROGRAMS 83731.09

RUN NUMBER 1170A/1166B
SAMPLE NAUTILUS POMPILIUS
LOCALITY S.W. PACIFIC OCEAN
TYPE SHELL
FACTOR 20.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2626	0.0127	0.2539	0.	0.	0.	0.	0.
TAURINE	1130	0.0051	0.1029	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	190100	0.8143	16.2861	83.15	2167.6856	10.67	228.01	7.65
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	28940	0.1342	2.6834	13.70	319.6414	1.57	37.57	1.26
SERINE	234800	1.0744	21.4871	109.70	2258.0766	11.12	300.82	10.10
GLUTAMIC ACID	103500	0.4776	9.5524	48.77	1405.4412	6.92	133.73	4.49
PROLINE	3048	0.0802	1.6038	8.19	184.6442	0.91	22.45	0.75
GLYCINE	202212	3.3121	66.2412	338.20	4972.7244	24.48	927.38	31.12
ALANINE	17612	2.2622	45.2432	230.99	4030.7135	19.84	633.40	21.26
CYSTINE (HALF)	10000	0.0758	1.5163	9.18	217.7429	1.07	25.17	0.84
VALINE	38430	0.1580	3.1597	16.13	370.1603	1.82	44.24	1.48
METHIONINE	9703	0.0417	0.8348	4.26	124.5756	0.61	11.69	0.39
ISOLEUCINE	34320	0.1507	3.0145	15.39	395.4412	1.95	42.20	1.42
LEUCINE	55520	0.2483	4.9660	25.35	651.4413	3.21	69.52	2.33
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	27440	0.1191	2.3819	12.16	431.5845	2.12	33.35	1.12
PHENYLALANINE	124400	0.5288	10.5760	54.00	1747.0466	8.60	148.06	4.97
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	800	0.0039	0.0773	0.39	12.5425	0.06	2.17	0.07
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5104	0.0229	0.4586	2.34	67.0399	0.33	12.84	0.43
HISTIDINE	700	0.0042	0.0834	0.43	12.9416	0.06	3.50	0.12
ARGININE	42000	0.2710	5.4194	27.67	944.1058	4.65	303.48	10.19
TOTALS		9.7971	195.9418	1000.00	20313.5488	100.00	2979.58	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	34290	0.1854	3.7080		664.3676		51.91	
GALACTOSAMINE	1200	0.0067	0.1331		23.8430		1.86	
AMMONIA	148500	0.4054	8.1070		137.8190		113.50	

TOTAL NITROGEN - MICROGRAMS 3146.86

RUN NUMBER 1180A/1182B
SAMPLE NAUTILUS POMPILIUS
LOCALITY S.W. PACIFIC OCEAN
TYPE PERIOSTRACUM
FACTOR 769.230

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1826	0.0088	6.7905	0.	0.	0.	0.	0.
TAURINE	7672	0.0349	26.8679	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	1500	0.0862	67.8732	65.46	8900.2173	7.01	950.23	5.84
ASPARTIC ACID	70560	0.3022	232.4989	224.22	30945.6038	24.38	3254.98	19.99
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	13810	0.0640	49.2493	47.50	5866.5723	4.62	689.49	4.24
SERINE	19860	0.0909	69.9012	67.41	7345.9173	5.79	978.62	6.01
GLUTAMIC ACID	29520	0.1362	104.7885	101.06	15417.5331	12.15	1467.04	9.01
PROLINE	3800	0.1000	76.9028	74.16	8853.8150	6.98	1076.64	6.61
GLYCINE	38920	0.1774	136.4870	131.63	10246.0818	8.07	1910.82	11.74
ALANINE	14770	0.0617	47.4286	45.74	4225.4162	3.33	664.00	4.08
CYSTINE (HALF)	1526	0.0116	8.8995	38.36	4417.1742	3.80	556.81	3.42
VALINE	15990	0.0657	50.5652	48.76	5923.7145	4.67	707.91	4.35
METHIONINE	800	0.0034	2.6474	2.55	385.0424	0.31	37.06	0.23
ISOLEUCINE	8661	0.0380	29.2591	28.22	3838.2110	3.02	409.63	2.52
LEUCINE	12480	0.0558	42.9338	41.40	5632.0516	4.44	601.07	3.69
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	3673	0.0168	12.9307	12.47	2342.9092	1.85	181.03	1.11
PHENYLALANINE	6152	0.0262	20.1161	19.40	3322.9718	2.62	281.62	1.73
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5047	0.0227	17.4407	16.82	2549.6585	2.01	488.34	3.00
HISTIDINE	0	0.	0.	0.	0.	0.	0.	0.
ARGININE	7282	0.0470	36.1389	34.85	6295.7615	4.96	2023.78	12.43
TOTALS		1.3516	1039.7193	1000.00	126918.6510	100.00	16279.07	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	7495	0.0405	31.1726		5585.2010		436.42	
GALACTOSAMINE	3179	0.0176	13.5591		2429.3824		189.83	
AMMONIA	119400	0.3259	250.7058		4261.9982		3509.88	

