

CASE FILE COPY

N71-32231
CR. 121325

SCIENTIFIC PUBLICATIONS AND PRESENTATIONS
RELATING TO PLANETARY QUARANTINE

Volume V
The 1970 Supplement

August 1971



BIOLOGICAL SCIENCES COMMUNICATION PROJECT
THE GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER
2001 S STREET, N.W., WASHINGTON, D.C. 20009
Telephone (202) 462-5828

SCIENTIFIC PUBLICATIONS AND PRESENTATIONS
RELATING TO PLANETARY QUARANTINE

PLANETARY QUARANTINE OFFICE
PLANETARY PROGRAMS
OFFICE OF SPACE SCIENCE AND APPLICATIONS
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Volume V
The 1970 Supplement

by

Frank D. Bradley, B.A., M.A.
Margaret F. Werts, B.A.

C.W. Shilling, M.D., Director
Biological Sciences Communication Project
The Medical Center
THE GEORGE WASHINGTON UNIVERSITY
Washington, D.C.

Work Performed under NASA Contract
NSR-09-010-027

August 1971

PREFACE

This compilation is the fourth annual supplement to the original bibliography issued in June, 1967, entitled Scientific Publications of the Biosciences Programs Division, National Aeronautics and Space Administration, Volume V. Planetary Quarantine.

The annual supplements consist of citations of documents relating to planetary quarantine; many, but not all, refer to work supported by the Planetary Quarantine Office, Planetary Programs, National Aeronautics and Space Administration, Washington, D.C. While they are compiled primarily to bring up to date our survey of the literature in the field, it will be noted that there is also a heavy back gathering of references not previously included. Some of these ante-date the formation of NASA, but are of substantive or historical value to the planetary quarantine program.

In certain references, numerals preceded by the letter A, AD, N, X, NASA-CR, NASA-SP, or NASA-TM-X are given parenthetically as part of the citation. These numbers will implement the procurement of the document. Those carrying "A" numbers are obtainable, for a fee, from the

American Institute of Aeronautics and Astronautics, Inc.
Technical Information Service
750 Third Avenue
New York, New York 10017

Documents carrying "N", "NASA-CR", and "NASA-TM-X" numbers are available, at set rates, from the

National Technical Information Service
U.S. Department of Commerce
Springfield, Virginia 22151

"NASA-SP" coded documents are obtainable from the
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

"X" numbered documents are limited in their distribution to NASA associated or contractor personnel. "AD" coded documents are generally available from the

Defense Documentation Center
Cameron Station
Alexandria, Virginia 22314

The authors wish to acknowledge with gratitude the able and tireless assistance of Miss Susan E. Dugan in the preparation of this bibliography.

TABLE OF CONTENTS

	Page
Preface	iii
Citations	1
Author Index	53
Permuted Title Index	59
Journals Publishing Planetary Quarantine Related Articles	108
Proceedings Publishing Planetary Quarantine Related Articles	110
Corporate Sources	114

CITATIONS

1939

1. NORDGREN, G. Investigations on the sterilization efficacy of gaseous formaldehyde. *Acta Pathologica et Microbiologica Scandinavica* (Suppl.XI). Copenhagen 1939.

1945

2. RAHN, O. Physical methods of sterilization of microorganisms. *Bacteriological Reviews* 9:1-47; 1945.

1949

3. KAYE, S. The sterilizing action of gaseous ethylene oxide. III. The effect of ethylene oxide and related compounds upon bacterial aerosols. *American Journal of Hygiene* 50(3):289-295; 1949.
4. KAYE, S. and C.R. Phillips. The sterilizing action of gaseous ethylene oxide. IV. The effect of moisture. *American Journal of Hygiene* 50(3):296-306; 1949.
5. PHILLIPS, C.R. and S. Kaye. The sterilizing action of gaseous ethylene oxide. I. Review. *American Journal of Hygiene* 50(3):270-279; 1949.
6. PHILLIPS, C.R. The sterilizing action of gaseous ethylene oxide. II. Sterilization of contaminated objects with ethylene oxide and related compounds: time, concentration and temperature relationships. *American Journal of Hygiene* 50(3):280-288; 1949.

1951

7. MANUFACTURING CHEMISTS ASSOCIATION. Properties and essential information for safe handling and use of ethylene oxide. Chemical Safety Data Sheet SD-38. Washington, D.C., Published by the Association, 1951.

1954

8. PFLUG, I.J. and W.B. Esselen. Design of thermal destruction apparatus. *Agricultural Engineering* 35(4):245-246,251; April 1954.

1957

9. NORCROSS, N.L., R.B. Read, W. Litsky and E.B. Seligmann, Jr. Rapid heat treatment of bacteria. I. Sterilization of suspensions of Serratia marcescens and spores of Bacillus subtilis var. niger. Applied Microbiology 5(3):193-196; May 1957.

1958

10. ANGELOTTI, R., M.J. Foter, K.A. Busch and K.H. Lewis. A comparative evaluation of methods for determining the bacterial contamination of surfaces. Food Research 23:175-185; 1958.
11. ANGELOTTI, R. and M.J. Foter. A direct surface agar plate laboratory method for qualitatively detecting bacterial contamination on nonporous surfaces. Food Research 23:170-174; 1958.
12. FERNELIUS, A.L., C.E. Wilkes, I.A. DeArmon, Jr. and R.E. Lincoln. A probit method to interpret thermal inactivation of bacterial spores. Journal of Bacteriology 75(3):300-304; March 1958.
13. HOFFMAN, R.K. and B. Warshowsky. Beta-propiolactone vapor as a disinfectant. Applied Microbiology 6(5):358-362; September 1958.

1959

14. DAWSON, F.W., H.J. Hearn and R.K. Hoffman. Virucidal activity of Beta-propiolactone vapor. I. Effect of Beta-propiolactone vapor on Venezuelan equine encephalomyelitis virus. Applied Microbiology 7(4):199-201; July 1959.
15. DEINDOERFER, F.H., and A.E. Humphrey. Analytical method for calculating heat sterilization times. Applied Microbiology 7(4):256-264; 1959.
16. DEINDOERFER, F.H., and A.E. Humphrey. Principles in the design of continuous sterilizers. Applied Microbiology 7(4):264-270; 1959.
17. KAUFMANN, O.W., L.G. Harmon, O.C. Pailthorp and I.J. Pflug. Effect of heat treatment on the growth of surviving cells. Journal of Bacteriology 78(6):834-838; December 1959.
18. OPFELL, J.B., J.P. Hohmann and A.B. Latham. Ethylene oxide sterilization of spores in hygroscopic environments. American Pharmaceutical Association Scientific Edition 48(11):617-619. November 1959.

1960

19. ALLEN, H.F. and J.T. Murphy. Sterilization of instruments and materials with Beta-propiolactone. Journal of the American Medical Association 172(16):1759-1763; 16 April 1960.
20. BEJUKI, W.M. The microbiological challenge in space. In: Developments in industrial microbiology. Vol.1. Proceedings of the 16th general meeting of the Society of Industrial Microbiologists, State College, Pennsylvania, September 1959, p.45-55. New York Plenum Press, 1960.
21. DAVIES, R.W. and M.G. Comuntzis. The sterilization of space vehicles to prevent extraterrestrial biological contamination. In: Proceedings of the international astronautical congress, London, 1959, p.495-503. Vienna, Springer-Verlag, 1960.
22. DAWSON, F.W., R.J. Janssen and R.K. Hoffman. Virucidal activity of Beta-propiolactone vapor. II. Effect on the etiological agents of smallpox, yellow fever, psittacosis and Q fever. Applied Microbiology 8(1):39-41; January 1960.
23. HOFFMAN, R.K., H.M. Decker and C.R. Phillips. A technique for the investigation of bacterial contamination inside electronic components. U.S. Army, Fort Detrick Protection Branch Report of Test No. 7-60. 11 March 1960. (N65-83818)
24. JET PROPULSION LABORATORY. Sterilization facility concepts. Capsule assembly and sterilization. July 1960.
25. LION, K.S. Survey of electronic components. U.S. Army, Fort Detrick Protection Branch Report of Test No. 5-61. 31 August 1960.
26. PFLUG, I.J. Thermal resistance of microorganisms to dry heat: Design of apparatus, operational problems and preliminary results. Food Technology 14(10):483-487; 1960.
27. PORTNER, D.M. Effect of dry heat upon dry bacterial spores. U.S. Army, Fort Detrick Protection Branch Report of Test No. 22-60. 14 April 1960.
28. PORTNER, D.M. Effect of Gamma and X-rays upon dry bacterial spores. U.S. Army, Fort Detrick Protection Branch Report of Test No. 2-61. 14 September 1960.
29. PORTNER, D.M. Investigation of bacterial contamination inside electronic components. Test I. U.S. Army, Fort Detrick Protective Branch Report of Test No. 19-60. 14 April 1960.

30. PORTNER, D.M. Investigation of bacterial contamination inside electronic components. Test II. U.S. Army, Fort Detrick Protection Branch Report of Test No. 24-60. 21 June 1960.
 31. PORTNER, D.M. Investigation of bacterial contamination inside electronic components. Test III. U.S. Army, Fort Detrick Protection Branch Report of Test No. 1-61. 19 August 1960.
 32. PORTNER, D.M. Investigation of bacterial contamination inside solar panel. U.S. Army, Fort Detrick Protection Branch Report of Test No. 20-60. 14 April 1960.
 33. PORTNER, D.M. Penetrability and effect of ethylene oxide gas on Scotch tape. U.S. Army, Fort Detrick Protective Branch Report of Test No. 21-60. 14 April 1960.
 34. PRINCE, A.E. Space age microbiology. In: Developments in industrial microbiology. Vol.1. Proceedings of the 16th general meeting of the Society of Industrial Microbiologists, State College, Pennsylvania, September 1959, p.13-14. New York, Plenum Press, 1960.
 35. SAGAN, C. Biological contamination of the Moon. Proceedings of the National Academy of Sciences 46(4):396-402; April 1960.
 36. SCHLEY, D.G., R.K. Hoffman and C.R. Phillips. Simple improvised chambers for gas sterilization with ethylene oxide. Applied Microbiology 8(1):15-19; January 1960.
 37. SHEFNER, A.M. Adaptation of microorganisms to radiation. In: Developments in industrial microbiology. Vol.1. Proceedings of the 16th general meeting of the Society of Industrial Microbiologists, State College, Pennsylvania, September 1959, p.21-25. New York, Plenum Press, 1960.
 38. SPINER, D.R. and R.K. Hoffman. Method for disinfecting large enclosures with Beta-propiolactone vapor. Applied Microbiology 8:152-155; 1960.
 39. TREXLER, P.C. Gnotobiotics in relation to space biology. In: Developments in industrial microbiology. Vol.1. Proceedings of the 16th general meeting of the Society of Industrial Microbiologists, State College, Pennsylvania, September 1959, p.15-20. New York, Plenum Press, 1960.
- 1961
40. BRUCH, C.W. Decontamination of enclosed spaces with Beta-propiolactone vapor. American Journal of Hygiene 73(1):1-9; January 1961.

41. BRUCH, C.W. Gaseous sterilization. Annual Review of Microbiology 15:245-262; 1961.
 42. BRUESCHKE, E.E., R.H. Suess and M. Willard. The viability of microorganisms in ultra-high vacuum. Planetary Space Science 8:30-34; 1961.
 43. DEINDOERFER, F.H. and A.E. Humphrey. Scale-up of heat sterilization operations. Applied Microbiology 9(2):134-139; 1961.
 44. HAWRYLEWICZ, E.J. and R. Ehrlich. Studies with microorganisms and plants under simulated Martian environments. Presented at the Symposium on extraterrestrial biochemistry and biology, 128th meeting of the American Association for the Advancement of Science, Denver, December 1961.
 45. PHILLIPS, C.R. The sterilising properties of ethylene oxide. In: Proceedings of the symposium on recent developments in the sterilisation of surgical materials, University of London, 1961. London, The Pharmaceutical Press, 1961.
 46. PORTNER, D.M. Investigation of bacterial contamination inside electronic components. Test IV. U.S. Army, Fort Detrick Protection Branch Report of Test No.13-61. 19 May 1961.
 47. PORTNER, D.M. Investigation of microbial contamination inside balsa wood and explosive charges (squibs, pyrotechnic pellets and finished propellant). U.S. Army, Fort Detrick Protection Branch Report of Test No. 14-61. 19 May 1961.
 48. PORTNER, D.M. Investigation of microbial contamination inside cured solid propellant. U.S. Army, Fort Detrick Protection Branch Report of Test No. 13-62. 8 November 1961.
 49. SNEATH, P.H.A. Dangers of contamination of planets and the Earth. In: Pirie, N.W., Ed. The biology of space travel. Proceedings of the 10th symposium of the Institute of Biology, p.95-106. London, published by the Institute, 1961.
 50. WYNNE, E.S. Sterilization of space vehicles: the problem of mutual contamination. AF-SAM-Q-47(16). Lectures in Aerospace Medicine, Brooks Air Force Base, 20 January 1961. (N67-86054)
- 1962
51. BRUCH, C.W. Sterilization of space probe components. Status reports 1-5. Wilmot Castle Company. 1962.

52. BUCHANAN, L.M. Bacterial penetration of R bbins BC filter. U.S. Army, Fort Detrick Protection Branch Report of Test No. 17-62. 16 January 1962.
53. CLEMEDSON, C.J. Sterilization of lunar and planetary space vehicles. In: Proceedings of the 13th international astronuatical congress, Varna, Bulgaria. Vol. I. September 1962. (A64-28456)
54. ERNST, R.R. and J.J. Shull. Ethylene oxide gaseous sterilization. I. Concentration and temperature effects. Applied Microbiology 10(4):337-341; July 1962.
55. ERNST, R.R. and J.J. Shull. Ethylene oxide gaseous sterilization. II. Influence of method of humidification. Applied Microbiology 10(4):342-344; July 1962.
56. GAMBILL, V.M. Bacterial penetration of the millipore microtube cartridge filter. U.S. Army, Fort Detrick. 8 October 1962.
57. HAWRYLEWICZ, E., B. Gowdy and R. Ehrlich. Microorganisms under simulated Martian environment. Nature 193(4814):497; 3 February 1962.
58. JAFFE, L.D. Examination of engineering requirements and procedures for sterilization of unmanned lunar and planetary missions. NASA, Office of Space Sciences, Lunar and Planetary Programs. 3 May 1962.
59. KOESTERER, M.G. Sterilization of space probe components. Final report. Wilmot Castle Company. July 1962. (N63-13482)
60. MORELLI, F.A. Effect of ultra-high vacuum on Bacillus subtilis var. niger. Nature 196(4850):106-107; October 1962. (N63-12213)
61. NASA. Space probe sterilization. In: A review of space research. NAS/NRC Publ. No.1079, Chapter 10. Washington, D.C. National Academy of Sciences - National Research Council. 1962. (N63-11562)
62. NOWITSKY, A.M. Effect of sterilization in spacecraft design. In: Proceedings of the IAS/NASA national meeting on manned space flight, St. Louis, Mo., 1962. p.250-258. 1962
63. QUIMBY, F.H., Ed. Proceedings of the conference on spacecraft sterilization, Washington, D.C., NASA, December 1962. (NASA TND-1357) (N63-10793)

64. STIERLI, H., L.L. Reed and I.H. Billick. Evaluation of sterilization by gaseous oxide. PH Monograph 68, PHS Publ. 903. Washington, D.C., Public Health Service, 1962.
65. WILLARD, M. Research study: Surveyor sterilization. Part I: Compatibility of materials and components with heat and ethylene oxide-Freon 12. Rep. RS-277. Hughes Aircraft Co., January 1962.
66. WILLARD, M. and A. Alexander. Surveyor sterilization. Part IV. Studies of sterilization techniques. Rep. RS-293. Prepared for Jet Propulsion Laboratory by Hughes Aircraft Co., August 1962. (NASA-CR-86673)