TOTAL NITROGEN - MICROGRAMS 20415.20

RUN NUMBER 11904/11888
SAMPLE NAUTILUS
LOCALITY S.W. PACIFIC OCEAN
TYPE INNER MANTLE
FACTOR 1000.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	5500	0.0266	26.5893	0.	0.	0.	0.	0.
TAURINE	3760	0.0171	17.1181	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	4929	0.0242	24.1677	0.	0.	0.	0.	0.
OH - PROLINE	6000	0.3529	352.9412	53.62	46281.1763	5.78	4941.18	4.54
ASPARTIC ACID	133600	0.5723	572.2853	87.27	76171.1713	9.52	8011.99	7.35
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	79560	0.3668	368.8456	56.24	43936.8900	5.49	5163.84	4.74
SERINE	95910	0.4388	438.8469	66.92	46118.4254	5.76	6143.86	5.64
GLUTAMIC ACID	167500	0.7730	772.9580	117.87	113725.3109	14.21	10821.41	9.93
PROLINE	16930	0.4454	445.4091	67.92	51279.9499	6.41	6235.73	5.72
GLYCINE	238400	1.0868	1086.8475	165.73	81589.6418	10.20	15215.87	13.97
ALANINE	97750	0.4081	408.0568	62.22	36353.7778	4.54	5712.79	5.24
CYSTINE (HALF)	8679	0.0673	67.3161	15.70	12466.8887	1.56	1441.02	1.32
VALINE	67690	0.2783	278.2734	42.43	32509.7265	4.07	3895.83	3.58
METHIONINE	20550	0.0884	88.4061	16.81	16449.0255	2.06	1543.27	1.42
ISOLEUCINE	66270	0.2910	291.0408	44.38	38178.7377	4.77	4074.57	3.74
LEUCINE	103700	0.4638	463.7746	70.72	60837.9515	7.60	6492.84	5.96
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	29910	0.1298	129.8177	19.80	23521.6705	2.94	1817.45	1.67
PHENYLALANINE	43650	0.1855	185.5473	28.29	30650.5568	3.83	2597.66	2.38
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	4000	0.0193	19.3330	2.95	3135.6211	0.39	541.32	0.50
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	40520	0.1820	182.0305	27.76	26611.0457	3.33	5096.86	4.68
HISTIDINE	4033	0.0240	24.0274	3.66	3728.0922	0.47	1009.15	0.93
ARGININE	50320	0.3246	324.6452	49.50	56556.4333	7.07	18180.13	16.69
TOTALS		6.5663	6568.2777	1000.00	800192.0869	100.00	108936.77	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	72350	0.3912	391.1868	70088.9401	5476.62	
GALACTOSAMINE	5000	0.0277	27.7239	4967.2858	388.13	
AMMONIA	246200	0.6720	672.0349	11424.5939	9408.49	

TOTAL NITROGEN - MICROGRAMS 124210.00

RUN NUMBER 1179A/1177B
SAMPLE NAUTILUS POMPILIUS
LOCALITY S.W. PACIFIC OCEAN
TYPE MANTLE
FACTOR 666.660

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESIDUES	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	0	0.	0.	0.	[illegible]	0.	0.	0.
TAURINE	0	0.	0.	0.	[illegible]	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	[illegible]	[illegible]	0.	0.
OH - PROLINE	8160	0.4800	319.9968	48.1[illegible]	[illegible]	[illegible]	4479.96	4.03
ASPARTIC ACID	180200	0.7719	514.5947	77.42	[illegible]	6.63	7204.33	6.49
METHIONINE SULFONE	0	0.	0.	0.	[illegible]	0.	0.	0.
THREONINE	105400	0.4866	325.7578	49.01	[illegible]	4.89	4560.61	4.11
SERINE	141200	0.6461	430.7133	64.80	[illegible]	5.71	6029.99	5.43
GLUTAMIC ACID	261000	1.2044	802.9454	120.80	[illegible]	14.89	11241.24	10.12
PROLINE	80280	0.7966	531.0830	79.90	[illegible]	7.71	7435.16	6.69
GLYCINE	449300	2.0453	1365.5361	205.49	[illegible]	12.92	19117.51	17.21
ALANINE	158000	0.6596	439.7090	66.15	[illegible]	4.94	6155.93	5.54
CYSTINE (HALF)	12590	0.0955	63.6334	9.57	[illegible]	0.97	890.87	0.80
VALINE	94690	0.3893	259.5109	39.04	[illegible]	3.83	3633.15	3.27
METHIONINE	35720	0.1537	102.4439	15.41	[illegible]	1.93	1434.22	1.29
ISOLEUCINE	87750	0.3854	256.9144	38.65	[illegible]	3.25	3596.80	3.24
LEUCINE	144400	0.6458	430.5264	64.77	[illegible]	6.12	6027.37	5.43
NORVA	0	0.	0.	0.	[illegible]	0.	0.	0.
TYROSINE	34280	0.1468	99.1888	14.92	[illegible]	2.27	1388.64	1.25
PHENYLALANINE	52320	0.2224	148.2663	22.31	[illegible]	3.09	2075.73	1.87
OH - ALANINE	0	0.	0.	0.	[illegible]	0.	0.	0.
OH - LYSINE	11130	0.0538	35.8624	5.40	[illegible]	0.73	1004.15	0.90
NORLEUCINE	0	0.	0.	0.	[illegible]	0.	0.	0.
LYSINE	42930	0.1911	127.3722	19.16	[illegible]	2.35	3566.42	3.21
HISTIDINE	13790	0.0822	54.7706	8.24	[illegible]	1.07	2300.36	2.07
ARGININE	78560	0.5068	337.8891	50.84	[illegible]	7.42	18921.79	17.04
TOTALS		9.9702	6646.7145	1000.00	[illegible]	100.00	111064.20	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	7552	0.0408	27.2215	4677.276[illegible]	381.10
GALACTOSAMINE	7030	0.0390	25.9862	4655.956[illegible]	363.81
AMMONIA	240300	0.6559	437.2824	7433.6[illegible]	6121.95

TOTAL NITROGEN - MIC[illegible] 117931.07

RUN NUMBER 1181A/1186B
SAMPLE SEPIA
LOCALITY NORTH SEA
TYPE CUTTLE BONE
FACTOR 16.666

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2552	0.0123	0.2056	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	140600	0.6023	10.0374	116.35	1335.9828	12.67	140.52	9.70
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	48500	0.2248	3.7473	43.44	446.3830	4.23	52.46	3.62
SERINE	110500	0.5056	8.4264	97.68	885.5319	8.40	117.97	8.14
GLUTAMIC ACID	81840	0.3777	6.2942	72.96	926.0604	8.78	88.12	6.08
PROLINE	21020	0.5530	9.2165	106.84	1061.0961	10.06	129.03	8.91
GLYCINE	136000	0.6200	10.3331	119.78	775.7094	7.36	144.66	9.99
ALANINE	131900	0.5506	9.1766	106.37	817.5399	7.75	128.47	8.87
CYSTINE (HALF)	17910	0.1358	2.2630	27.94	291.9291	2.77	33.74	2.33
VALINE	50510	0.2076	3.4606	40.12	405.4135	3.84	48.45	3.34
METHIONINE	12010	0.0517	0.8611	9.98	128.4908	1.22	12.06	0.83
ISOLEUCINE	23750	0.1043	1.7383	20.15	228.0340	2.16	24.34	1.68
LEUCINE	58550	0.2619	4.3640	50.59	572.4718	5.43	61.10	4.22
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	71070	0.3085	5.1409	59.59	931.4712	8.83	71.97	4.97
PHENYLALANINE	24960	0.1061	1.7683	20.50	292.0990	2.77	24.76	1.71
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	43370	0.1948	3.2471	37.64	474.6935	4.50	90.92	6.28
HISTIDINE	42190	0.2514	4.1891	48.56	649.9790	6.16	175.94	12.15
ARGININE	17260	0.1114	1.8558	21.51	323.3058	3.07	103.93	7.18
TOTALS		5.1797	86.3254	1000.00	10546.1912	100.00	1448.44	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	475400	1.9016	31.6921	5678.2674	443.69
GALACTOSAMINE	4000	0.0191	0.3183	57.0264	4.46
AMMONIA	137800	0.3761	6.2688	106.5696	87.76

TOTAL NITROGEN - MICROGRAMS 1984.35

RUN NUMBER 1103A/1104B
SAMPLE SEPIA
LOCALITY NORTH SEA
TYPE SKIN ON CUTTLE BONE
FACTOR 400.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	0	0.	0.	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	15790	0.0626	25.0238	119.74	3330.6640	13.49	350.33	11.27
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	17040	0.0679	27.1770	130.05	3237.3282	13.11	380.48	12.24
SERINE	12930	0.0519	20.7794	99.43	2183.7102	8.84	290.91	9.36
GLUTAMIC ACID	12490	0.0515	20.5936	98.54	3029.9319	12.27	288.31	9.28
PROLINE	1500	0.0281	11.2360	53.77	1293.5955	5.24	157.30	5.06
GLYCINE	14330	0.0583	23.3008	111.50	1749.1920	7.08	326.21	10.50
ALANINE	14230	0.0572	22.8732	109.45	2037.7749	8.25	320.23	10.30
CYSTINE [HALF]	3217	0.0233	9.3246	44.62	1129.4001	4.57	130.54	4.20
VALINE	8421	0.0320	12.7857	61.18	1497.8480	6.07	179.00	5.76
METHIONINE	2541	0.0094	3.7712	18.05	562.7451	2.28	52.80	1.70
ISOLEUCINE	4462	0.0171	6.8213	32.64	694.8216	3.62	95.50	3.07
LEUCINE	5724	0.0225	8.9947	43.04	1179.9243	4.78	125.93	4.05
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	1500	0.0063	2.5089	12.01	454.5850	1.84	35.12	1.13
PHENYLALANINE	2000	0.0082	3.2693	15.64	540.0572	2.19	45.77	1.47
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	3882	0.0219	8.7408	41.83	1277.8150	5.18	244.74	7.88
HISTIDINE	500	0.0027	1.0846	5.19	168.2863	0.68	45.55	1.47
ARGININE	300	0.0017	0.6957	3.33	121.1896	0.49	38.96	1.25
TOTALS		0.5225	208.9806	1000.00	24688.8687	100.00	3107.69	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	162024	5.5852	2234.0946	00282.7251	31277.32
GALACTOSAMINE	35560	0.1896	75.8411	13588.4515	1061.78
AMMONIA	136400	0.4666	186.6256	3172.6355	2612.76

TOTAL NITROGEN - MICROGRAMS 38059.54

RUN NUMBER 1175A/1160b
SAMPLE SPIRULA SPIRULA
LOCALITY ST. KITTS ISLANDS, BRITISH W. I.
TYPE SHELL
FACTOR 20.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	9851	0.0476	0.9525	0.	0.	0.	0.	0.
TAURINE	5471	0.0249	0.4982	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	202200	0.8661	17.3228	129.79	2305.6603	13.89	242.52	10.42
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	82040	0.3803	7.6069	56.99	906.1293	5.46	106.50	4.58
SERINE	209800	0.9600	19.1993	143.85	2017.6511	12.15	268.79	11.55
GLUTAMIC ACID	168900	0.7794	15.5884	116.79	2293.5170	13.82	218.24	9.38
PROLINE	18070	0.4754	9.5080	71.24	1094.6588	6.59	133.11	5.72
GLYCINE	150500	0.6861	13.7224	102.81	1030.1377	6.21	192.11	8.26
ALANINE	105500	0.4404	8.8082	65.99	784.7209	4.73	123.31	5.30
CYSTINE (HALF)	19650	0.1490	2.9795	31.05	501.9110	3.02	58.01	2.49
VALINE	63920	0.2628	5.2555	39.38	615.6816	3.71	73.58	3.16
METHIONINE	15990	0.0688	1.3758	10.31	205.2939	1.24	19.26	0.83
ISOLEUCINE	38450	0.1689	3.3773	25.30	443.0278	2.67	47.28	2.03
LEUCINE	63600	0.2844	5.6887	42.62	746.2476	4.50	79.64	3.42
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	38420	0.1668	3.3351	24.99	604.2812	3.64	46.69	2.01
PHENYLALANINE	43000	0.1828	3.6557	27.39	603.8827	3.64	51.18	2.20
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	16620	0.0803	1.6066	12.04	260.5701	1.57	44.98	1.93
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	45740	0.2055	4.1096	30.79	600.7844	3.62	115.07	4.95
HISTIDINE	4165	0.0248	0.4963	3.72	77.0023	0.46	20.84	0.90
ARGININE	67180	0.4334	8.6684	64.95	1510.1197	9.10	485.43	20.86
TOTALS		6.6877	133.7549	1000.00	16601.2773	100.00	2326.56	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	176612	2.8036	56.0720	10046.4202	785.01
GALACTOSAMINE	700	0.0033	0.0668	11.9760	0.94
AMMONIA	310500	0.8476	16.9510	288.1671	237.31