1963

67. BRUCH, C.W., M.G. Koesterer and M.K. Bruch. Dry-heat sterilization: Its development and application to components of exobiological space probes. In: Developments in industrial microbiology. Vol.4. Proceedings of the 19th general meeting of the Society for Industrial Microbiology, Corvallis, Oregon, August 1962. Washington, D.C., American Institute of Biological Sciences, 1963.
68. BUCHANAN, L.M., R.K. Hoffman, H.M. Decker and C.R. Phillips. Enumeration of viable microorganisms in nitrogen gas. U.S. Army, Fort Detrick Protection Branch Report of Test No. 12-63. 17 January 1963.
69. CORDARO, J.T., H. Buchanan, B. Mann and A.K. Miller. Controlled Contamination: A practical approach for developing sterilizing procedures for sealed components of spacecraft. Washington, D.C., NASA, 1963. (NASA SP-7011) (AD 437-645)
70. DECKER, H.M., L.M. Buchanan, L.B. Hall and K.R. Goddard. Air filtration of microbial particles. American Journal of Public Health 53(19):1982-1988; December 1963. (AD 637-407)
71. JAFFE, L.D. Sterilizing unmanned spacecraft. Astronautics and Aerospace Engineering 1:22-29; August 1963. (A63-20266)
72. JAFFE, L.D. Sterilization of unmanned planetary and lunar space vehicles. An engineering examination. TR 32-325. Jet Propulsion Laboratory. 7 January 1963, revised 25 March 1963. (N63-15243)
73. KOESTERER, M.G. Studies for sterilization of space probe components. Final report. Wilmot Castle Company. August 1963. (N64-28764)

74. LEVENTHAL, E.L. Parametric study of radioisotope thermoelectric and thermionic power generators. In: Space programs summary 37-22, Vol.IV, p.23-25. Jet Propulsion Laboratory. 31 August 1963.
75. NORTH AMERICAN AVIATION, INCORPORATED. Ultrasonic cleaning: A bibliography. SID-63-167. 1 March 1963. (N63-23353)
76. PACKER, E., S. Scher and C. Sagan. Biological contamination of Mars. II. Cold and aridity as constraints on the survival of terrestrial microorganisms in simulated Martian environments. Icarus 2(4):293-316; November 1963.
77. PORTNER, D.M. Microbial contamination obtained on surfaces exposed to room air or touched by the human hand. U.S. Army, Fort Detrick Protection Branch Report of Test No. 1-64. 22 July 1963.
78. REED, L. Ethylene oxide sterilization studies. In: Space programs summary No.37-22, Vol.IV, p.6-8. Jet Propulsion Laboratory. 31 August 1963. (N63-22581)
79. SHULL, J.J., G.T. Cargo and R.R. Ernst. Kinetics of heat activation and of thermal death of bacterial spores. Applied Microbiology 11(6):485-487; November 1963.
80. SILVERMAN, G.J., R.P. Giammanco, N.S. Davies, F.C. Benner and C.G. Dunn. Effects of simulated space environments on the viability of microorganisms. Final report. National Research Corporation. April 1963. (N62-10570)
81. SOFFEN, G. and J. Stuart. Ballon-borne bacterial collector. In: Space programs summary 37-22, Vol.IV, p.244-252. Jet Propulsion Laboratory. 31 August 1963. (NASA-CR-51738)
82. SWIFT, J. Astronautics information: Effects of sterilizing agents on microorganisms. Supplement to literature search No.260. Jet Propulsion Laboratory. March 1963. (N64-56372)
83. VARGA, R.J. Surveyor spacecraft system, Vol.I. Final sterilization report, SSD 3372R. Prepared for Jet Propulsion Laboratory by Hughes Aircraft Company. June 1963. (N67-31115)
84. VARGA, R.J. Surveyor spacecraft system, Vol.II. Final sterilization report. Appendices, SSD 3373R. Prepared for Jet Propulsion Laboratory by Hughes Aircraft Company. June 1963. (N66-17274)
85. WATSON, D.C. and H.F. Kabat. Sterilizing techniques with ethylene oxide. Hospitals 37:81-85; 1 September 1963.

86. WINGE-HEDEN, K. Ethylene oxide sterilization without special equipment. *Acta Pathologica et Microbiologica Scandinavica* 58(2):225-244; 1963.
87. YALOF, S. Compatibility of Centaur/Surveyor materials with Freon-12 ethylene oxide sterilant gases. 4th quarterly report. MRG-299. General Dynamics Astronautics. 27 May 1963. (AD 405 179)
88. YOUNG, R.S., P.H. Deal, J. Bell and J. Allen. Effect of diurnal freeze-thawing on survival and growth of selected bacteria. *Nature* 199(4898):1078-1079; 14 September 1963.

1964

89. BRUCH, C.W. Some biological and physical factors in dry heat sterilization: A general review. In: Florkin, M. and A. Dollfus, Eds. *Life sciences and space research. Vol.II. A session of the 4th international space science symposium, Warsaw, June, 1963, p.357-371. Amsterdam, North-Holland Publishing Company, 1964. (A64-24979)*
90. COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA. 1st quarterly report. Department of Health, Education and Welfare, Public Health Service, Atlanta. November 1964.
91. DYNAMIC SCIENCE CORPORATION. Sterilization handbook. Appendix. Final report SN-37. 26 August 1964.
92. FEDOROVA, R.T. The effect of ultraviolet radiation upon micro-organisms as a principal extremal factor of space environment. In: Florkin, M. and A. Dollfus, Eds. *Life sciences and space research. Vol.II. A session of the 4th international space science symposium, Warsaw, June 1963, p.305-310. Amsterdam, North-Holland Publishing Company, 1964. (A64-24973)*
93. FOX, G.W. Design of clean rooms. A classified list of selected references, 1955-1964. PHS Publ. No.1219. National Institutes of Health. 1964.
94. ERNST, R.R. and A.P. Kretz, Jr. Compatability of sterilization and contamination control with application to spacecraft assembly. *Contamination Control* 3:10-15; November 1964.
95. HALL, L.B. Biological and chemical surface contamination. A recurring problem. In: *Proceedings of a symposium on surface contamination, Gatlinburg, Tenn., 12 June 1964.*
96. HALL, L.B. The National Aeronautics and Space Administration position on COSPAR Resolution 26.5. Draft. 1964.

97. IRONS, A. Evaluation of microbiological filters for liquids and gases. In: Space programs summary 37-29, Vol.IV, p.16-18. Jet Propulsion Laboratory. October 1964.
98. JAFFE, L.D. Problems in sterilization of unmanned space vehicles. In: Florkin, M. and A. Dollfus, Eds. Life sciences and space research. Vol.II. A session of the 4th international space science symposium, Warsaw, June 1963, p.406-432. Amsterdam, North-Holland Publishing Company, 1964. (A63-18964)
99. JET PROPULSION LABORATORY. Microbiologic filters - liquid and gas. Memo. No. 33-243. In: Planetary quarantine sterilization, Vol.I, p.441-461. 1964. (N66-10426)
100. MCDADE, J.J. An experimental study of sterile assembly techniques. In: Space programs summary 37-29, Vol.IV, p.13-16. Jet Propulsion Laboratory. October 1964.
101. KOESTERER, M.G. Studies for sterilization of space probe components. Final report. Wilmot Castle Company. 31 August 1964. (N65-18205)
102. KOESTERER, M.G. Thermal death studies on microbial spores and some considerations for the sterilization of spacecraft components. In: Developments in industrial microbiology. Vol.6. Proceedings of the 21st general meeting of the Society for Industrial Microbiology, Boulder, Colorado, August 1964, p.268-276. Washington, D.C., American Institute of Biological Sciences, 1964.
103. LeDOUX, F.N. Decontamination, cleaning, coating and encapsulation of electronic circuit boards. X-630-373. Goddard Space Flight Center. November 1964. (N68-109647)
104. OPFELL, J.B. A general review of chemical sterilization in space research. In: Florkin, M. and A. Dollfus, Eds. Life sciences and space research. Vol.II. A session of the 4th international space science symposium, Warsaw, June 1963, p.386-405. Amsterdam, North-Holland Publishing Company, 1964. (A64-24981)
105. OPFELL, J.B., Y.L. Wang, A.L. Louderback and C.E. Miller. Penetration by gases to sterilize interior surfaces of confined spaces. Applied Microbiology 12(1):27-31; 1964.
106. PORTNER, D.M. The level of microbial contamination in a clean room during an eleven week test period. U.S. Army, Fort Detrick. 3 February 1964. (NASA-CR-53127)

107. SCHER, S., E. Packer and C. Sagan. Biological contamination of Mars. I. Survival of terrestrial microorganisms in simulated Martian environments. In: Florkin, M. and A. Dollfus, Eds. Life sciences and space research. Vol.II. A session of the 4th international space science symposium, Warsaw, June 1963. Amsterdam, North-Holland Publishing Company, 1964.
108. SILVERMAN, G.J., C.B. Dunn, R. Barrett, R.P. Giammanco and P. Blum. Study of viability of microorganisms in simulated space. Final report. National Research Corporation. 10 August 1964. (N64-33099)
109. WILLARD, M. and A. Alexander. Comparison of sterilizing properties of formaldehyde-methanol solutions with formaldehyde-water solutions. Applied Microbiology 12(3):229-233; May 1964.
110. YOUNG, R.S., P.H. Deal and J. Bell. Bacteria under simulated Martian conditions. In: Florkin, M. and A. Dollfus, Eds. Life sciences and space research. Vol.II. A session of the 4th international space science symposium, Warsaw, June, 1963. Amsterdam, North-Holland Publishing Company, 1964.
- 1965
111. ANGELOTTI, R. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 1st quarterly report. Department of Health, Education and Welfare, Public Health Service, Robert A. Taft Sanitary Engineering Center, Cincinnati. July 1965.
112. ANGELOTTI, R. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 2nd quarterly report. Department of Health, Education and Welfare, Public Health Service, Robert A. Taft Sanitary Engineering Center, Cincinnati. October 1965.
113. BEEBY, M.M. and C.E. Whitehouse. A bacterial spore test piece for the control of ethylene oxide sterilization. Journal of Applied Bacteriology 28(3):349-360; 1965.
114. BLAIR, P.M. Study of the effect of JPL sterilization techniques on thermal control surfaces. Hughes Aircraft Company. December 15, 1965. (N66-18443)
115. CALIFORNIA, UNIVERSITY OF. Biochemical activities of terrestrial microorganisms in simulated planetary environments. Final report. July 1965. (N66-20131)

116. COMMUNICABLE DISEASE CENTER. Research on microbiological sterilization problems. Quarterly report. Department of Health, Education and Welfare, Public Health Service, Phoenix Field Station. April 1965. (NASA-CR-63868) (N65-86311)
117. COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA. Reduction of bacterial dissemination; germicidal activity of ethylene oxide; reduction of bacterial contamination on surfaces. 2nd quarterly report. Department of Health, Education and Welfare, Public Health Service, Atlanta. 1 February 1965.
118. COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA. Reduction of bacterial dissemination; germicidal activity of ethylene oxide; reduction of bacterial contamination on surfaces. 3rd quarterly report. Department of Health, Education and Welfare, Public Health Service, Atlanta. 21 May 1965.
119. COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA. Reduction of bacterial dissemination; germicidal activity of ethylene oxide; reduction of bacterial contamination on surfaces. 4th quarterly report. Department of Health, Education and Welfare, Public Health Service, Atlanta. August 1965.
120. COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA. Reduction of bacterial dissemination; germicidal activity of ethylene oxide; reduction of bacterial contamination on surfaces. 5th quarterly report. Department of Health, Education and Welfare, Public Health Service, Atlanta. 12 November 1965.
121. COOLEY, W.C. and S. Schalkowsky. Definition of requirements for advanced sterilizable components for planetary quarantine. Vol.1. Final report. TR-011, Vol.1. Exotech, Inc. 1 September 1965.
122. DAVIS, N.S. Feasibility study for combined method of sterilization. Final report. Prepared for Jet Propulsion Laboratory by Wilmot Castle Company. 15 January 1965.
123. DRUMMOND, D. and V. Magistrale. JPL spacecraft sterilization technology program: A status report. TR 32-853. Jet Propulsion Laboratory. 31 December 1965. (N66-19629)
124. DUMAS, E.J. Sterilizable photomultiplier tubes. EMR Proj.3456. Prepared for Jet Propulsion Laboratory by Electro-Mechanical Research, Incorporated, December 1965.

125. EDWARDS, J.L., Jr., F.F. Busta and M.L. Speck. Heat injury of Bacillus subtilis spores at ultrahigh temperatures. Applied Microbiology 13(6):858-864; November 1965.
126. EDWARDS, J.L., Jr., F.F. Busta and M.L. Speck. Thermal inactivation characteristics of Bacillus subtilis at ultrahigh temperatures. Applied Microbiology 13(6):851-857; November 1965.
127. ERNST, R.R. Evaluation of the efficiency and reliability of filters to sterilize liquids and gases. Progress report No.6. Filter testing program. Prepared for the Jet Propulsion Laboratory by Wilmot Castle Company. February 1965.
128. FAVERO, M.S., J.R. Puleo, J.H. Marshall and G.S. Oxborrow. Detection and quantitation of microbial contamination to which spacecraft components are subjected during manufactures. A preliminary report. Department of Health, Education and Welfare, Public Health Service, Communicable Disease Center, Phoenix. 18 March 1965.
129. FRIED, E. and R.J. Kepple. Spacecraft sterilization. Thermal considerations. Presented as Paper No.65-427 at the 2nd annual meeting of the American Institute of Aeronautics and Astronautics, San Francisco, July 1965. (A65-29377)
130. HAGEN, C.A. Life in extraterrestrial environments. Quarterly report L 6023-2. IIT Research Institute. August 1965. (NASA-CR-64577)
131. HALL, L.B., J.R. Miles, C.W. Bruch and P. Tarver. The objectives and technology of spacecraft sterilization. In: Proceedings of the symposium of the American Astronautics Society, Denver, Colorado, February 1965. (A66-42672)
132. HALL, L.B. and C.W. Bruch. Procedures necessary for the prevention of planetary contamination. In: Florkin, M., Ed. Life sciences and space research. Vol.III. A session of the 5th international space science symposium, Florence, May 1964, p.48-62. Amsterdam, North-Holland Publishing Co., 1965.
133. HALL, L.B. Spacecraft sterilization - A new engineering and sanitation technology. Presented at the annual meeting of the American Public Health Association, Chicago, October 1965.
134. HALL, L.B. Spacecraft sterilization and the prevention of planetary contamination. Presented at the 65th annual meeting of the American Society for Microbiology, Atlantic City, April 1965.