TOTAL NITROGEN - MICROGRAMS 3349.81

RUN NUMBER 1197A/1200B
SAMPLE DENTALIUM ENTALE
LOCALITY DELAWARE CRUISE
TYPE MANTLE
FACTOR 1176.470

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	200	0.0010	1.1375	0.	[illegible]	0.	0.	0.
TAURINE	800	0.0036	4.2849	0.	[illegible]	0.	0.	0.
METHIONINE SULFOXIDES	800	0.0039	4.6147	0.	[illegible]	0.	0.	0.
GH - PROLINE	1051	0.0624	73.4256	12.33	[illegible]	1.31	1027.96	1.00
ASPARTIC ACID	120500	0.5162	607.2591	101.96	[illegible]	11.02	8501.63	8.29
METHIONINE SULFONE	0	0.	0.	0.	[illegible]	0.	0.	0.
THREONINE	64970	0.3012	354.3591	59.50	[illegible]	5.75	4961.03	4.84
SERINE	76790	0.3514	413.3660	69.40	[illegible]	5.92	5787.12	5.64
GLUTAMIC ACID	105900	0.7194	846.3852	142.11	[illegible]	16.97	11849.39	11.55
PROLINE	12130	0.3191	375.4428	63.04	[illegible]	5.89	5256.20	5.12
GLYCINE	149400	0.6811	801.2976	134.54	[illegible]	8.20	11218.17	10.93
ALANINE	69470	0.3735	439.4021	73.77	[illegible]	5.34	6151.63	6.00
CYSTINE (HALF)	3850	0.0295	34.6787	6.06	[illegible]	0.25	554.98	0.54
VALINE	67640	0.2781	327.1385	54.93	[illegible]	5.22	4579.94	4.46
METHIONINE	26220	0.1168	137.7040	22.91	[illegible]	1.78	1916.21	1.87
ISOLEUCINE	57900	0.2543	299.1551	50.23	[illegible]	3.35	4188.17	4.08
LEUCINE	1[illegible]500	0.4495	528.7801	88.78	[illegible]	4.45	7402.92	7.22
HCYS	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	212	0.0009	1.0825	0.18	[illegible]	0.03	15.16	0.01
PHENYLALANINE	29260	0.1244	146.3274	24.57	[illegible]	2.29	2048.58	2.00
BETA - ALANINE	0	0.	0.	0.	[illegible]	0.	0.	0.
GH - LYSINE	210	0.0010	1.2225	0.21	[illegible]	0.03	34.23	0.03
HYDROXYLYSINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	28230	0.1202	150.7848	25.32	[illegible]	3.00	4221.97	4.11
HISTIDINE	3060	0.0182	21.4477	3.60	[illegible]	0.45	900.80	0.88
ARGININE	91730	0.3337	392.6374	65.92	[illegible]	9.32	21987.69	21.43
TOTALS		5.0634	5956.9330	1000.00	[illegible]	100.00	102603.78	100.00
UREA	0	0.	0.				0.	
GLUCOSAMINE	510	0.0028	3.2441				45.42	
GALACTOSAMINE	534	0.0019	2.1788				30.50	
AMMONIA	137800	0.3761	442.5210				6195.29	
			TOTAL NITROGEN -				108874.99	

RUN NUMBER 1448A/1454B
SAMPLE CALLINECTES SAPIDUS
LOCALITY WOODS HOLE
TYPE 1A-%101 PLEOPOD
FACTOR 740.600

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER 3RAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	1589	0.0066	4.9208	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	78910	0.2705	200.3454	79.34	26665.9694	8.62	2804.84	6.07
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	53900	0.1924	142.4637	56.41	16970.2807	5.48	1994.49	4.31
SERINE	93400	0.3844	284.7172	112.75	29923.9288	9.67	3986.04	8.62
GLUTAMIC ACID	65890	0.2438	180.5666	71.50	26566.7694	8.58	2527.93	5.47
PROLINE	17230	0.3069	227.2580	89.99	26164.2161	8.45	3181.61	6.88
GLYCINE	118300	0.4337	321.2208	127.20	24114.0472	7.79	4497.09	9.73
ALANINE	97660	0.3549	262.8161	104.07	23414.2879	7.57	3679.43	7.96
CYSTINE (HALF)	0	0.	0.	1.40	426.8535	0.14	49.34	0.11
VALINE	58180	0.2031	150.3948	59.56	17618.7498	5.69	2105.53	4.55
METHIONINE	4962	0.0180	13.3027	5.27	1985.0215	0.64	186.24	0.40
ISOLEUCINE	24030	0.0844	62.4991	24.75	8198.6316	2.65	874.99	1.89
LEUCINE	36810	0.1313	97.2582	38.51	12758.3365	4.12	1361.62	2.95
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	36250	0.1205	89.2660	35.35	16174.1068	5.23	1249.72	2.70
PHENYLALANINE	36470	0.1305	96.6357	38.27	15953.2535	5.16	1352.90	2.93
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	3783	0.0249	18.4625	7.31	2994.4387	0.97	516.95	1.12
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	27670	0.1656	122.6356	48.56	17928.0924	5.79	3433.80	7.43
HISTIDINE	21120	0.1621	120.0420	47.54	18625.7159	6.02	5041.76	10.91
ARGININE	22510	0.1781	131.8901	52.23	22976.5706	7.42	7385.84	15.98
TOTALS		3.4117	2526.6954	1000.00	309466.2681	100.00	46230.12	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	353704	2.4301	1799.7470	322460.6768	25196.46
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	98830	0.5964	441.7230	7509.2907	6184.12

TOTAL NITROGEN - MICROGRAMS 77610.70

RUN NUMBER 1471A/1467B
SAMPLE CALLINECTES SAPIDUS
LOCALITY WOODS HOLE
TYPE 1B-CUTICLE
FACTOR 55.478

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4769	0.0199	1.1063	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	123400	0.4230	23.4693	72.22	3123.7594	7.99	328.57	5.91
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	105100	0.3751	20.8092	64.03	2478.7919	6.34	291.33	5.24
SERINE	137100	0.5643	31.3070	96.34	3290.0518	8.42	438.30	7.88
GLUTAMIC ACID	134200	0.4966	27.5491	84.77	4053.3009	10.37	385.69	6.94
PROLINE	42270	0.7528	41.7641	128.51	4808.3825	12.30	584.70	10.51
GLYCINE	184300	0.6757	37.4871	115.35	2814.1535	7.20	524.82	9.44
ALANINE	211800	0.7696	42.6971	131.38	3803.3841	9.73	597.76	10.75
CYSTINE (HALF)	0	0.	0.	2.44	95.9664	0.25	11.09	0.20
VALINE	113200	0.3951	21.9201	67.45	2567.9401	6.57	306.88	5.52
METHIONINE	13540	0.0490	2.7192	8.37	405.7553	1.04	38.07	0.68
ISOLEUCINE	40080	0.1408	7.8088	24.03	1024.3595	2.62	109.32	1.97
LEUCINE	71920	0.2566	14.2347	43.80	1867.3039	4.78	199.29	3.58
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	47730	0.1587	8.8045	27.09	1595.2943	4.08	123.26	2.22
PHENYLALANINE	60300	0.2157	11.9690	36.83	1977.1520	5.06	167.57	3.01
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	3730	0.0246	1.3636	4.20	221.1694	0.57	38.18	0.69
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	21590	0.1292	7.1680	22.06	1047.8875	2.68	200.70	3.61
HISTIDINE	13230	0.1015	5.6330	17.33	874.0392	2.24	236.58	4.25
ARGININE	39834	0.3151	17.4835	53.80	3045.7954	7.79	979.07	17.61
TOTALS		5.8635	325.2935	1000.00	39094.8768	100.00	5561.18	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	232995	5.2002	288.4944	51689.5355	4038.92	
GALACTOSAMINE	0	0.	0.	0.	0.	
AMMONIA	73410	0.4430	24.5784	417.8327	344.10	

TOTAL NITROGEN - MICROGRAMS 9944.20

RUN NUMBER 1464A/1461B
SAMPLE CALLINECTES SAPIDUS
LOCALITY WOODS HOLE
TYPE 1C-CARAPACE
FACTOR 47.310

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	2880	0.0120	0.5697	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	148700	0.5098	24.1172	71.34	3210.0038	7.67	337.64	5.51
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	110900	0.3958	18.7248	55.39	2230.4939	5.33	262.15	4.27
SERINE	144700	0.5956	28.1776	83.35	2961.1879	7.08	394.49	6.43
GLUTAMIC ACID	186100	0.6886	32.5787	96.37	4793.3027	11.45	456.10	7.44
PROLINE	41410	0.7375	34.8906	103.20	4016.9546	9.60	488.47	7.97
GLYCINE	189100	0.6933	32.8004	97.02	2452.3293	5.88	459.21	7.49
ALANINE	239300	0.8695	41.1384	121.69	3665.0185	8.76	575.94	9.39
CYSTINE (HALF)	0	0.	0.	1.21	49.4216	0.12	5.71	0.09
VALINE	129000	0.4503	21.3019	63.01	2495.5158	5.96	298.23	4.86
METHIONINE	25100	0.0909	4.2986	12.71	641.4332	1.53	60.18	0.98
ISOLEUCINE	51050	0.1793	8.4817	25.09	1112.6347	2.66	118.74	1.94
LEUCINE	96190	0.3432	16.2353	48.02	2129.7440	5.09	227.29	3.71
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	57540	0.1913	9.0514	26.77	1640.0285	3.92	126.72	2.07
PHENYLALANINE	67290	0.2408	11.3899	33.69	1881.5052	4.50	159.46	2.60
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	2672	0.0176	0.8330	2.46	135.1092	0.32	23.32	0.38
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	88580	0.5301	25.0791	74.18	3666.3155	8.76	702.22	11.45
HISTIDINE	32060	0.2460	11.6405	34.43	1806.1417	4.32	488.90	7.97
ARGININE	45220	0.3578	16.9253	50.06	2948.5569	7.05	947.82	15.46
TOTALS		7.1493	338.2343	1000.00	41845.6964	100.00	6132.58	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	465190	10.4003	492.0390		88158.6187		6888.55	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	237600	1.4339	67.8386		1153.2562		949.74	

TOTAL NITROGEN - MICROGRAMS 13970.87

RUN NUMBER 1446A/1449B
SAMPLE CALLINECTES SAPIDUS
LOCALITY WOODS HOLE
TYPE 1D-CUTICLE
FACTOR 491.600

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	205	0.0009	0.4214	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	226100	0.7751	381.0448	108.33	50717.0590	11.52	5334.63	8.47
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	132500	0.4729	232.4661	66.09	27691.3612	6.29	3254.53	5.16
SERINE	112100	0.4614	226.8300	64.49	23837.5696	5.41	3175.62	5.04
GLUTAMIC ACID	232800	0.8614	423.4763	120.40	62306.0732	14.15	5928.67	9.41
PROLINE	34760	0.6191	304.3280	86.52	35037.2801	7.96	4260.59	6.76
GLYCINE	286300	1.0497	516.0223	146.71	38737.7933	8.80	7224.31	11.46
ALANINE	124500	0.4524	222.3990	63.23	19813.5253	4.50	3113.59	4.94
CYSTINE (HALF)	0	0.	0.	0.09	36.5542	0.01	4.23	0.01
VALINE	96690	0.3375	165.9086	47.17	19436.1884	4.41	2322.72	3.69
METHIONINE	15230	0.0551	27.1025	7.71	4044.2363	0.92	379.44	0.60
ISOLEUCINE	78300	0.2750	135.1792	38.43	17732.8087	4.03	1892.51	3.00
LEUCINE	97320	0.3472	170.6832	48.53	22390.2272	5.09	2389.57	3.79
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	58790	0.1955	96.0970	27.32	17411.8101	3.96	1345.36	2.13
PHENYLALANINE	108900	0.3896	191.5393	54.46	31640.3802	7.19	2681.55	4.26
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	312	0.0021	1.0107	0.29	163.9313	0.04	28.30	0.04
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	33960	0.2032	99.9087	28.40	14605.6460	3.32	2797.44	4.44
HISTIDINE	22640	0.1753	86.1715	24.50	13370.3670	3.04	3619.20	5.74
ARGININE	60910	0.4819	236.8936	67.35	41269.2408	9.37	13266.04	21.05
TOTALS		7.1552	3517.4822	1000.00	440242.0493	100.00	63018.28	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	400634	2.7526	1353.1548	242444.7368	18944.17	
GALACTOSAMINE	0	0.	0.	0.	0.	
AMMONIA	311900	1.8823	925.3473	15730.9033	12954.86	