135. HANSEN, W., S.R. Hawes, V. Lynch, R. Zeits and A.K. Miller. Experimental study of sterile assembly techniques. Vol.1. Final report. M-56-65-1. Prepared for Jet Propulsion Laboratory by Lockheed Missiles and Space Company. 21 March 1965.
136. JACOBS, R.A., R.C. Nicholas and I.J. Pflug. Heat resistance of Bacillus subtilis spores in atmospheres of different water contents. Michigan State University, Agricultural Experimental Station Quarterly Bulletin 48(2):238-246; November 1965.
137. KEENAN, K.M., M.M. Halbert, J.E. Bearman and G.S. Michaelson. Some statistical problems in the standardization of a method for sampling surfaces for microbiological contamination. Health Laboratory Science 2(4):208-215; October 1965.
138. KOESTERER, M.G. Studies for sterilization of space probe components. Wilmot Castle Company. March 1965. (NASA-CR-191) (N65-18205)
139. LeDOUX, F.N. Encapsulation, electronics, eccofoam. X-723-65-450. Goddard Space Flight Center. November 1965. (NASA TM-X-055394)
140. LeDOUX, F.N. Handling, cleaning, decontamination and encapsulation of MOSFETS circuitry. X-723-35-406. Goddard Space Flight Center. October 1965.
141. MAGISTRALE, V. and W. Shipley. Sterilization group report No.1, Eng. Doc. No.284. Jet Propulsion Laboratory. 28 June 1965. (N70-73640 - N70-73645)
142. MARSHALL SPACE FLIGHT CENTER. Development of a typical Mars probe sterilization container. RAD-SR-65-264. 1st Quarterly Report. Prepared by Avco Corporation. 15 October 1965. (NASA-CR-68118)
143. McDADE, J.J. and V.J. Magistrle. Experimental study of sterile assembly techniques. In: Space programs summary 37-34, Vol.IV, p.23-30. Jet Propulsion Laboratory. 31 August 1965. (NASA-CR-67637)
144. McDADE, J.J., W.W. Paik, M. Christensen and C. Smith. Microbiological activities conducted during the Phase I operation in the Experimental Assembly and Sterilization Laboratory (EASL). Jet Propulsion Laboratory. 31 December 1965.
145. McDADE, J.J., W. Paik, M. Christensen, D. Drummond and V.J. Magistrle. Microbiological studies conducted in the Experimental Assembly and Sterilization Laboratory. In: Space programs summary 37-34, Vol.IV, p.30-37. Jet Propulsion Laboratory. 31 August 1965. (NASA-CR-67637)

146. McNALL, E.G. and W.T. Duffy. Microorganisms in solid materials. Phases I, II, III, IV. Prepared for Jet Propulsion Laboratory by Dynamic Science Corporation. 23 April 1965. (N65-24899)
147. MICHAELSEN, G.S. The bacteriology of "clean rooms." Rep.NSG643. University of Minnesota, School of Public Health. 30 September 1965. (N66-13553)
148. NOWITZKY, A.M. Spacecraft sterilization, techniques and equipment. Boulder, Colorado, Johnson Publishing Company, 1965. (A66-19238)
149. OPFELL, J.B., I. Gemme and T. Cheron. Some observations about and a bibliography on the technological basis of the Soviet Union's spacecraft sterilization processes. Philco-Ford Corporation. December 1966.
150. PHILLIPS, G.B. Contributions of microbiological safety to space research. In: Proceedings of the 10th biological safety conference, Plum Island Animal Disease Laboratory, U.S. Department of Agriculture, Greenport, L.I., N.Y. September 1965.
151. PHILLIPS, G.B. Microbiological barrier techniques. TM 260. U.S. Army, Fort Detrick. December 1965. (AD-666-085)
152. PHILLIPS, G.B. Microbiological contamination control. A state of the art report. U.S. Army, Fort Detrick. April 1965.
153. PISANO, M.A. An investigation of a Sono-chemical approach in sterilization problems. 1st Semiannual Report. St. Johns University. 1965. (N65-81857)
154. PORTNER, D.M. Investigation of microbial contamination inside irradiated and heated electronic components. U.S. Army, Fort Detrick Protection Branch Report of Test No.16-65. 20 April 1965.
155. PORTNER, D.M., R.K. Hoffman and C.R. Phillips. Microbial contamination in clean rooms. Rep.209. U.S. Army, Fort Detrick. March 1965. (AD-456-387)
156. RYDELEK, R.F. Literature review of the compatibility of commercial materials with ethylene oxide-Freon 12 sterilant gas mixture. Prepared for Jet Propulsion Laboratory by Hughes Aircraft Corporation. 1965. (N67-30007)
157. SAGAN, C. and S. Coleman. Spacecraft sterilization and contamination of Mars. Astronautics and Aeronautics 3:22-27; May 1965. (A65-24224)

158. SHORT, L.L., B.C. Newsom and A. Wolgin. Development of concepts for improved spacecraft sterilization. GDC-ERR-AN-885. General Dynamics/Convair. 11 February 1965.
159. SLEPECKY, R.A. Studies on trace elements in the sporulation of bacteria and the germination of bacterial spores. Informal annual report. Syracuse University. 1965. (NASA-CR-63925)
160. TENNEY, J.B., Jr., and R.G. Crawford. Design requirements for the sterilization containers of planetary landers. Presented as Paper No.65-387 at the 2nd annual meeting of the American Institute for Aeronautics and Astronautics, San Francisco, July 1965. (A65-30207)
161. TENNEY, J.B., E. Fried and R.G. Crawford. Thermal sterilization of spacecraft structures. In: Proceedings of the American Institute of Aeronautics and Astronautics meeting on unmanned spacecraft, Los Angeles, March 1965, p.45-59. (A66-38162)
162. WATKINS, H.D. Severe Voyager sterilization criteria set. Aviation Week and Space Technology, p.58-63; 6 December 1965.
- 1966
163. ALDER, V.G., A.M. Brown and W.A. Gillespie. Disinfection of heat-sensitive material by low-temperature steam and formaldehyde. Journal of Clinical Pathology 19:83-89; 1966.
164. AMES RESEARCH CENTER. A feasibility study of an experiment for determining the properties of the Mars atmosphere. Final report, Vol.1. Prepared by Avco Corporation. 1 September 1966. (Advance copy). (NASA-CR-530).
165. ANGELOTTI, R. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 3rd quarterly report. Department of Health, Education and Welfare, Public Health Service, Robert A. Taft Sanitary Engineering Center, Cincinnati, January 1966.
166. ANGELOTTI, R. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 4th quarterly report. Department of Health, Education and Welfare, Public Health Service, Robert A. Taft Sanitary Engineering Center, Cincinnati. April 1966. (NASA-CR-74711)
167. ANGELOTTI, R. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 5th quarterly report. Department of Health, Education and Welfare, Public Health Service, Robert A. Taft Sanitary Engineering Center, Cincinnati. July 1966.

168. ANGELOTTI, R. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 6th quarterly report. Department of Health, Education and Welfare, Public Health Service, Robert A. Taft Sanitary Engineering Center, Cincinnati. October 1966. (NASA-CR-80484)
169. ANONYMOUS. Spacecraft sterilization. Immaculate Voyager will visit Mars. Machine Design 38:106-111; 3 March 1966.
170. ANTHONY, H.V., J.G. Drew, E.F. LaRue and J.P. McDonald. Study of contamination sensors. Vol.I. Executive summary report. Martin-CR-66-18, Vol.I. Martin-Marietta Corporation. April 1966. (N66-37944)
171. AUERBACH, E.E. and S. Russell. New approaches to contaminant control in spacecraft. In: Kammermeyer, Ed. Atmosphere in space cabins and closed environments, p.145-170. New York, Appleton Century Crofts, 1966. (A66-36237)
172. BELLER, W.S. Soviet spacecraft sterilization methods aired at COSPAR. Missiles and Rockets 18:17-18; 16 May 1966.
173. BIOLOGICAL CONTAMINATION CONTROL COMMITTEE. Microbiological barrier equipment and techniques. A state of the art report. American Association for Contamination Control. March 1966.
174. BOLLEN, W.B. Systematic description of bacterial isolants from rigorous environments. Prepared for Jet Propulsion Laboratory by Oregon State Univeristy. 1 April 1966.
175. BOTAN, E.A., J.A. Gautraud, T.H. Rider and W.J. Schafer. Biological burden estimation of Mars probes and capsules and a method of burden control. In: Technical papers of the American Institute of Aeronautics and Astronautics/American Astronautical Society "Stepping stones to Mars" meeting, Baltimore, March, 1966, p.501-507. (A66-25287)
176. BREWER, J.H. and R.J. Arnsberger. Biological-chemical indicator for ethylene oxide sterilization. Journal of the Pharmaceutical Sciences 55(1):57-59; January 1966.
177. CALOF, R., A. Depbolt, J. Hamer, D. Kessler, T. Thompson and G. Winterton. A study of critical sterilization problems on a Mars atmospheric entry probe. Vol.I and II. NSL 66-3. Northrop Corporation. June 1966. (X66-19071 and X66-19072)
178. CAMERON, R.E. and G.B. Blank. Soil studies - Desert microflora. XI. Desert soil algae survival at extremely low temperatures. In: Space programs summary 37-37, Vol.IV, p.174-181. Jet Propulsion Laboratory. February 1966.

179. CLAGHORN, A. Sterilization with ethylene oxide gas mixtures. Inhalation Therapy 11(5):76-83, 87. October 1966. (PB 186462)
180. COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA. Reduction of microbial dissemination; germicidal activity of ethylene oxide; reduction of microbial contamination on surfaces. 6th quarterly report. Department of Health, Education and Welfare, Public Health Service, Atlanta. February 1966.
181. COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA. Reduction of microbial dissemination; germicidal activity of ethylene oxide; reduction of microbial contamination on surfaces. Evaluation of leakage of microbial contamination from space suits. 7th quarterly report. Department of Health, Education and Welfare, Public Health Service, Atlanta. 16 May 1966. (NASA-CR-75733)
182. CORNELL, R.G. A nomenclature of symbols relevant to the probability of contaminating Mars. TR 5. Florida State University, Department of Statistics. 24 August 1966. (NASA-CR-77753)
183. CORNELL, R.G. Sterilization requirements. TR 1. Florida State University, Department of Statistics. 14 February 1966. (NASA-CR-704790)
184. COSPAR CONSULTATIVE GROUP, CHAIRMAN. Potentially harmful effects of space experiments. In: Minutes of the meeting of the Executive Committee on Space Research at the 9th meeting of COSPAR, Vienna, May 1966.
185. CRAVEN, C.W., J.J. McDade and J.O. Light. Sterilization and quarantine parameters for consideration during the design of planetary vehicles. In: Spacecraft Sterilization Technology, p.43-50. Washington, D.C., NASA, 1966. (NASA SP-108) (N67-14766)
186. CRAWFORD, J.G. and J.F. Zanks. The assembly/sterilizer - A facility for the sterilization and assembly of spacecraft. In: Technical papers of the American Institute of Aeronautics and Astronautics/American Astronautical Society "Stepping stones to Mars" meeting, Baltimore, March 1966, p.346-350. (A66-25270)
187. CZARNECKI, E.G., J.A. Stern and L.B. Barlow. The probability of planetary contamination by space probes. In: Technical papers of the American Institute of Aeronautics and Astronautics/American Astronautical Society "Stepping stones to Mars" meeting, Baltimore, March 1966, p.526-531. (A66-25290)

188. FARMER, F.H. Microbiological contamination control in spacecraft sterilization. Presented at the Sterilization Technology Symposium at the 13th annual technical meeting of the Institute of Environmental Sciences, San Diego, April 1966.
189. FORT DETRICK. The space vehicle sterilization problem. Quarterly report. U.S. Army Biological Center. November 1966. (NASA CR-79735) (N67-80059)
190. GODDARD SPACE FLIGHT CENTER. Sterilization. A selected bibliography from the literature retrieval system. X-450-66-53. March 1966. (N68-12946)
191. HALL, L.B. Contamination and sterilization. Presented at the NASA/University of Virginia Biospace Technology Training Program, Wallops Island, Virginia. August 1966.
192. HALL, L.B. The objectives and technology of spacecraft sterilization. In: Biology and the exploration of Mars, NASA-NRC Publ.1296, p.463-465. Washington, D.C., National Academy of Sciences - National Research Council, 1966. (N66-36492)
193. HALL, L.B. Sterilizing space probes. International Science and Technology Magazine 52:50-53,56,61; April 1966. (A66-27844)
194. HOFFMAN, R.K., L.M. Buchanan and D.R. Spiner. Beta-propiolactone vapor decontamination. Applied Microbiology 14(6):989-992; November 1966.
195. HOROWITZ, N.H. The biological significance of search for extra-terrestrial life. TR-32-1000. Jet Propulsion Laboratory. 15 August 1966. (NASA-CR-77550)
196. JONES, D.L. and C.R. Phillips. Sterilization with methyl bromide vapor. TM 304. U.S. Army Biological Center, Fort Detrick. July 1966. (AD-636-846) (N66-37450).
197. KAUTZ, G.P. Test environments associated with the sterilization of planetary capsules. In: Proceedings of the annual technical meeting of the Institute of Environmental Sciences, San Diego, April 1966, p.481-484. (A66-30493)
198. LANGLEY RESEARCH CENTER. Comparative studies of conceptual design and and qualification procedures for a Mars Probe/lander. Final report, Vol.IV. Sterilization. AVSSD-0006-66-RR. Prepared by Avco Corporation. 11 May 1966. (NASA-CR-66134)
199. LANGLEY RESEARCH CENTER. Comparative studies of conceptual design and qualification procedures for a Mars probe/lander. Final report, Vol.IV. Sterilization, Appendix C (with 8 nomogram enclosures). AVSSD-0006-66-RR. Prepared by Avco Corporation. 22 October 1966.

200. LEAMAN, A.B. Noncontaminating separation systems for spacecraft (Project Zip). In: Hertzl, G.G., Ed. Aerospace mechanisms. Proceedings of the 1st symposium, sponsored by Jet Propulsion Laboratory and Lockheed Missiles and Space Company, Santa Clara, Cal., May 1966, p.61-72. (N67-16906)
201. LeVORA, N.W. Sterilization literature abstracts. ER 14111. Martin Marietta Corporation. February 1966. (N68-85813).
202. LOCKYEAR, W.H. Electronic parts sterilization program at the Jet Propulsion Laboratory. In: Spacecraft sterilization technology. NASA SP-108, p.313-326. Washington, D.C., NASA, 1966.
203. LORSCH, H.G. Biocontamination control. Space Aeronautics 46(6):82-91; November 1966. (A67-14425)
204. LUTWACK, R. Sterilizable battery. In: Space programs summary 37-42, Vol.IV, p.35-36. Jet Propulsion Laboratory. 31 December 1966.
205. MAGISTRALE, V.J. Engineering problems in capsule sterilization. Astronautics and Aeronautics 4:80-84; February 1966. (A66-20249)
206. MANDROVSKY, B. Spacecraft sterilization procedures in the USSR. Meeting on sterilization of space vehicles, University of California at Los Angeles, May 1962. Library of Congress, Aerospace Technology Division, Information letter. 5 August 1966.
207. MARSHALL SPACE FLIGHT CENTER. Development of a typical Mars landing capsule sterilization container. 2nd quarterly report. RAD-SR-66-14. Prepared by Avco Corporation. 15 January 1966. (NASA-CR-70589)
208. MARSHALL SPACE FLIGHT CENTER. Development of a typical Mars landing capsule sterilization container. 3rd quarterly report. AV SSD-0031-66-CR. Prepared by Avco Corporation. 15 April 1966. (NASA-CR-76146)
209. MARSHALL SPACE FLIGHT CENTER. Development of a typical Mars landing capsule sterilization container. Final report. AV SSD-0105-66-CR. Prepared by Avco Corporation. 28 June 1966. (NASA-CR-76487)
210. McDADE, J.J., W.E. Clapper and W.J. Whitfield. Monitoring clean areas. Sandia Laboratory. 1966.
211. McDADE, J.J., C.W. Bruch, M.S. Favero, D. Vesley and J.B. Ingles. Standard procedures for the microbiological examination of space hardware. Washington, D.C., NASA, April 1966.