TOTAL NITROGEN - MICROGRAMS 94917.31

RUN NUMBER 1463A/1460B
SAMPLE CARCINUS MAENAS
LOCALITY WOODS HOLE
TYPE 3A-CHELA
FACTOR 22.180

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3931	0.0164	0.3646	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	62060	0.2128	4.7189	86.65	628.0800	9.48	66.06	7.10
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	38210	0.1364	3.0246	55.54	360.2924	5.44	42.34	4.55
SERINE	53740	0.2212	4.9062	90.09	515.5891	7.78	68.69	7.39
GLUTAMIC ACID	58300	0.2157	4.7848	87.86	703.9886	10.62	66.99	7.20
PROLINE	12660	0.2255	5.0009	91.83	575.7501	8.69	70.01	7.53
GLYCINE	76280	0.2797	6.2031	113.90	465.6653	7.03	86.84	9.34
ALANINE	72130	0.2621	5.8134	106.75	517.9144	7.82	81.39	8.75
CYSTINE (HALF)	1816	0.0121	0.2687	9.73	64.1709	0.97	7.42	0.80
VALINE	44540	0.1555	3.4482	63.32	403.9517	6.10	48.27	5.19
METHIONINE	2943	0.0107	0.2363	4.34	35.2595	0.53	3.31	0.36
ISOLEUCINE	19600	0.0688	1.5267	28.03	200.2726	3.02	21.37	2.30
LEUCINE	38030	0.1357	3.0093	55.26	394.7593	5.96	42.13	4.53
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	15305	0.0509	1.1287	20.73	204.5142	3.09	15.80	1.70
PHENYLALANINE	18840	0.0674	1.4951	27.45	246.9701	3.73	20.93	2.25
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	3285	0.0216	0.4801	8.82	77.8740	1.18	13.44	1.45
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	43805	0.2621	5.8145	106.77	850.0147	12.83	162.80	17.51
HISTIDINE	7930	0.0609	1.3499	24.79	209.4450	3.16	56.69	6.10
ARGININE	5635	0.0446	0.9888	18.16	172.2588	2.60	55.37	5.95
TOTALS		2.4600	54.5626	1000.00	6626.7707	100.00	929.88	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	170971	11.9810	265.7386	47612.3935	3720.34
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	210050	1.2677	28.1165	477.9810	393.63

TOTAL NITROGEN - MICROGRAMS 5043.85

RUN NUMBER 1462A/1459B
SAMPLE CARCINUS MAENAS
LOCALITY WOODS HOLE
TYPE 3B-CARAPACE
FACTOR 51.220

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	7689	0.0322	1.6468	0.	0.	0.	0.	0.
TAURINE	[illegible]	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	[illegible]	0.3264	16.8181	94.51	2238.4945	10.23	235.45	7.64
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	[illegible]	0.1855	9.5000	53.39	1131.6414	5.17	133.00	4.32
SERINE	[illegible]	0.3451	17.6777	99.34	1857.7494	8.49	247.49	8.03
GLUTAMIC ACID	[illegible]	0.3893	19.9384	112.05	2933.5321	13.40	279.14	9.06
PROLINE	[illegible]	0.3033	15.5348	87.30	1784.5166	8.17	217.49	7.06
GLYCINE	[illegible]	0.4165	21.3331	119.89	1601.4728	7.32	298.66	9.70
ALANINE	[illegible]	0.3419	17.5101	98.4[illegible]	1559.9742	[illegible].13	245.14	7.96
CYSTINE (HALF)	0	0.	0.	6.63	142.8501	[illegible].65	16.51	0.54
VALINE	[illegible]	0.2146	10.9895	61.76	1287.4206	[illegible].38	153.85	4.99
METHIONINE	[illegible]	0.0226	1.1599	6.52	172.0856	.79	16.24	0.53
ISOLEUCINE	[illegible]	0.1009	5.1697	29.05	678.1570	3.10	72.38	2.35
LEUCINE	[illegible]	0.1670	8.5537	48.0	1122.0772	[illegible].13	119.75	3.89
DOPA	0	0.	0.	0.	0.	[illegible]	0.	0.
TYROSINE	[illegible]	0.1154	5.9097	33.2[illegible]	1070.7734	.49	92.74	2.69
PHENYLALANINE	[illegible]	0.1236	6.3297	35.5	1045.5954	[illegible]	88.62	2.88
BETA - ALANINE	0	0.	0.	0.	0.	[illegible]	0.	0.
OH - LYSINE	252	0.0017	0.0851	0.4[illegible]	13.7954	6	2.38	0.08
ORNITHINE	0	0.	0.	0.	0.	[illegible]	0.	0.
LYSINE	[illegible]	0.1443	7.3933	41.[illegible]	1080.8317	5.94	207.01	6.72
HISTIDINE	[illegible]	0.0775	3.9718	22.3[illegible]	616.2651	[illegible].32	166.82	5.42
ARGININE	[illegible]	0.1736	8.8906	49.9[illegible]	1548.8245	7.08	497.87	16.16
TOTALS		3.4832	178.4118	1000.00	21891.0564	100.00	3080.53	100.00

UREA	0	0.	0.	0.	
GLUCOSAMINE	471010	6.8382	350.2519	62754.6322	4903.53
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	163800	0.9885	50.6327	860.7557	708.86

TOTAL NITROGEN - MICROGRAMS 8692.92

RUN NUMBER 1441A/1450B
SAMPLE CARCINUS MAENAS
LOCALITY WOODS HOLE
TYPE 3C-CUTICLE
FACTOR 843.200

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4539	0.0190	16.0037	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	120900	0.4145	349.4785	100.09	46515.5889	10.58	4892.70	7.44
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	76840	0.2742	231.2330	66.23	27544.4755	6.27	3237.26	4.92
SERINE	70870	0.2917	245.9666	70.45	25848.6293	5.88	3443.53	5.23
GLUTAMIC ACID	119100	0.4407	371.6008	106.43	54673.5276	12.44	5202.41	7.91
PROLINE	20920	0.3726	314.1539	89.97	36168.5435	8.23	4398.16	6.69
GLYCINE	146900	0.5386	454.1378	130.07	34092.1232	7.76	6357.93	9.67
ALANINE	84810	0.3082	259.8539	74.42	23150.3835	5.27	3637.95	5.53
CYSTINE (HALF)	0	0.	0.	3.28	1389.2318	0.32	160.46	0.24
VALINE	55840	0.1949	164.3431	47.07	19252.7900	4.38	2300.80	3.50
METHIONINE	5460	0.0198	16.6656	4.77	2486.8408	0.57	233.32	0.35
ISOLEUCINE	45570	0.1600	134.9416	38.65	17701.6406	4.03	1889.18	2.87
LEUCINE	52020	0.1856	156.4868	44.82	20527.9449	4.67	2190.82	3.33
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	39480	0.1313	110.6884	31.70	20055.6309	4.56	1549.64	2.36
PHENYLALANINE	52780	0.1888	159.2275	45.60	26302.7964	5.98	2229.19	3.39
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	0	0.	0.	0.	0.	0.	0.	0.
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	19660	0.1177	99.2059	28.41	14502.9158	3.30	2777.77	4.22
HISTIDINE	19890	0.1526	128.7126	36.86	19971.0424	4.54	5405.93	8.22
ARGININE	42490	0.3362	283.4459	81.18	49379.1186	11.23	15872.97	24.13
TOTALS		4.1463	3496.1457	1000.00	439562.3203	100.00	65780.02	100.00