212. MINNESOTA, UNIVERSITY OF. Basic studies in environmental microbiology as related to planetary quarantine. Progress Report. School of Public Health. June 1966.
213. NASA. Handbook for contamination control on the Apollo program. NHB 5300.3. Office of Manned Space Flight. Washington, D.C., NASA, August 1966. (N67-18074)
214. NASA. Spacecraft sterilization technology. NASA SP-108. Washington, D.C., NASA, 1966.
215. NOWITZKY, A.M. An engineer looks at spacecraft sterilization. In: Proceedings of the annual technical meeting of the Institute of Environmental Sciences, San Diego, April 1966, p.471-480. (A66-30492)
216. OPFELL, J.B. and W. Bandaruk. Microbial contaminants in the interiors of spacecraft components. In: Brown, A.H. and M. Florkin, Eds. Life Sciences and Space Research. Vol.VI. A session of the 6th international space science symposium, Mar del Plata, Argentina, May 1965. Washington, D.C., Spartan Books, 1966.
217. PAIK, W.W., M.R. Christensen and J.A. Stern. Microbiological survey of environmentally controlled areas. In: Space programs summary 37-41, p.7-16. Jet Propulsion Laboratory. 31 October 1966. (NASA-CR-81201)
218. PHILLIPS, G.B. Biological contamination control. Presented at a seminar on "A management engineering approach to the control of contamination," Los Angeles, October 1966.
219. PHILLIPS, G.B. Microbiological barrier equipment and techniques. Contamination Control 5(11):16-17,26; November 1966.
220. PISANO, M.A., R.M.G. Boucher and I.E. Alcamo. Sterilizing effects of high intensity airborne sonic and ultrasonic waves. Applied Microbiology 14(5):732-738; September 1966.
221. PORTNER, D.M. Effectiveness of dry heat and ethylene oxide gas upon spore contamination located between mated surfaces and on exterior surfaces of various materials. U.S. Army, Fort Detrick Protection Branch Report of Test No. 9-67. 7 December 1966.
222. PORTNER, D.M. A study of dry heat sterilization of microorganisms at 105°C. U.S. Army, Fort Detrick Protection Branch Report of Test No.6-66. 26 January 1966. (N66-17088)

223. PULEO, J.R., M.S. Favero, N.J. Petersen and G.S. Oxborrow. Services provided in support of the planetary quarantine requirements of NASA. Report No.13. Department of Health, Education and Welfare, Public Health Service, Communicable Disease Center, Phoenix Field Station. 8 June 1966.
224. SANDIA LABORATORY. Planetary Quarantine Department. 1st quarterly report. July 1966. (NASA-CR-76987)
225. SANDIA LABORATORY. Planetary Quarantine Department. 2nd quarterly report. October 1966. (NASA-CR-80201)
226. SANDIA LABORATORY. Planetary Quarantine Department. 3rd quarterly report. December 1966. (NASA-CR-81784)
227. SHERRY, E.J. and C.A. Trauth, Jr. An assembly contamination model. SC-RR-66-421. Sandia Laboratory. July 1966.
228. SILVER, R.H. and S.H. Kalfayan. An automatic ethylene oxide decontamination system. In: Space programs summary 37-40, Vol.IV, p.103-106. Jet Propulsion Laboratory. 31 August 1966.
229. STEVENS, J. Environmental specification Voyager capsule flight equipment type approval and flight acceptance test procedures for the heat sterilization and ethylene oxide decontamination environments. VOL-50503-ETS. Jet Propulsion Laboratory. 12 January 1966.
230. SULLIVAN, L. Investigation of the reliability of sterile insertion techniques for spacecraft. Monthly letter report. Martin Marietta Corporation. July 1966.
231. TOBEY, W.H. Flight capsule contamination probability from viable organism penetration of bio-barrier meteoroid holes. PR 22-10-2. Martin Company. September 1966.
232. UNGAR, A., R.E. Wheeler and D.L. Roberts. Probability of biological contamination of Mars. Final report. IIT Research Institute. March 1966.
233. UNITED STATES GOVERNMENT. Clean room and work station requirements, controlled environment. Federal Standard No.209a. Revised edition. Washington, D.C., General Services Administration, Business Service Center. 10 August 1966.
234. WATKINS, H.D. Voyager effort focused on sterilization. Aviation Week and Space Technology 84(1):58-59,61,64-65,67-68; 3 January 1966.

1967

235. ANGELOTTI, R. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 7th quarterly report. Department of Health, Education and Welfare, Public Health Service. National Center for Urban and Industrial Health, Cincinnati. January 1967. (N67-19086)
236. ANONYMOUS. JPL develops double vacuum chamber for spacecraft tests. Aerospace Technology, p.52-53; 23 October 1967.
237. ANONYMOUS. Spacecraft-sterilization issue may effect pace of Mars and Venus exploration. Astronautics and Aeronautics 5(5):93-94; 1967.
238. ARNETT, J.C., M. Dimitrov, J.P. McDonald and A.A. Rothstein. Design feasibility study of sterile insertion techniques. Final Technical Report. Martin Marietta Corporation. October 1967. (NASA-CR-1-1632) (N69-29726)
239. ASTAFYEVA, A.K., V.I. Vashkov, N.V. Ramkova and E.N. Nikiforva. Methods for spacecraft sterilization. In: Brown, A.H. and F.G. Favorite, Eds. Life sciences and space research. Vol.V. A session of the 7th international space science symposium, Vienna, May 1966, p.38-43. Amsterdam, North-Holland Publishing Company, 1967. (A67-29100)
240. AUSTIN, P.R. Spacecraft preparation and sterilization as state of the art. Contamination Control 6:32,34,35. August 1967. (A67-36804)
241. BORICK, P.M. and M.G. Fogarty. Effects of continuous and interrupted radiation on microorganisms. Applied Microbiology 15(4): 785-789; July 1967.
242. BOTAN, E.A. and T.H. Rider. Experimental Assembly and Sterilization Lab (EASL) microbiological assay and certification of spacecraft hardware sterility. EASL 300.01 (Supersedes EASL 300.00) AVSSD-0134-67-CR Prepared for Jet Propulsion Laboratory by Avco Corporation. 15 April 1967. (N68-22635)
243. BOUCHER, R.M.G., M.A. Pisano, G. Tortora and E. Sawicki. Synergistic effects in sonochemical sterilization. Applied Microbiology 15(6):1257-1261; 1967. (A68-2216)
244. BRANNEN, J.P. A rational model for spacecraft sterilization requirements. SC-RR-67-256. Sandia Corporation. April 1967. (NASA-CR-83799)

245. BREWER, W.A. and P.A. Kales. Assembly of CMTM for purposes of determining areas of contact during the assembly process. Phase 2. AVSSD-0303-67-CR Prepared for Jet Propulsion Laboratory by Avco Corporation. 15 August 1967. (N68-22521) (NASA-CR-94371)
246. CORNELL, R.G. Estimation of the parameters in exponential decontamination models. TR 8. Florida State University, Department of Statistics. 1 February 1967. (NASA-CR-82663)
247. CRAVEN, C.W. and R.R. Wolfson. Planetary quarantine. Techniques for the prevention of contamination of the planets by unsterilized spaceflight hardware. TR 32-1216. Jet Propulsion Laboratory. 14 December 1967. (NASA-CR-91343) (N68-13079)
248. CRAWFORD, R.L. and P.V. Popat. Heat sterilizable and impact resistant Ni-Cd battery development. Vol.1. Electrochemistry of heat-sterilizable sealed cells. Final report. Prepared for Jet Propulsion Laboratory by Texas Instruments, Inc. 1 July 1967. (NASA-CR-109854)
249. DeGRAFF, E. and W.C. Cooley. Evaluation of current technology in attaining planetary quarantine requirements for spacecraft sterilization. Final report, Vol.I. TR-018, Vol.I. Exotech, Inc. 10 April 1967.
250. DeGRAFF, E. and W.C. Cooley. Sterilizable status sheets. Final report, Vol.II. TR-108, Vol.II. Exotech, Inc. 10 April 1967.
251. DRUMMOND, D. and I.J. Pflug. Study of attributes of mated surfaces that affect the heat destruction of microorganisms located in these areas. In: Environmental microbiology as related to planetary quarantine. Progress report, p.24-25. University of Minnesota, School of Public Health, December 1967. (N68-26293)
252. GENERAL ELECTRIC COMPANY. A research study to definitize a bio-isolation suit system (BISS). Final report. GE Doc.67S 0888. Re-entry Systems Department. 25 August 1967. (NASA-CR-66441) (N67-34812)
253. GLASS, A.A. A research study to definitize a bioisolator suit system. Addendum to final report. GE Doc.67SD 2047. General Electric Company 15 December 1967. (NASA-CR-6641-A) (N68-13172)
254. GREENE, V.W., B. Walker, Jr. and O.A. Anderson. Methodology of measuring internal contamination in space hardware. Final report. University of Minnesota, School of Public Health. June 1967. (NASA-CR-90538)

255. HOTCHIN, J., P. Lorenz, A. Markusen and C. Hemenway. The survival of microorganisms in space. Further rocket and ballon borne exposure experiments. In: Brown, A.H. and F.G. Favorite, Eds. Life sciences and space research. Vol.V. A session of the 7th international space science symposium, Vienna, May 1966, p.1-6. Amsterdam, North-Holland Publishing Company, 1967. (A66-29965)
256. JET PROPULSION LABORATORY. Planetary quarantine plan Voyager project. Document 818-11-PQ001. Prepared for NASA, March 1966, revised twice in 1967.
257. KALFAYAN, S.H. and R.H. Silver. Ethylene oxide-Freon 12 decontamination procedure: Reactions in the decontamination chamber and effective air-flush periods. In: Space programs summary No. 37-48, Vol.III, p.106-108. Jet Propulsion Laboratory. 31 December 1967.
258. LeDOUX, F.N. Decontamination of AIMP-D spacecraft. X-723-67-171. Goddard Space Flight Center. April 1967.
259. LIGHT, J.O., W. Vishniac, C.W. Craven and L.B. Hall. A discussion of the planetary quarantine constraints. I. An introduction to the problems of planetary quarantine. In: Brown, A.H., and F.G. Favorite, Eds. Life sciences and space research, Vol.V. A session of the 7th international space science symposium, Vienna, May 1966, p.7-21. Amsterdam, North-Holland Publishing Company, 1967. (A66-29966)
260. LUNNEY, E.J. and E.A. Botan. Sterilization assembly and development routine cleaning and decontamination of SADL facility. AVSSD-0136-67-CR. Prepared for Jet Propulsion Laboratory by Avco Corporation. 15 April 1967. (NASA-CR-94381) (N68-22682)
261. LYLE, R.G. Technical manuals and planning study in planetary quarantine. 1st quarterly report. Exotech, Inc. 9 November 1967.
262. MARTEN, R.A. Some new concepts in contamination control for Tital IIIB program. Contamination Control 6:18-20; October 1967. (A67-41499)
263. MINNESOTA, UNIVERSITY OF, School of Public Health. Environmental microbiology as related to planetary quarantine. Progress report. December 1967. (N68-26293)
264. MURRAY, B.C., M.E. Davies and P.K. Eckman. Planetary contamination. II. Soviet and U.S. practices and policies. Science 155(3769): 1505-1511; 24 March 1967. (A67-23580) (AD 648 864)

265. NASA. Outbound lunar biological contamination control: Policy and responsibility. NPD 8020.8. Washington, D.C., NASA, 6 September 1967.
266. NASA. Outbound planetary biological contamination control: Policy and responsibility. NPD 8020.10. Washington, D.C., NASA, 6 September 1967.
267. NASA. Outbound spacecraft: Basic policy relating to lunar and planetary contamination control. NPD 8020.7. Washington, D.C., NASA, 6 September 1967.
268. NATIONAL COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA. Reduction of microbial dissemination; germicidal activity of ethylene oxide; reduction of microbial contamination on surfaces. Evaluation of leakage of microbial contamination from Gemini space suits. 8th quarterly report. Department of Health, Education and Welfare, Public Health Service, Atlanta. 8 April 1967.
269. NATIONAL COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA. Reduction of microbial dissemination; germicidal activity of ethylene oxide; reduction of microbial contamination on surfaces. Evaluation of leakage of microbial contamination from Gemini space suits. Final report. Department of Health, Education and Welfare, Public Health Service, Atlanta. October 1967.
270. OLSON, R.L., R.H. Green, E.A. Gustan and A.J. Pilgrim. Microbial survival after simulated meteoroid impact. In: Developments in industrial microbiology. Vol.8. Proceedings of the 23rd general meeting of the Society for Industrial Microbiology, College Park, Md., August 1966, p.235-246. Washington, D.C. American Institute of Biological Sciences, 1967.
271. PAULUS, H.J. and V. Goppers. Detection of low levels of microbial contamination on surfaces by chemical approaches. In: Environmental microbiology as related to planetary quarantine. Progress report, p.21-23. University of Minnesota, School of Public Health, December 1967. (N68-26293)
272. QUESNEL, L.B., J.M. Hayward and J.W. Barnett. Hot air sterilization at 200°. Journal of Applied Bacteriology 30(3):518-528; 1967.
273. SANDIA LABORATORY. Planetary quarantine. 7th Quarterly Report. December 1967.
274. STERN, J.A. and A.R. Hoffman. Recommendations for determination of spacecraft sterilization process times. Presentation to NASA/AIBS Spacecraft Sterilization Committee, Houston. 13 April 1967.

275. STEWARD, D.L. and J.C. Hurgeton. Effect of current cleaning procedures on sterilization of spacecraft components. R-ME-IN-67-7. Marshall Space Flight Center. July 1967.
 276. VAN ALLEN, R.T. and F.J. Beyerle. Contamination control. In: Research achievements review, Vol.II, Report No.11, p.108. Marshall Space Flight Center. 1967. (NASA TM-X-53721)
 277. VASHKOV, V.I. and A.G. Prishchep. Efficiency of sterilization by making use of ethylene oxide and methyl bromide mixture. In: Brown, A.H. and F.G. Favorite, Eds. Life sciences and space research. Vol.V. A session of the 7th international space science symposium, Vienna, May 1966, p.44-50. Amsterdam, North-Holland Publishing Company, 1967.
 278. VESLEY, D. and C. Smith. Basic studies in environmental microbiology as related to planetary quarantine. I. Assay methodology. II. Natural die-off of contaminants. Progress report. University of Minnesota, School of Public Health. June 1967. (N70-73637)
 279. VESLEY, D. and G. Smith. Die-off of microbial contamination. In: Environmental microbiology as related to planetary quarantine. Progress report, p.6-12. University of Minnesota, School of Public Health. December 1967. (N68-26293)
 280. VESLEY, D. and G. Smith. Space hardware assay methodology. In: Environmental microbiology as related to planetary quarantine. Progress report, p.1-5. University of Minnesota, School of Public Health. December 1967. (N68-26293)
 281. WRIGHT, D.E. and A.K. Serrell. Bibliography on applications of ethylene oxide. Biological Sciences Communication Project. June 1967. (N67-28787)
 282. ZHUKOVA, A.I. and V.K. Kozlova. Resistance of certain strains of microorganisms to ultraviolet rays. NASA TT-F-10720. February 1967. (N67-18938)
 283. ZHUKOVA, A.I. and V.K. Kozlova. Viability of microorganisms in the desert soils of Turkmenia. NASA TT-F-10721. February 1967. (N67-28222)
- 1968
284. ANGELOTTI, R. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 14th quarterly report. Department of Health, Education and Welfare, Public Health Service, National Center for Urban and Industrial Health, Cincinnati. October 1968. (N69-13436)

285. BERMAN, B. and D.W. Jenkins, Eds. Spacecraft sterilization and planetary quarantine. In: Significant achievements in space science, NASA SP-167, p.62-74. Washington, D.C., NASA, 1968.
286. BOMAR, M. The age of Bacillus subtilis spores and their resistance to ethylene oxide. In: Sneath, P.H.A., Ed. Proceedings of COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967, p.101-108. Paris, Muray-Print, 1968.
287. BRADY, H.F. Experimental heat chamber for sterilization of large interplanetary structures. Heat chamber configuration selection. MCR-68-431. Marshall Space Flight Center. October 1968.
288. BURSEY, C.H., W. Doble, Jr. and J. Parker. A study of thermal kill of viable organisms during Mars atmosphere entry. Presented at the 3rd thermophysics conference of the American Institute of Aeronautics and Astronautics, Los Angeles, 1968, as Paper 68-752. (A68-34043)
289. CHAMBERLAIN, R.G. Adaptive allocation of planetary quarantine violation probabilities. In: Space programs summary 37-50, Vol.III, p.59-64. Jet Propulsion Laboratory. 30 April 1968. (NASA-CR-95582)
290. COURTNEY, W.J., C.A. Hagen and E.J. Hawrylewicz. A Martian surface simulation facility for bacterial studies. In: Proceedings of the 14th annual technical meeting of the Institute of Environmental Sciences, St. Louis, April 1968, p.327-332. Mount Prospect, Illinois, Institute of Environmental Sciences, 1968.
291. CUDDIHY, E.F. and J. Moacanin. Investigations on sterilizable polymeric battery separator. In: Space programs summary 37-50, Vol.III, p.166-169. Jet Propulsion Laboratory. 30 April 1968. (NASA-CR-95582)
292. DAVIS, D.P. Capsule sterilization canister separation joint. In: Space programs summary 37-49, Vol.III, p.248-249. Jet Propulsion Laboratory. 29 February 1968.
293. DeGRAFF, E.D. Status review of technology developments for spacecraft sterilization. Final report, Vol.I. TRSR-032, Vol.I. Exotech, Inc. 25 May 1968.
294. DeGRAFF, E.D. Status review of technology developments for spacecraft sterilization. Final report, Vol.II. Sterilization status sheets. TRSR-032, Vol.II. Exotech, Inc. 25 May 1968.

295. FORT DETRICK. Quarterly report on NASA contract R-35. U.S. Army, Fort Detrick. November 1968.
296. FRIED, E., J.R. Gillis and M.R. Stahler. Development of quality assurance requirements for planetary spacecraft to be sterilized by heating. Final report. 68SD4361. Marshall Space Flight Center. 15 December 1968. (X69-16142)
297. GAMMON, R.A., K. Kereluk and R.S. Lloyd. Microbial resistance to ethylene oxide. Bacteriological Proceedings 68:A94; 1968.
298. GELEZUMAS, V.L. and A.J. Bryce. Study of the biological cleanability of surfaces using radioisotope tracer techniques. Aerospace Medicine 39(8):856-859; 1968. (A68-38090)
299. HAGEN, C.A., E.J. Hawrylewicz, B.I. Anderson, V.K. Tolkacz and M.L. Ewing. Ability of microorganisms to establish ecological niches in different soils and environments. In: Development of industrial microbiology. Vol.9. Proceedings of the 24th general meeting of the Society for Industrial Microbiology, London, Ontario, August 1967, p.401-414. Washington, D.C., American Institute of Biological Sciences, 1968.
300. HOFFMAN, A.R. and J.A. Stern. Terminal sterilization process calculation for spacecraft. In: Developments in industrial microbiology. Vol.9. Proceedings of the 24th general meeting of the Society for Industrial Microbiology, London, Ontario, August 1967, p.49-64. Washington, D.C., American Institute of Biological Sciences, 1968. (N68-11368)
301. HOFFMAN, R.K. Ethylene oxide sterilization rates and protective influences. In: Sneath, P.H.A., Ed. Proceedings of the COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967, p.75-86. Paris, Muray-Print, 1968. (A69-15940)
302. HOTCHIN, J.H. Panspermia revisited, or have we already contaminated Mars? In: Sneath, P.H.A., Ed. Proceedings of the COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967, p.243-254. Paris, Muray-Print, 1968. (A69-15951)
303. HOTCHIN, J.H., P. Lorenz and C. Hemenway. The survival of terrestrial Microorganisms in space at orbital altitudes during Gemini satellite experiments. In: Brown, A.H. Life sciences and space research. Vol.VI. Proceedings of the open meeting of working group V of the 10th plenary meeting of COSPAR, London, July 1967, p.108-114. Amsterdam, North-Holland Publishing Company, 1968. (A67-35223)

304. JAMES, A.N., Jr. and C.P. Houser. Valve bioload reduction and sterilization study. MEL TR MD-226-68. Hayes International Corporation. 1968. (M70-38855)
305. KALFAYAN, S.H. and R.H. Silver. The ethylene oxide-Freon 12 decontamination procedure B. The quantitative estimation of ethylene oxide concentration by gas. In: Space programs summary 37-49, Vol. III, P.193-196. Jet Propulsion Laboratory. 29 February 1968.
306. KALLINGS, L.O. The place of radiation sterilization in combined techniques. In: Sneath, P.H.A., Ed. Proceedings of the COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967. Paris, Muray-Print, 1968. (A69-15947)
307. KAYE, S. Synergistic effects of ethylene oxide and other agents. In: Sneath, P.H.A., Ed. Proceedings of the COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967, p.133-140. Paris, Muray-Print, 1968. (A69-15945)
308. KOESTERER, M.G., J.R. Gillis and N.W. Behringer. Microbiological studies on planetary quarantine. In: Developments in industrial microbiology. Vol.9. Proceedings on the 24th general meeting of the Society for Industrial Microbiology, London, Ontario, August 1967, p.30-48. Washington, D.C. American Institute of Biological Sciences, 1968.
309. LEVINTHAL, E.C., J. Lederberg and C. Sagan. Relationship of planetary quarantine to biological search strategy. In: Brown, A.H. and F.G. Favorite, Eds. Life sciences and space research. Vol.VI. Proceedings of the open meeting of working group V of the 10th plenary meeting of COSPAR, London, July 1967, p.136-145. Amsterdam, North-Holland Publishing Company, 1968. (A67-35233)
310. LLOYD, R.S., K. Kereluk and R.A. Gammon. The sporicidal activity of ethylene oxide. In: Developments in industrial microbiology. Vol.9. Proceedings of the 24th general meeting of the Society of Industrial Microbiologists, London, Ontario, August 1967, p.442-447. Washington, D.C., American Institute of Biological Sciences, 1968.
311. LORENZ, P., C.L. Hemenway and J.H. Hotchin. The biological effectiveness of solar electromagnetic radiation in space. In: Brown, A.H. and F.G. Favorite, Eds. Life sciences and space research. Vol. VI. Proceedings of the open meeting of working group V of the 10th plenary meeting of COSPAR, London, July 1967, p.100-107. Amsterdam, North-Holland Publishing Company, 1968.

312. LUTWACK, R. Development of the sterilizable battery. In: Space programs summary 37-50, Vol.III, p.97-99. Jet Propulsion Laboratory. 30 April 1968. (NASA-CR-95582)
313. LYLE, R.G. Technical manuals and planning study in planetary quarantine. 2nd quarterly report. Exotech, Incorporated. February 1968.
314. McDONNELL DOUGLAS ASTRONAUTICS COMPANY, EASTERN DIVISION. Class 100 clean room program. Phase I. Pilot shop operations. Rep. G 511. 16 September 1968.
315. McDONNELL DOUGLAS ASTRONAUTICS COMPANY, EASTERN DIVISION. Class 100 clean room program. Phase II. Pilot shop operations. Rep. G 576. 21 October 1968.
316. McDONNELL DOUGLAS ASTRONAUTICS COMPANY, EASTERN DIVISION. Class 100 clean room program. Phase III. Pilot shop operations. Rep. G 829. 30 November 1968.
317. PFLUG, I.J. and C.F. Schmidt. Thermal destruction of microorganisms. In: Lawrence, C.A. and S.S. Block, Eds. Disinfection, sterilization and presentation, p.63-105. Philadelphia, Lea & Febiger, 1968.
318. PHILLIPS, C.R. Sterilization of spacecraft. Quarterly Report. U.S. Army, Fort Detrick. May 1968.
319. PHILLIPS, G.B. and J.H. Brewer. Recent advance in microbiological environmental control. In: Developments in industrial microbiology. Vol.9. Proceedings of the 24th general meeting of the Society for Industrial Microbiology, London, Ontario, August 1967, p.105-121. Washington, D.C., American Institute of Biological Sciences, 1968.
320. REDMANN, G.H. EASL/SADL test and operations. Phase II. In: Space programs summary 37-50, p.71-74. Jet Propulsion Laboratory, 30 April 1968. (NASA-CR-95582)
321. ROTHSTEIN, A.A., R.D. Knight, P.L. Nelson and J.C. Arnett. Develop and test of a sterile insertion repair technique. MCR-67-407. Prepared for Marshall Space Flight Center by Martin Marietta Corporation. January 1968. (X68-17638)
322. ROTHSTEIN, A.A. New concepts on sterilization. I. Alternatives to reduce the problems from terminal heat sterilization. PR-22-10-94-22. Martin Marietta Corporation, Denver Division. January 1968.

323. RUBBO, S.D. and J.F. Gardner. Efficiency of sterilants in terrestrial and extraterrestrial environments. In: Sneath, P.H.A., Ed. Proceedings of the COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967, p.3-18. Paris, Muray-Print, 1968. (A69-15937)
324. SAGAN, C., E.C. Levinthal and J. Lederberg. Contamination of Mars. Science 159(3820):1191-1196; 1968. (A68-23194)
325. SCHALKOWSKY, S., R.C. Kline and E. DeGraff. Effect of microbial release probabilities on spacecraft sterilization requirements. TR-SR-034. Exotech, Inc. August 1968. (NASA-CR-100717)
326. SCHALKOWSKY, S. Estimation of microbial survival in heat sterilization. In: Sneath, P.H.A., Ed. Proceedings of the COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967, p.87-100. Paris, Muray-Print, 1968. (A69-15941) (A67-35264)
327. SCHISSEL, G.Z. Mariner Mars 1969 planetary quarantine plan. Rep. 605-87. Jet Propulsion Laboratory. 22 May 1968. (N70-73635)
328. STERN, J.A. and A.R. Hoffman. Determination of terminal sterilization process parameters. In: Sneath, P.H.A., Ed. Proceedings of the COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967, p.109-120. Paris, Muray-Print, 1968. (A69-15942)
329. STERN, J.A. Planetary quarantine program. Presented at the 1st NASA spacecraft sterilization technology seminar, Jet Propulsion Laboratory, Pasadena, Cal., June 1968.
330. SYKES, G. Control and sampling in sterile rooms. In: Sneath, P.H.A., Ed. Proceedings of the COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967, p.263-268. Paris, Muray-Print, 1968. (A69-15953)
331. TULIS, J.J. Investigation of methods for the sterilization of potting compounds and mated surfaces. 2nd monthly status report. Becton, Dickinson and Company. 11 November 1968.
332. TULIS, J.J. Investigation of methods for the sterilization of potting compounds and mated surfaces. 3rd monthly status report. Becton, Dickinson and Company. 6 December 1968.

333. UNGAR, A. Probability of biological contamination of Mars. Presented at the 34th national meeting of the Operations Research Society of America, Philadelphia, November 1968.
334. VASHKOV, V.I., E.N. Kikiforova and Iu.F. Shumaeva. The possibility of using hydrogen peroxide mixed with a detergent to reduce microbial contamination. In: Sneath, P.H.A., Ed. Proceedings of the COSPAR symposium on sterilization techniques for instruments and materials as applied to space research, London, July 1967, p.123-126. Paris, Muray-Print, 1968. (A69-15943)
335. WILLARD, M.Y. Contamination control in the manufacturing sequence. In: Developments in industrial microbiology. Vol.9. Proceedings of the 24th general meeting of the Society for Industrial Microbiology, London, Ontario, August 1967, p.78-87. Washington, D.C., American Institute of Biological Sciences, 1968.
336. WILSON, D.A. A study of the factors influencing sterilization by heat and radiation. Journal of the Medical Laboratory Technology 25(4):301-312; 1968.

1969

337. ALLEN, H.N. and V.A. DesCamp. Contamination control handbook for ground fluid systems. Final technical publication. GP-871 (MCR-69-485). Prepared for Kennedy Space Center by Martin Marietta Corporation. September 1969. (NASA CR-110506)
338. CAMERON, R.E., G.B. Blank and N.H. Horowitz. Bacterial growth in agar subjected to freezing and thawing. Part I. Cryogenic Technology 5(6):253-255; 1969.
339. CAMERON, R.E. Desert microflora. In: Semiannual review of research and advanced development, Vol.I, p.301-303. Jet Propulsion Laboratory. 15 August 1969. (NASA-CR-105386)
340. CAMPBELL, R.W. RTG radiation test laboratory. In: Space programs summary 37-59, Vol.III, p.124-127. Jet Propulsion Laboratory. 31 October 1969.
341. CASEY, E.F. Apollo and contamination control. Rocketdyne's role. Contamination Control 8(10):16-19; October 1969. (A70-11078)
342. CHRISTENSEN, M.R. Microbiological monitoring of spacecraft assembly facility operations. In: Semiannual review of research and advanced development, Vol.I, p.315-316. Jet Propulsion Laboratory. 15 August 1969.

343. DRUMMOND, D.W., I.J. Pflug and J. Haugen. The effect of humidity, location, surface finish and separator thickness on the dry heat destruction of B. subtilis var. niger spores located between mated surfaces. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.3, p.13-40. University of Minnesota, School of Public Health. December 1969.
344. EXOTECH, INC. Development and application of a system model for spacecraft sterilization. Final report. August 1969. (NASA-CR-107041) (N70-12195)
345. FARMER, F.H. and R.M. Hueschen. Sterile access studies in the Pilot Assembly Sterilizer System (PASS). In: Proceedings of the 8th annual technical meeting and exhibit of the American Association for Contamination Control, New York, May 1969, p.63-66. (A70-16708)
346. FAVERO, M.S. Procedures for the microbiological examination of space hardware: NASA's current edition. In: Proceedings of the 8th annual technical meeting and exhibit of the American Association for Contamination Control, New York, May 1969, p.33-37. (A70-16705)
347. FINKELSTEIN, H. Air pollution aspects of biological aerosols (micro-organisms). Litton Systems, Inc. September 1969. (Contract PH-22-68-25)
348. FORT DETRICK. Quarterly status report on NASA Contract R-35. U.S. Army, Fort Detrick. August 1969.
349. FORT DETRICK. Quarterly status report on NASA Contract R-35. U.S. Army, Fort Detrick. November 1969.
350. GARST, D.M. and C.A. Trauth, Jr. Contamination control: a very old, new field. Presented as paper 69-651 at the annual conference of the Instrument Society of America, Houston, October 1969.
351. GARST, D.M. and H.D. Sivinski. Present day usage of clean rooms in medical and life science research. Presented as paper 69-654 at the annual conference of the Instrument Society of America, Houston, October 1969.
352. GOPPERS, V. Detection of low levels of microbial contamination on surfaces by chemical approaches. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.3, p.41-43. University of Minnesota, School of Public Health. December 1969.