UREA	0	0.	0.	0.	0.	
GLUCOSAMINE	265900	1.8269	1540.4114	275995.5103	21565.76	
GALACTOSAMINE	0	0.	0.	0.	0.	
AMMONIA	229900	1.3874	1169.8955	19888.2230	16378.54	

TOTAL NITROGEN - MICROGRAMS 103724.31

RUN NUMBER 1447A/1465B
SAMPLE OVALIPES OCCELATUS
LOCALITY WOODS HOLE
TYPE 2A-PLEOPOD
FACTOR 536.800

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	3160	0.0132	7.0930	0.	0.	0.	0.	0.
TAURINE	2976	0.0115	6.1692	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	86300	0.2959	158.8133	87.10	21138.0503	9.42	2223.39	6.66
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	44120	0.1575	84.5240	46.36	10068.4951	4.49	1183.34	3.55
SERINE	91830	0.3780	202.8991	111.28	21322.6696	9.50	2840.59	8.51
GLUTAMIC ACID	82620	0.3057	164.1088	90.00	24145.3346	10.76	2297.52	6.89
PROLINE	15670	0.2791	149.8069	82.16	17247.2654	7.69	2097.30	6.29
GLYCINE	143400	0.5258	282.2259	154.78	21186.6998	9.44	3951.16	11.84
ALANINE	68010	0.2471	132.6590	72.75	11818.5939	5.27	1857.23	5.57
CYSTINE (HALF)	0	0.	0.	6.06	1338.6096	0.60	154.73	0.46
VALINE	58520	0.2043	109.6458	60.13	12845.0113	5.73	1535.04	4.60
METHIONINE	5279	0.0191	10.2580	5.63	1530.6959	0.68	143.61	0.43
ISOLEUCINE	23480	0.0825	44.2636	24.28	5806.5008	2.59	619.69	1.86
LEUCINE	40420	0.1442	77.4080	42.45	10154.3784	4.53	1083.71	3.25
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	40440	0.1345	72.1802	39.59	13078.3285	5.83	1010.52	3.03
PHENYLALANINE	37330	0.1336	71.6950	39.32	11843.2920	5.28	1003.73	3.01
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	232	0.0015	0.8207	0.45	133.1055	0.06	22.98	0.07
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	19940	0.1193	64.0562	35.13	9364.3767	4.17	1793.57	5.37
HISTIDINE	15920	0.1222	65.5860	35.97	10176.3240	4.54	2754.61	8.25
ARGININE	28580	0.2261	121.3746	66.57	21144.6615	9.43	6796.98	20.37
TOTALS		3.4009	1825.5873	1000.00	224342.3909	100.00	33369.69	100.00

UREA	0	0.	0.	0.	
GLUCOSAMINE	468026	3.2156	1726.1172	209268.4150	24165.64
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	116000	0.7001	375.7924	6388.4707	5261.09

TOTAL NITROGEN - MICROGRAMS 62796.43

RUN NUMBER 1470A/1466B
SAMPLE OVALIPES OCCELATUS
LOCALITY WOODS HOLE
TYPE 2B-CHELA
FACTOR 31.250

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	4022	0.0168	0.5256	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	36770	0.1261	3.9392	75.51	524.3065	8.10	55.15	5.52
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	25130	0.0897	2.8027	53.73	333.8559	5.16	39.24	3.92
SERINE	30220	0.1244	3.8871	74.51	408.4971	6.31	54.42	5.44
GLUTAMIC ACID	41350	0.1530	4.7815	91.66	703.4951	10.87	66.94	6.70
PROLINE	10760	0.1916	5.9884	114.79	689.4472	10.65	83.84	8.39
GLYCINE	46610	0.1709	5.3403	102.37	400.8951	6.19	74.76	7.48
ALANINE	48940	0.1778	5.5573	106.53	495.1018	7.65	77.80	7.78
CYSTINE (HALF)	0	0.	0.	7.22	45.5893	0.70	5.27	0.53
VALINE	28560	0.0997	3.1152	59.72	364.9437	5.64	43.61	4.36
METHIONINE	1750	0.0063	0.1980	3.79	29.5402	0.46	2.77	0.28
ISOLEUCINE	12740	0.0447	1.3982	26.80	183.4101	2.83	19.57	1.96
LEUCINE	20950	0.0747	2.3357	44.77	306.3928	4.73	32.70	3.27
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	9114	0.0303	0.9470	18.15	171.5883	2.65	13.26	1.33
PHENYLALANINE	9569	0.0342	1.0699	20.51	176.7334	2.73	14.98	1.50
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	857	0.0056	0.1765	3.38	28.6237	0.44	4.94	0.49
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	24360	0.1458	4.5557	87.33	665.9912	10.29	127.56	12.76
HISTIDINE	10760	0.0826	2.5806	49.47	400.4033	6.19	108.38	10.84
ARGININE	12610	0.0998	3.1176	59.76	543.1141	8.39	174.58	17.46
TOTALS		1.6741	52.3162	1000.00	6471.9290	100.00	999.78	100.00
UREA	0	0.	0.		0.		0.	
GLUCOSAMINE	275860	5.4974	171.7941		30780.3411		2405.12	
GALACTOSAMINE	0	0.	0.		0.		0.	
AMMONIA	161700	0.9759	30.4956		518.4256		426.94	