353. GREEN, R.H., A.R. Hoffman and A.S. Irons. Planetary quarantine analysis. In: Semiannual review of research and advanced development, Vol.I, p.313-314. Jet Propulsion Laboratory. 15 August 1969.
354. GRIGOR'YEV, Yu.G., P.P. Ivanov and A.S. Ushakov. Eleventh annual COSPAR session. JPRS 48042. Washington, D.C., Joint Publications Research Service, 14 May 1969.
355. IRONS, A.S. Development of ethylene oxide process specifications and procedures. In: Semiannual review of research and advanced development, Vol.I, p.317-320. Jet Propulsion Laboratory. 15 August 1969.
356. JAMES, MRS. A.N., Jr. Evaluation of alcohol sporulation method. Prepared for Marshall Space Flight Center by Hayes International Corporation. 12 September 1969. (NASA-TM-X-53891)
357. JET PROPULSION LABORATORY. Planetary quarantine. Presented at the semiannual NASA spacecraft sterilization technology seminar, Cape Kennedy, February 1969.
358. JET PROPULSION LABORATORY. Semiannual review of research and advanced development. Vol.1. 15 August 1969. (NASA-CR-1-5386) (N69 35839)
359. LASSEGARD, W.E. and V.G. Schenk. Apollo and contamination control. McDonnell Douglas' role. Contamination Control 8(10): 20-23; October 1969. (A70-11079)
360. LEWIS, T.M. Monitoring airborne particulate contamination. Marshall Space Flight Center. 12 September 1969. (NASA-TM-X-53881)
361. MARSHALL SPACE FLIGHT CENTER. Effect of current cleaning procedures on sterilization of spacecraft components. 12 September 1969. (NASA TM-X-53885)
362. MOORE, B., I.J. Pflug and J. Haugen. Dry heat destruction rates of B. subtilis var. niger in a closed system. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.3, p.44-50. University of Minnesota, School of Public Health, December 1969.
363. NASA. Astronautics and aeronautics, 1968. Chronology of science, technology, and policy. Washington, D.C., NASA, 1969. 437p. (NASA SP-4010)

364. NATIONAL COMMUNICABLE DISEASE CENTER. Services provided in support of the planetary quarantine requirements of NASA; germicidal activity of ethylene oxide; reduction of microbial dissemination. 11th summary report of progress. Department of Health, Education and Welfare, Public Health Service, Atlanta. January 1969.
365. NELSON, B.A. Mathematical models for contamination and pollution prediction. Presented at the 15th annual technical meeting of the Institute of Environmental Sciences, Anaheim, Cal., April 1969.
366. PAIK, W.W. and A.R. Hoffman. Review of heat specifications. In: Semiannual review of research and advanced development, Vol.I, p.309-312. Jet Propulsion Laboratory. 15 August 1969.
367. PFLUG, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.3. University of Minnesota, School of Public Health, December 1969. (NASA-CR-110431).
368. SCHALKOWSKY, S. Ninth monthly status report on Contract NASw-1734. Exotech Incorporated. 29 January 1969.
369. STERILIZATION GROUP. Sterilization supporting activities. In: Semiannual review of research and advanced development, Vol.I, p.325-326. Jet Propulsion Laboratory. 15 August 1969.
370. TAYLOR, D.M. and G.H. Redmann. Biological monitoring of the capsule mechanical training model during assembly in the sterilization assembly development laboratory. Doc.611-7. Jet Propulsion Laboratory. 25 August 1969.
371. TAYLOR, D.M., G.M. Renninger and M.D. Wardle. A feasibility study of liquid sterile insertion. Doc.611-5. Jet Propulsion Laboratory. 21 July 1969.
372. VESLEY, D., M. Halbert, I.J. Pflug, J. Ramquist and S. Fowler. Dry heat destruction rates of microorganisms on surfaces as a function of relative humidity. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.3, p.51-68. University of Minnesota, School of Public Health, December 1969.
373. VESLEY, D., G. Smith, J. Haugen and Y. Thun. Survival of microbial spores under several temperature and humidity conditions. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.3, p.1-12. University of Minnesota, School of Public Health, December 1969.

374. WHITFIELD, W.J., D.M. Garst and K.F. Lindell. Instrumentation and methodology in measurement of viable and nonviable contamination. Presented as paper 69-653 at the annual conference of the Instrument Society of America, Houston, October 1969.
375. WHITFIELD, W.J., J.W. Beakley, V.L. Dugan, L.W. Hughes, M.E. Morris and J.J. McDade. Vacuum probe: new approach to the microbiological sampling of surfaces. Applied Microbiology 17(1): 164-168; January 1969.
- 1970
376. ANONYMOUS. Life in the clouds. Time, p.42; 2 November 1970.
377. BARRETT, M.J. and J.L. Woodall. The release of buried contamination by aeolian erosion. In: Analytical techniques in planetary quarantine. Final report. TRSR 70-13, Appendix C. Exotech, Incorporated. May 1970.
378. BOLLEN, W.B. and K.M. Kemper. Microorganism study: bacterial isolants from harsh environment. Final report. Prepared for Jet Propulsion Laboratory by Oregon State University. 22 May 1970. (NASA-CR-110558)
379. BOND, W.W., M.S. Favero, N.J. Petersen and J.H. Marshall. Dry-heat inactivation kinetics of naturally occurring spore populations. Applied Microbiology 20(4):573-578; October 1970.
380. BOURRIEU, J.C., C. Elbaz, J.F. Faugere and A. Paillous. Space and spacecraft environment. In: 3rd symposium on automatic control of the International Federation of Automatic Control, Toulouse, France, March 1970.
381. BRADLEY, F.D. and S.G. Moritsugu. Scientific publications and presentations relating to planetary quarantine. Vol.V. 1969 Supplement. Biological Sciences Communication Project. September 1970.
382. BRANNEN, J.P. An analysis of vacuum effects in the sterilization of microorganisms. Sandia Laboratories. August 1970. (NASA-CR-112962)
383. BRANNEN, J.P. Dry heat sterilization modeling. Interim Report SC-RR-70-439. Sandia Laboratories. August 1970. (NASA-CR-113817)
384. BRANNEN, J.P. Microbial sterilization in ultra-high vacuum and outer space: a kinetic comparison. Space Life Sciences 2(2):219-220; September 1970. (NASA-CR-112963)

385. BRANNEN, J.P. On the role of DNA in wet heat sterilization of micro-organisms. *Journal of Theoretical Biology* 27:425-432; 1970. Also published as SC-R-70-4181. Sandia Laboratories. August 1970.
386. BRASWELL, J.R., D.R. Spiner and R.K. Hoffman. Adsorption of formaldehyde by various surfaces during gaseous decontamination. *Applied Microbiology* 20(5):765-769; November 1970.
387. BRILL, J.N. Heat-sterilizable, remotely activated battery development program. Final report. Prepared for Jet Propulsion Laboratory by Eagle-Picher Company. 11 March 1970. (NASA-CR-110498)
388. BRUCH, C.W. and M.K. Bruch. Gaseous disinfection. In: Benarde, M., Ed. *Disinfection*, 149-206. New York, Marcel Dekker, Incorporated, 1970.
389. CAMERON, R.E. and J.R. Devaney. Antarctic soil algal crusts: scanning electron and optical microscope study. *Transactions of the American Microscopical Society* 89(2):264-273; 1970.
390. CAMERON, R.E., G.B. Blank and N.H. Horowitz. Bacterial growth in agar subjected to freezing and thawing. II. *Cryogenic Technology* 6(1):16-18; 1970.
391. CAMERON, R.E. Desert microflora. In: *Semiannual review of research and advanced development*. Vol.1. Doc.701-66, p.287-290. Jet Propulsion Laboratory. 16 February 1970.
392. CAMERON, R.E., R.B. Hanson, G.H. Lacy and F.A. Morelli. Soil microbial and ecological investigations in the Antarctic interior. *Antarctic Journal of the United States* 5(4):87,89; July/August 1970.
393. CAMERON, R.E., F.A. Morelli and H.P. Conrow. Survival of microorganisms in desert soil exposed to five years of continuous very high vacuum. TR 32-1454. Jet Propulsion Laboratory. 15 March 1970.
394. CAMPBELL, J.E. Measurement of the destruction of bacterial spores by dry heat. Presented to the meeting of the Planetary Quarantine Advisory Committee, Raleigh, N.C., 11 February 1970.
395. CAPUTO, R.S. Review of radioisotope thermoelectric generators for outer planet missions. In: *Space programs summary* 37-66, Vol.III, P.70-75. Jet Propulsion Laboratory, 31 December 1970.

396. CHEATER, D.J., R.J. Homsey, M.E. Long and J.F. Sontowski. A study of aseptic maintenance by pressurization. Prepared for Langley Research Center by General Electric Company. April 1970. (NASA-CR-66908)
397. CHRISTENSEN, M.R. Development of an ultrasonic/vacuum sampling device. In: Semiannual review of research and advanced development. Vol.1. Doc.701-66, p.317-318. Jet Propulsion Laboratory. 16 February 1970.
398. CHRISTENSEN, M.R. Microbiological monitoring of spacecraft assembly facility operations. In: Semiannual review of research and advanced development. Vol.1. Doc.701-66, p.309-311. Jet propulsion Laboratory. 16 February 1970.
399. CORNELL, R.G. Biostatistics of space exploration: Microbiology and sterilization. Progress report. Florida State University, Department of Statistics. 1 April 1970.
400. CORNELL, R.G. Biostatistics of space exploration: microbiology and sterilization. Final report. Florida State University, Department of Statistics. 15 September 1970. (NASA-CR-113863)
401. CORNELL, R.G. and N.J. Petersen. Evaluation of a quantal response model with estimated concentrations. Biometrics 26(4): 713-722; December 1970.
402. CORNELL, R.G. and A.K. Bansal. Exponential decontamination models for count data. TR 22. Florida State University, Department of Statistics. 1 September 1970.
403. DILLON, R.T., Sr. and D.B. Holdridge. An approach to computerized bacterial identification. SC-RR-70-779. Sandia Laboratories. November 1970.
404. DIMITROV, M. Development of mechanical sterile insertion engineering model hardware. Final report, Vol.II. MCR-69-92. Prepared for Marshall Space Flight Center by Martin Marietta Corporation. January 1970. (NASA-CR-102485)
405. DIMITROV, M. Mechanical sterile insertion system. Quality assurance. Final report, Vol.III. MCR-69-92. Prepared for Marshall Space Flight Center by Martin Marietta Corporation. August 1970.
406. DOYLE, J.E., A.W. McDaniel, K.L. West, J.E. Whitbourne and R.R. Ernst. Ethylene oxide resistance of nondesiccated and desiccated spores of Bacillus subtilis var. niger hermetically sealed in various polymeric films. Applied Microbiology 20(5):793-797; November 1970.

407. DRUMMOND, D.W. and I.J. Pflug. Dry-heat destruction of Bacillus subtilis spores on surfaces: effect of humidity in an open system. Applied Microbiology 20(5):805-809; November 1970.
408. DRUMMOND, D.W. and I.J. Pflug. The effect of humidity, location, surface finish and separator thickness on the dry heat destruction of Bacillus subtilis var. niger spores located between mated surfaces. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.4, p.11-22. University of Minnesota, School of Public Health, June 1970.
409. DUGAN, V.L. Dry heat sterilization modeling. Presented at the Semi-annual NASA spacecraft sterilization technology seminar, Atlanta, April 1970.
410. DUGAN, V.L. A mathematical model for the thermoradiation inactivation of dry Bacillus subtilis var. niger spores. SC-RR-70-203. Sandia Laboratories. April 1970.
411. DUGAN, V.L. Mathematical modeling of thermoradiation synergism. Presented at the semiannual NASA spacecraft sterilization technology seminar, Atlanta, April 1970.
412. DUGAN, V.L. A preliminary analysis of the radiation burden of a typical Mars lander mission. SC-RR-70-769. Sandia Laboratories. December 1970. (NASA-CR-116144)
413. EDWARDS, T.R. An approach to contamination identification. Marshall Space Flight Center. 17 April 1970. (NASA TM-X-64506).
414. ERVIN, G.F. Planetary quarantine operations. In: Semiannual review of research and advanced development. Vol.1. Doc.701-66, p.319-320. Jet Propulsion Laboratory. 16 February 1970.
415. ERVIN, G.F. Planetary quarantine operations. In: Semiannual review of research and advanced development, Doc.701-90, p.237-238. Jet Propulsion Laboratory. 31 August 1970.
416. EXOTECH, INCORPORATED. Analytical techniques in planetary quarantine. Final report. TRSR-70-13. May 1970. (NASA-CR-109886)
417. EXOTECH, INCORPORATED. Planetary microbiological contamination log. (Preliminary) May 1970.
418. EXOTECH, INCORPORATED. Planning, evaluation and analytical studies in planetary quarantine and spacecraft sterilization. 1st quarterly report. 15 June 1970. (NASA-CR-112501)

419. EXOTECH, INCORPORATED. Re-evaluation of planetary quarantine constraints. May 1970.
420. EXOTECH SYSTEMS, INCORPORATED. Analysis of microbial release probabilities. Interim report. TR 71-11. December 1970.
421. EXOTECH SYSTEMS, INCORPORATED. Analytical basis for the estimation of planetary contamination by terrestrial microorganisms. Interim Report. TR 71-14. December 1970.
422. EXOTECH SYSTEMS, INCORPORATED. Estimation of planetary contamination probabilities by non-landing vehicles. Interim report. TR 71-10. December 1970.
423. EXOTECH SYSTEMS, INCORPORATED. Implications of change in probability of microbial growth for Mars. Summary report. TR 71-04. September 1970.
424. EXOTECH SYSTEMS, INCORPORATED. Implications of 1970 COSPAR recommendations on PQ requirements for Mars missions. Summary report. 70-42. 10 June 1970.
425. EXOTECH SYSTEMS, INCORPORATED. Mathematical basis for a diffusion model of microbial spore destruction. Interim report. TR 71-15. December 1970.
426. EXOTECH SYSTEMS, INCORPORATED. Optimization of oven-heating profiles in spacecraft sterilization. Interim report. TR 71-12. December 1970.
427. EXOTECH SYSTEMS, INCORPORATED. Organic constituent inventory for planetary flight missions. Interim report. TR 71-16. December 1970.
428. EXOTECH SYSTEMS, INCORPORATED. Planning, evaluation, and analytical studies in planetary quarantine and spacecraft sterilization. 2nd quarterly report. September 1970. (NASA-CR-114166)
429. EXOTECH SYSTEMS, INCORPORATED. Planning, evaluation and analytical studies in planetary quarantine and spacecraft sterilization. Final report. TR-71-17. December 1970.
430. EXOTECH SYSTEMS, INCORPORATED. Quarantine document system operations manual. Interim report. TR-71-13. December 1970.
431. FARABEE, L.B. A study program on the development of mathematical model(s) for microbial burden prediction. Vol.VIII. Revisions to Vol.VI User's manual. Prepared for Jet Propulsion Laboratory by Martin Marietta Corporation. April 1970. (NASA-CR-110141)

432. FARABEE, L.B. A study program on the development of mathematical model(s) for microbial burden prediction. Vol.X. Final report addendum on Phase IX with revisions to Vol.VI User's manual. MCR-68-97. Prepared for Jet Propulsion Laboratory by Martin Marietta Corporation. September 1970. (NASA-CR-110892)
433. FARMER, F.H. The Model Assembly Sterilizer for Testing (MAST). Prepared for the National Cancer Institute by Langley Research Center. November 1970.
434. FAVERO, M.S. Industrial applications of laminar airflow. In: Developments in industrial microbiology. Vol.11. Preceedings of the 26th general meeting of the Society for Industrial Microbiology held at Burlington, Vermont, August 1969, p.65-77. Washington, D.C., American Institute of Biological Sciences, 1970.
435. FAVERO, M.S. Services provided in support of the planetary quarantine requirements of NASA under Contract W-13,062. Presented to a meeting of the Planetary Quarantine Advisory Committee, Raleigh, North Carolina, 11 February 1970.
436. FAVERO, M.S. Services provided in support of the planetary quarantine requirements of NASA. Report No.28. Department of Health, Education and Welfare, Public Health Service, National Communicable Disease Center, Phoenix Laboratories. January 1970. (NASA-CR-108101)
437. FAVERO, M.S. Services provided in support of the planetary quarantine requirements of NASA. Report No.29. Department of Health, Education and Welfare, Public Health Service, National Communicable Disease Center, Phoenix Laboratories. April 1970. (NASA-CR-110410)
438. FAVERO, M.S. Services provided in support of the planetary quarantine requirements of NASA. Report No.30. Department of Health, Education and Welfare, Public Health Service, National Communicable Disease Center, Phoenix Laboratories. June 1970.
439. FAVERO, M.S. Services provided in support of the planetary quarantine requirements of NASA. Report No.31. Department of Health, Education and Welfare, Public Health Service, Center for Disease Control, Phoenix Laboratories. October 1970.
440. FISCHHELL, R.E. The space environment. Presented at the NASA Bio-space technology training program, Wallops Island, Va. August 1970.