TOTAL NITROGEN - MICROGRAMS 3831.84

RUN NUMBER 1457A/1468B
SAMPLE OVALIPES OCCELATUS
LOCALITY WOODS HOLE
TYPE 2C-CARAPACE
FACTOR 165.000

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	325	0.0014	0.2242	0.	0.	0.	0.	0.
TAURINE	0	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	26150	0.0896	14.7917	91.29	1968.7803	10.32	207.08	8.23
METHIONINE SULFONE	0	0.	0.	0.	0.	0.	0.	0.
THREONINE	16280	0.0561	9.5867	59.17	1141.9705	5.99	134.21	5.34
SERINE	26050	0.1072	17.6919	109.19	1859.2430	9.75	247.69	9.85
GLUTAMIC ACID	24420	0.0904	14.9095	92.02	2193.6389	11.50	208.73	8.30
PROLINE	5382	0.0959	15.8153	97.61	1820.8173	9.55	221.41	8.80
GLYCINE	34700	0.1272	20.9918	129.55	1575.8507	8.26	293.88	11.68
ALANINE	35010	0.1272	20.9907	129.55	1870.0645	9.80	293.87	11.68
CYSTINE (HALF)	0	0.	0.	0.99	19.4508	0.10	2.25	0.09
VALINE	21780	0.0760	12.5435	77.41	1469.4658	7.70	175.61	6.98
METHIONINE	2861	0.0104	1.7088	10.55	254.[illegible]	1.34	23.92	0.95
ISOLEUCINE	9128	0.0321	5.2893	32.64	693.8466	3.64	74.05	2.94
LEUCINE	14990	0.0535	8.8239	54.46	1157.5243	6.07	123.54	4.91
DOPA	0	0.	0.	0.	0.	0.	0.	0.
TYROSINE	7133	0.0237	3.9134	24.15	709.0629	3.72	54.79	2.18
PHENYLALANINE	7340	0.0263	4.3331	26.74	715.7839	3.75	60.66	2.41
BETA - ALANINE	0	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	294	0.0019	0.3197	1.97	51.8474	0.27	8.95	0.36
ORNITHINE	0	0.	0.	0.	0.	0.	0.	0.
LYSINE	5148	0.0308	5.0833	31.37	743.[illegible]	3.90	142.33	5.66
HISTIDINE	2371	0.0182	3.0024	18.53	465.5551	2.44	126.10	5.01
ARGININE	1569	0.0126	2.0742	12.80	361.3548	1.89	116.16	4.62
TOTALS		0.9824	162.0935	1000.00	19072.6769	100.00	2515.25	100.00

UREA	0	0.	0.	0.	0.
GLUCOSAMINE	224000	1.5390	253.9334	45497.2393	3555.07
GALACTOSAMINE	0	0.	0.	0.	0.
AMMONIA	27980	0.1689	27.8618	473.6506	390.07

TOTAL NITROGEN - MICROGRAMS 6460.38

RUN NUMBER 1472A/1445B
SAMPLE OVALIPES OCCELATUS
LOCALITY WOODS HOLE
TYPE 2D-CUTICLE
FACTOR 616.640

ACID	AREA	MICROMOLES	MICROMOLES PER GRAM	RESIDUES PER 1000 TOTAL RESID.	MICROGRAMS PER GRAM	PERCENT CONCEN-TRATION	NITROGEN MICROGRAMS	NITROGEN PERCENT
CYSTEIC ACID	387.	0.0016	0.9979	0.	0.	0.	0.	0.
TAURINE	0.	0.	0.	0.	0.	0.	0.	0.
METHIONINE SULFOXIDES	0.	0.	0.	0.	0.	0.	0.	0.
OH - PROLINE	0.	0.	0.	0.	0.	0.	0.	0.
ASPARTIC ACID	97920.	0.3357	206.9982	98.65	27551.4666	10.34	2897.98	7.01
METHIONINE SULFONE	0.	0.	0.	0.	0.	0.	0.	0.
THREONINE	53910.	0.1924	118.6405	56.54	14132.4539	5.31	1660.97	4.02
SERINE	60250.	0.2480	152.9227	72.88	16070.6422	6.03	2140.92	5.18
GLUTAMIC ACID	102300.	0.3785	233.4219	111.24	34343.3660	12.89	3267.91	7.91
PROLINE	19800.	0.3526	217.4438	103.62	25034.3100	9.40	3044.21	7.36
GLYCINE	114800.	0.4209	259.5427	123.69	19483.8705	7.31	3633.60	8.79
ALANINE	62910.	0.2286	140.9623	67.18	12558.3304	4.71	1973.47	4.77
CYSTINE (HALF)	0.	0.	0.	0.34	86.5593	0.03	10.01	0.02
VALINE	38370.	0.1339	82.5846	39.36	9674.7813	3.63	1156.18	2.80
METHIONINE	4873.	0.0176	10.8774	5.18	1623.1283	0.61	152.28	0.37
ISOLEUCINE	34190.	0.1201	74.0401	35.28	9712.5817	3.65	1036.56	2.51
LEUCINE	44180.	0.1576	97.1928	46.32	12749.7577	4.79	1360.70	3.29
DOPA	0.	0.	0.	0.	0.	0.	0.	0.
TYROSINE	26190.	0.0871	53.6984	25.59	9729.6178	3.65	751.78	1.82
PHENYLALANINE	37010.	0.1324	81.6524	38.91	13488.1602	5.06	1143.13	2.77
BETA - ALANINE	0.	0.	0.	0.	0.	0.	0.	0.
OH - LYSINE	230.	0.0015	0.9346	0.45	151.5845	0.06	26.17	0.06
ORNITHINE	0.	0.	0.	0.	0.	0.	0.	0.
LYSINE	21560.	0.1290	79.5617	37.92	11631.1234	4.37	2227.73	5.39
HISTIDINE	18550.	0.1424	87.7872	41.84	13621.0617	5.11	3687.06	8.92
ARGININE	40880.	0.3234	199.4323	95.04	34743.1015	13.04	11168.21	27.02
TOTALS		3.4034	2098.6916	1000.00	266385.8955	100.00	41338.86	100.00
UREA	0.	0.	0.		0.		0.	
GLUCOSAMINE	306062.	2.1028	1296.6683		232324.0593		18153.36	
GALACTOSAMINE	0.	0.	0.		0.		0.	
AMMONIA	279400.	1.6862	1039.7659		17676.0209		14556.72	

TOTAL NITROGEN - MICROGRAMS 74048.94