441. FOX, D.G. Sterilization procedures for planetary landers. In: Biological Sciences Communication Project. Bioscience Capsule No.22. June 1970.
442. GARST, D.M. and K.F. Lindell. The development of two closely controlled humidity systems. SC-RR-70-409. Sandia Laboratories. June 1970. (NASA-CR-109869)
443. GIBSON, W.C. and J.L. Modisette. A system for removing contaminants from spacecraft optical systems. Journal of Spacecraft and Rockets 7:353-355. March 1970.
444. GOPPERS, V. and I.J. Pflug. Detection of low levels of microbial contamination on surfaces by chemical approaches. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.4, p.23-30. University of Minnesota, School of Public Health. June 1970.
445. GREEN, R.H., D.M. Taylor and A.R. Hoffman. Planetary quarantine analysis. In: Semiannual review of research and advanced development. Vol.1. Doc.701-66, p.301-304. Jet Propulsion Laboratory. 16 February 1970.
446. GRUMMAN AEROSPACE CORPORATION. Maintainability design criteria for packaging of spacecraft replaceable electronic equipment. Final report. June 1970. (NASA-CR-109931)
447. HAGEN, C.A., E.J. Hawrylewicz, B.T. Anderson and M.L. Cephus. Effect of ultraviolet on the survival of bacteria airborne in simulated Martian dust clouds. In: Vishniac, W. and F.G. Favorite, Eds. Life sciences and space research. Vol.VIII. Proceedings of the open meeting of working group V at the 12th plenary meeting of COSPAR at Prague, 1969, p.53-58. Amsterdam, North-Holland Publishing Company, 1970.
448. HALBERT, M., G. Smith, B. Moore, S. Maki and I.J. Pflug. Dry heat destruction rates of microorganisms on surfaces: studies to evaluate possible sources of variation in the experimental system. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.4, p.45-56. University of Minnesota, School of Public Health. June 1970.
449. HALL, L.B. Ultraclean technology. Science Journal 6:41-46; April 1970.
450. HOFFMAN, A.R. and R.J. Reichert. Mariner Mars 1971 planetary quarantine plan. Doc. 610-18, Part 1. Jet Propulsion Laboratory. 13 April 1970.

451. HOFFMAN, A.R. Stochastic math model. In: Semiannual review of research and advanced development. Vol.1. Doc.701-66, p.313-314. Jet Propulsion Laboratory. 16 February 1970.
452. HOFFMAN, A.R. Stochastic math model. In: Semiannual review of research and advanced development. Doc. 701-90. p.233-234. Jet Propulsion Laboratory. 31 August 1970. (NASA-CR-86437) (N70-39411)
453. HOFFMAN, R.K. and D.R. Spiner. Effect of relative humidity on the penetrability and sporocidal activity of formaldehyde. Applied Microbiology 20(4):616-619; October 1970.
454. HOFFMAN, R.K. Sterilization of interplanetary spacecraft. Quarterly report for 1 November 1969 - 1 February 1970. U.S. Army, Fort Detrick.
455. HOLLANDER, M. A distribution-free test for parallelism. Journal of the American Statistical Association 65(329):387-394; March 1970.
456. IMSHENETSKY, A.A., L.A. Kusjurina and V.M. Jakshina. Multiplication of certain soil micro-organisms under simulated Martian conditions. In: Vishniac, W. and F.G. Favorite, Eds. Life sciences and space research. Vol.VIII. Proceedings of the open meeting of working group V at the 12th plenary meeting of COSPAR, Prague, 1969, p.59-67. Amsterdam, North-Holland Publishing Company, 1970.
457. IRONS, A.S. Decontamination procedures. In: Semiannual review of research and advanced development. Doc. 701-90, p.211-213. Jet Propulsion Laboratory. 31 August 1970.
458. IRONS, A.S. Development of ethylene oxide process specifications and procedures. In: Semiannual review of research and advanced development. Vol.1. Doc. 701-66, p.293-296. Jet Propulsion Laboratory. 16 February 1970.
459. JEFFERSON, R.M. Feasibility of thermoradiation sterilization of spacecraft using Cobalt 60. SC-RR-70-301. Sandia Laboratories. May 1970.
460. JET PROPULSION LABORATORY. Analysis and sensitivity studies related to post-launch recontamination of spacecraft and the probability of contamination of a planet. Final report. 71-205. Prepared by Bionetics Corporation. 30 December 1970. (NASA-CR-117366)
461. JET PROPULSION LABORATORY. Planetary Quarantine, SPT (OSSA program). In: Research and advanced development program synopsis. Doc. 70-91, p.17-20. 30 September 1970.

462. JET PROPULSION LABORATORY. Semiannual review of research and advanced development. Vol.1. Doc. 701-66. 16 February 1970.
463. JET PROPULSION LABORATORY. Semiannual review of research and advanced development. Doc. 701-90. 31 August 1970.
464. JET PROPULSION LABORATORY. Sterilizable accelerometer development program. Final report. 60007-35. Prepared by Bell Aerospace Company, January 1970. (NASA-CR-109340)
465. KEMP, H.T. and C.W. Cooper. Investigation of spacecraft materials that support microorganism growth. Prepared for Marshall Space Flight Center by Battelle Memorial Institute. 17 June 1970. (NASA-CR-113798)
466. KERELUK, K., R.A. Gammon and R.S. Lloyd. Microbiological aspects of ethylene oxide sterilization. I. Experimental apparatus and methods. Applied Microbiology 19(1):146-151; January 1970.
467. KERELUK, K., R.A. Gammon and R.S. Lloyd. Microbiological aspects of ethylene oxide sterilization. II. Microbial resistance to ethylene oxide. Applied Microbiology 19(2):152-156; January 1970.
468. KERELUK, K., R.A. Gammon and R.S. Lloyd. Microbiological aspects of ethylene oxide sterilization. III. Effects of humidity and water activity on the sporicidal activity of ethylene oxide. Applied Microbiology 19(1):157-162; January 1970.
469. KERELUK, K., R.A. Gammon and R.S. Lloyd. Microbiological aspects of ethylene oxide sterilization. IV. Influence of thickness of polyethylene film on the sporicidal activity of ethylene oxide. Applied Microbiology 19(1):163-165; January 1970.
470. KNITTEL, M., R. Green and D. Taylor. Planetary quarantine analysis. In: Semiannual review of research and advanced development. Doc. 701-90, p.219-223. Jet Propulsion Laboratory. 31 August 1970.
471. LACY, G.H., R.E. Cameron, R.B. Hanson and F.A. Morelli. Microbiological analysis of snow and ice from the Antarctic interior. Antarctic Journal of the United States 5(4):88,90; July-August 1970.
472. LeDOUX, F.N. Bibliography. Codes, standards, procedures, specifications and reports relating to contamination control. X-723-70-220. Goddard Space Flight Center. June 1970.
473. LEVIN, G.V. Contamination and sterilization. Presented at the NASA Bio-Space Technology Training Program, Wallops Island, Va., August 1970.

474. LEVIN, G.V. Life detection systems. Presented at the NASA Bio-Space Technology Training Program, Wallops Island, Va., August 1970.
475. LIBBY, W.F. Water on Venus? New York State Journal of Medicine 70(10): 1175-1178; May 15, 1970.
476. MARSHALL, B.J. and W.G. Murrell. Biophysical analysis of the spore. Spore Newsletter 3(9):#12; January 1970.
477. MARTIN, K. Matrix test of sterilizable piece parts. In: Semiannual review of research and advanced development. Vol.1. Doc. 701-66, p.73-78. Jet Propulsion Laboratory. 16 February 1970.
478. MARTIN, K. Matrix test of sterilizable piece parts. In: Semiannual review of research and advanced development. Doc. 701-90, p.45-47. Jet Propulsion Laboratory. 31 August 1970.
479. MILLER, C.G. and V.C. Truscello. Compatibility and shielding analysis of science instruments in spacecraft containing a radioisotope thermoelectric generator. TR 32-1427. Jet Propulsion Laboratory. 1 May 1970.
480. MILLER, W.S. The types of biological indicators used in monitoring sterilization processes. Presented at the annual meeting of the Parenteral Drug Association, New York, 1970.
481. MINNESOTA, UNIVERSITY OF, SCHOOL OF PUBLIC HEALTH. Reproducibility of results in dry heat resistance studies. Presented at the meeting of the Planetary Quarantine Advisory Committee, Raleigh, N.C., February 1970.
482. MOORE, B., R. Gove, Y. Thun and I.J. Pflug. Dry heat destruction rates of Bacillus subtilis var. niger in a closed system. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.4, p.31-34. University of Minnesota, School of Public Health. June 1970.
483. NAGLER, R.G. Ground simulation of a Mars-entry-capsule aeroshell environmental history. TR 32-1466. Jet Propulsion Laboratory. 15 February 1970. (NASA-CR-108897)
484. NASA. Report to COSPAR. French space program. February 1970. (NASA-TT-F-12725)
485. NASA. Twenty-first semiannual report to Congress, p.65-66. 27 May 1970.
486. NIKANDER, J. Some problems posed by the planet Venus. Spaceflight 12(4):180-183; April 1970.

487. OLSON, R.L. and S.J. Fraser. Release of microorganisms from solids after simulated hard landings. Prepared for Jet Propulsion Laboratory by Boeing Company. 26 January 1970. (NASA-CR-109344)
488. OYAMA, V.I., E.L. Merek and M.P. Silverman. A search for viable organisms in a lunar sample. Science 167(3918):773-775; 30 January 1970.
489. PAUL, F.W. Degradation due to contaminants throughout the test cycle. In: Optical telescope technology. NASA SP-233, p.751-757. Washington, D.C., NASA, 1970.
490. PESCH, W.A. and C.P. Shaia. Biodetection grinder. TR DM-268-70. Hayes International Corporation, Methods Development Group. 27 May 1970.
491. PETERSEN, N.J. Services provided in support of the planetary quarantine requirements of NASA. Evaluation of a vertical laminar flow biological safety cabinet. Department of Health, Education and Welfare, Public Health Service, National Communicable Disease Center, Phoenix Laboratories. June 1970.
492. PETRASOVITS, A. and R.G. Cornell. Approximations to the Bayes estimate for a quantal assay with simple exponential tolerance distribution. TR-21. Florida State University, Department of Statistics. 1 September 1970. (NASA-CR-113862)
493. PETRASOVITS, A. and R.G. Cornell. Bayesian analysis for an exponential surveillance model. TR-20. Florida State University, Department of Statistics. 1 August 1970. (NASA-CR-114233)
494. PFLUG, I.J. Dry heat destruction rates for microorganisms on open surfaces, in mated surface areas and encapsulated in solids of spacecraft hardware. In: Vishniac, W. and F.G. Favorite, Eds. Life sciences and space research. Vol.VIII. Proceedings of the open meeting of working group V at the 12th plenary meeting of COSPAR, Prague, 1969, p.131-141. Amsterdam, North-Holland Publishing Company, 1970.
495. PFLUG, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.4. University of Minnesota, School of Public Health. June 1970.
496. PHILLIPS, G.B. Testing and fabrication of plastic vacuum probe surface samples. Final report. Prepared for Langley Research Center by Becton, Dickinson Research Center. July 1970. (NASA-CR-111796)

497. PONNAMPERUMA, C. and M.W. West. Chemical evolution and the origin of life. Space Life Sciences 2(2):225-288. September 1970.
498. PORTNER, D.M., J.E. Sheinmel and R.A. Urhin. Bactericidal activity of ethylene oxide and methyl bromide against microorganisms on various types of surfaces. U.S. Army, Fort Detrick Protection Branch of Test No.12-70. 8 April 1970.
499. PULEO, J.R., N.D. Fields and R.C. Graves. Microbial contamination associated with the Apollo 6 spacecraft during final assembly and testing. Space Life Sciences 2(1):48-56; May 1970.
500. PULEO, J.R., G.S. Oxborrow, N.D. Fields and H.E. Hall. Quantitative and qualitative microbiological profiles of the Apollo 10 and 11 spacecraft. Applied Microbiology 20(3):384-389; September 1970.
501. QUICK, R.G. A microscopic method of particulate contamination. Contamination Control 9(4):18-19,22-28; April 1970.
502. READ, R.B., Jr. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 19th quarterly report. Department of Health, Education and Welfare, Food and Drug Administration, Cincinnati Research Laboratories. March 1970.
503. READ, R.B., Jr. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 20th quarterly report. Department of Health, Education and Welfare, Food and Drug Administration, Cincinnati Research Laboratories. June 1970. (NASA-CR-11387)
504. READ, R.B., Jr. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 21st quarterly report. Department of Health, Education and Welfare, Food and Drug Administration, Cincinnati Research Laboratories. September 1970. (NASA-CR-113870)
505. READ, R.B., Jr. Ecology and thermal inactivation of microbes in and on interplanetary space vehicle components. 22nd quarterly report. Department of Health, Education and Welfare, Food and Drug Administration, Cincinnati Research Laboratories. December 1970.
506. REYNOLDS, M.C. and D.M. Garst. Optimizing thermal and radiation effects for bacterial inactivation. Space Life Sciences 2(3):394-399; December 1970.
507. REYNOLDS, M.C., K.F. Lindell and N. Laible. A study of the effectiveness of thermoradiation sterilization. SC-RR-70-423. Sandia Laboratories. June 1970. (NASA-CR-109972)

508. REYNOLDS, M.C. Thermoradiation as a means of bacterial sterilization. SC-DC-704936. Sandia Laboratory. June 1970.
509. ROARK, A.L. A stochastic approach to bioburden estimation and prediction. A preliminary report. SC-RR-70-561. Sandia Laboratories. August 1970. (NASA-CR-110902)
510. ROARK, A.L. and W.R. Gavin. User's manual for the planetary quarantine lunar information system. SC-M-70-604. Sandia Laboratories. November 1970.
511. ROPER, W.D. Spacecraft polymeric material interactions during decontamination, sterilization and thermal vacuum exposures. TR-32-1491. Jet Propulsion Laboratory. 15 June 1970. (NASA-CR-119474)
512. SANDERS, J.F. The interaction of living systems with the space environments. In: Space processing and manufacturing, p.195-215. Marshall Space Flight Center. 5 February 1970. (NASA-TM-X-53993)
513. SANDIA LABORATORIES. An improved method of spacecraft sterilization. Contamination Control 9:20-22; February 1970.
514. SANDIA LABORATORIES. Planetary quarantine program. 16th quarterly report. March 1970. (NASA-CR-111386)
515. SANDIA LABORATORIES. Planetary quarantine program. 17th quarterly report. 30 June 1970. (NASA-CR-110046)
516. SANDIA LABORATORIES. Planetary quarantine program. 18th quarterly report. September 1970. (NASA-CR-111309)
517. SANDIA LABORATORIES. Planetary quarantine program. 19th quarterly report. December 1970. (NASA-CR-116420)
518. SCHALKOWSKY, S. and P.S. Levy. Estimation of microbial release probabilities from a Martian lander. In: Exotech, Inc. Planning, evaluation and analytical studies in planetary quarantine and space craft sterilization. 1st quarterly report. 15 June 1970.
519. SCHNEIDER, H.W. Development of an ultrasonic/vacuum sampling device. In: Semiannual review of research and advanced development. Doc. 701-90, p.235-236. Jet Propulsion Laboratory. 31 August 1970.
520. SHAIA, C.P. and D.F. Johnson. Biological evaluation of the Biodetection Grinder. MD-265-70. Prepared for Marshall Space Flight Center by Hayes International Corporation. April 14, 1970.

521. SIVINSKI, H.D. Bioburden modeling. Presented at the Semiannual NASA Spacecraft Sterilization Technology Seminar, Atlanta, April 1970.
522. SIVINSKI, H.D. Fine particle physics. Presented at the Semiannual NASA Spacecraft Sterilization Technology Seminar, Atlanta, April 1970.
523. SIVINSKI, H.D. Laminar air flow in planetary quarantine. Presented at the 10th international congress for microbiology, Mexico City, August 14, 1970.
524. SIVINSKI, H.D. Thermoradiation. Presented at the Semiannual NASA spacecraft sterilization technology seminar, Atlanta, April 1970.
525. TAYLOR, D.M. Liquid sterile insertion. In: Semiannual review of research and advanced development. Vol.1. Doc. 701-66, p.315. Jet Propulsion Laboratory. 16 February 1970.
526. TAYLOR, D.M., R. Koukol and M. Christensen. Microbiological monitoring of spacecraft assembly facility operations. In: Semiannual review of research and advanced development. Doc. 701-90, p.229-231. Jet Propulsion Laboratory. 31 August 1970.
527. TAYLOR, D.M. Sterilization supporting activities. In: Semiannual review of research and advanced development. Vol.1. Doc. 701-66, p.305-308. Jet Propulsion Laboratory. 16 February 1970.
528. TAYLOR, D.M. Sterilization supporting activities. In: Semiannual review of research and advanced development. Doc. 701-90, p.225-227. Jet Propulsion Laboratory. 31 August 1970.
529. TRUJILLO, R.E. Mechanisms of spore inactivation. Presented at the Semiannual NASA spacecraft sterilization technology seminar, Atlanta, Georgia, April 1970.
530. TRUJILLO, R.E. and N. Laible. The reversible inhibition of spore germination by alcohols. Applied Microbiology 20(4):620-623; October 1970.
531. VESLEY, D., M. Halbert, I.J. Pflug, B. Moore, S. Maki and J. Haugen. Dry heat destruction rates of microorganisms on surfaces as a function of relative humidity; developing dry heat D-values. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.4, p.35-44. University of Minnesota, School of Public Health. June 1970.

532. VESLEY, D., G. Smith and B. Moore. Inter-Laboratory D-value experiments. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report 4, p.57-62. University of Minnesota, School of Public Health. June 1970.
533. VESLEY, D. and G. Smith. Survival of microbial spores under several temperature and humidity conditions. In: Pflug, I.J., Ed. Environmental microbiology as related to planetary quarantine. Semiannual progress report No.4., p.1-10. University of Minnesota, School of Public Health. June 1970.
534. WACHTER, J.P. Effective sky temperatures for several Martian atmospheric models. Journal of Spacecraft and Rockets 7:350-352; March 1970.
535. WALKER, B., Jr. Viruses respond to environmental exposure. Journal of Environmental Health 32(5):532-550; March/April 1970.
536. WARDLE, M.D. Review of heat specifications. In: Semiannual review of research and advanced development. Vol.1. Doc. 701-66, p.297-300. Jet Propulsion Laboratory. 16 February 1970.
537. WARDLE, M.D. Review of heat specifications. In: Semiannual review of research and advanced development. p.215-218. Jet Propulsion Laboratory. 31 August 1970.
538. WEIDNER, D.K., Ed. Natural environment criteria for the NASA Space Station Program. Second edition. Marshall Space Flight Center. 20 August 1970. (NASA TM-X-53865)
539. WEIDNER, D.K., Ed. Space environment criteria guidelines for use in space vehicle development (1969 revision). Second edition. Marshall Space Flight Center. 26 August 1970.
540. WHITFIELD, W.J. Contamination control -- a state-of-the-art review. Presented at the 1st annual European contamination control symposium, Stuttgart, June 1970.
541. WHITFIELD, W.J. Electrostatic deposition device to deposit monolayers of bacterial spores on test surfaces. SC-R-70-4259. Sandia Laboratories. April 1970.
542. WHITFIELD, W.J. and M.E. Morris. The vacuum probe sampler. Contamination Control 9:10-15,25; February 1970.

AUTHOR INDEX

Alcamo, I.E.	220	Blum, P.	108
Alder, V.G.	163	Bollen, W.B.	174, 378
Alexander, A.	66, 109	Bomar, M.	286
Allen, H.F.	19	Bond, W.W.	379
Allen, H.N.	337	Borick, P.M.	241
Allen, J.	88	Botan, E.A.	175, 242, 260
Ames Research Center	164	Boucher, R.M.G.	220, 243
Anderson, B.I.	299	Bourrieau, J.C.	380
Anderson, B.T.	447	Bradley, F.D.	381
Anderson, O.A.	254	Brady, H.F.	287
Angelotti, R.	10, 11, 111, 112, 165, 166, 167, 168, 235, 284	Brannen, J.P.	244, 382, 383, 384, 385
Anthony, H.V.	170	Braswell, J.R.	386
Arnett, J.C.	238, 321	Brewer, J.H.	176, 319
Arnsberger, R.J.	176	Brewer, W.A.	245
Astafyeva, A.K.	239	Brill, J.N.	387
Auerbach, E.E.	171	Brown, A.M.	163
Austin, P.R.	240	Bruch, C.W.	40, 41, 51, 67, 89, 131, 132, 211, 388
		Bruch, M.K.	67, 388
		Brueschke, E.E.	42
		Bryce, A.J.	298
Bandaruk, W.	216	Buchanan, H.	69
Bansal, A.K.	402	Buchanan, L.M.	52, 68, 70, 194
Barlow, L.B.	187	Bursey, C.H.	288
Barnett, J.W.	272	Busch, K.A.	10
Barrett, M.J.	377	Busta, F.F.	125, 126
Barrett, R.	108		
Beakley, J.W.	375		
Bearman, J.E.	137		
Beeby, M.M.	113	California,	
Behringer, N.W.	308	University of	115
Bejuki, W.M.	20	Calof, R.	177
Bell, J.	88, 110	Cameron, R.E.	178, 338, 339, 389, 390, 391, 392, 393, 471
Beller, W.S.	172		
Benner, F.C.	80	Campbell, J.E.	394
Berman, B.	285	Campbell, R.W.	340
Beyerle, F.J.	276	Caputo, R.S.	395
Billick, I.H.	64	Cargo, G.T.	79
Biological Contamination		Casey, E.F.	341
Control Committee	173	Cephus, M.L.	447
Blair, P.M.	114	Chamberlain, R.G.	289
Blank, G.B.	178, 338, 390		

Cheater, D.J.	396
Cheron, T.	149
Christensen, M.R.	144,145,217, 342,397,398,526
Claghorn, A.	179
Clapper, W.E.	210
Clemedson, C.J.	53
Coleman, S.	157
Communicable Disease Center	90,116,117,118,119, 120,180,181
Comuntzis, M.G.	21
Conrow, H.P.	393
Cooley, W.C.	121,249,250
Cooper, C.W.	465
Cordaro, J.T.	69
Cornell, R.G.	182,183,246,399, 400,401,402,492,493
Cospar Consultative Group, Chairman	184
Courtney, W.J.	290
Craven, C.W.	185,247,259
Crawford, J.G.	186
Crawford, R.G.	160,161
Crawford, R.L.	248
Cuddihy, E.F.	291
Czarnecki, E.G.	187

Davies, M.E.	264
Davies, N.S.	80
Davies, R.W.	21
Davis, D.P.	292
Davis, N.S.	122
Dawson, F.W.	14,22
Deal, P.H.	88,110
DeArmon, I.A., Jr.	12
Decker, H.M.	23,68,70
DeGraff, E.D.	249,250,293, 294,325
Deindoerfer, F.H.	15,16,43
Depbolt, A.	177
Descamp, V.A.	337
Devaney, J.R.	389
Dillon, R.T., Sr.	403
Dimitrov, M.	238,404,405
Dobley, W., Jr.	288
Doyle, J.E.	406
Drew, J.G.	170
Drummond, D.W.	123,145,251, 343,407,408

Duffy, W.T.	146
Dugan, V.L.	375,409,410,411, 412
Dumas, E.J.	124
Dunn, C.B.	80,108
Dynamic Science Corporation	91

Eckman, P.K.	264
Edwards, J.L., Jr.	125,126
Edwards, T.R.	413
Ehrlich, R.	44,57
Elbaz, J.C.	380
Ernst, R.R.	54,55,79,94,127, 406
Ervin, G.F.	414,415
Esselen, W.B.	8
Ewing, M.L.	299
Exotech, Inc.	344,416,417, 418,419
Exotech Systems, Inc.	420, 421,422,423,424,425,426,427, 428,429,430

Farabee, L.B.	431,432
Farmer, F.H.	188,345,433
Faugere, J.F.	380
Favero, M.S.	128,211,223,346, 379,434,435,436,437,438,439
Fedorova, R.T.	92
Fernelius, A.L.	12
Fields, N.D.	499,500
Finkelstein, H.	347
Fischell, R.E.	440
Fogarty, M.G.	241
Fort Detrick	189,295,348,349
Foter, M.J.	10,11
Fowler, S.	372
Fox, D.G.	441
Fox, G.W.	93
Fraser, S.J.	487
Fried, E.	129,161,296

Gambill, V.M.	56
Gammon, R.A.	297,310,466, 467,468,469

Gardner, J.F.	323	Holdridge, D.B.	403
Garst, D.M.	350,351,374,442,506	Hollander, M.	455
Gautraud, J.A.	175	Homsey, R.J.	396
Gavin, W.R.	510	Horowitz, N.H.	195,338,390
Gelezumas, V.L.	298	Hotchin, J.H.	255,302,303,311
Gemme, I.	149	Houser, C.P.	304
General Electric Company	252	Hueschen, R.M.	345
Giammanco, R.P.	80,108	Hughes, L.W.	375
Gibson, W.C.	443	Humphrey, A.E.	15,16,43
Gillespie, W.A.	163	Hurgeton, J.C.	275
Gillis, J.R.	296,308		
Glass, A.A.	253		
Goddard, K.R.	70		
Goddard Space Flight Center	190	Imshenetsky, A.A.	456
Goppers, V.	271,352,444	Ingles, J.B.	211
Gove, R.	482	Irons, A.S.	97,353,355,457,458
Gowdy, B.	57	Ivanov, P.P.	354
Graves, R.C.	499		
Green, R.H.	270,353,445,470	Jacobs, R.A.	136
Greene, V.W.	254	Jaffe, L.D.	58,71,72,98
Grigor'yev, Yu.G.	354	Jakshina, V.M.	456
Grumman Aerospace Corporation	446	James, Mrs. A.N., Jr.	304,356
Gustan, E.A.	270	Janssen, R.J.	22
		Jefferson, R.M.	459
		Jenkins, D.W.	285
		Jet Propulsion Laboratory	24,99,256,357,358,460,461,462,463,464
Hagen, C.A.	130,290,299,447	Johnson, D.F.	520
Halbert, M.M.	137,372,448,531	Jones, D.L.	196
Hall, H.E.	500		
Hall, L.B.	70,95,96,131,132,133,134,191,192,193,259,449		
Hamer, J.	177	Kabat, H.F.	85
Hansen, W.	135	Kales, P.A.	245
Hanson, R.B.	392,471	Kalfayan, S.H.	228,257,305
Harmon, L.G.	17	Kallings, L.O.	306
Haugen, J.	343,362,373,531	Kaufmann, O.W.	17
Hawes, S.R.	135	Kautz, G.P.	197
Hawrylewicz, E.J.	44,57,290,299,447	Kaye, S.	3,4,5,307
Hayward, J.M.	272	Keenan, K.M.	137
Hearn, H.J.	14	Kemp, H.T.	465
Hemenway, C.L.	255,303,311	Kemper, K.M.	378
Hoffman, A.R.	274,300,328,353,366,445,450,451,452	Kepple, R.J.	129
Hoffman, R.K.	13,14,22,23,36,38,68,155,194,301,386,453,454	Kereluk, K.	297,310,466,467,468,469
Hohmann, J.P.	18	Kessler, D.	177
		Kikiforova, E.N.	334
		Kline, R.C.	325
		Knight, R.D.	321

Knittel, M.	470
Koesterer, M.G.	59,67,73, 101,102,138,308
Koukol, R.	526
Kozlova, V.K.	282,283
Kretz, A.P., Jr.	94
Kusjurina, L.A.	456
Lacy, G.H.	392,471
Laible, N.	507,530
Langley Research Center	198,199
Larue, E.F.	170
Lassegard, W.E.	359
Latham, A.B.	18
Leaman, A.B.	200
Lederberg, J.	309,324
LeDoux, F.N.	103,139,140,258, 472
Leventhal, E.L.	74
Levin, G.V.	473,474
Levinthal, E.C.	309,324
Levora, N.W.	201
Levy, P.S.	518
Lewis, K.H.	10
Lewis, T.M.	360
Libby, W.F.	475
Light, J.O.	185,259
Lincoln, R.E.	12
Lindell, K.F.	374,442,507
Lion, K.S.	25
Litsky, W.	9
Lloyd, R.S.	297,310,466,467, 468,469
Lockyear, W.H.	202
Long, M.E.	396
Lorenz, P.	255,303,311
Lorsch, H.G.	203
Louderback, A.L.	105
Lunney, E.J.	260
Lutwack, R.	204,312
Lyle, R.G.	261,313
Lynch, V.H.	135
Magistrale, V.J.	123,141,143, 145,205
Maki, S.	448,531
Mandrovsky, B.	206

Mann, B.	69
Manufacturing Chemists Association	7
Markusen, A.	255
Marshall, B.J.	476
Marshall, J.H.	128,379
Marshall Space Flight Center	142,207,208,209,361
Marten, R.A.	262
Martin, K.	477,478
McDade, J.J.	100,143,144, 145,185,210,211,375
McDaniel, A.W.	406
McDonald, J.P.	170,238
McDonnell Douglas Aeronautics Company, Eastern Division	314,315, 316
McNall, E.G.	146
Merek, E.L.	488
Michaelson, G.S.	137,147
Miles, J.R.	131
Miller, A.K.	69,135
Miller, C.E.	105
Miller, C.G.	479
Miller, W.S.	480
Minnesota, University of, School of Public Health	212,263,481
Moacanin, J.	291
Modisette, J.L.	443
Moore, B.	362,448,482,531
Morelli, F.A.	60,392,393,471
Moritsugu, S.G.	381
Morris, M.E.	375,542
Murphy, J.T.	19
Murray, B.C.	264
Murrell, W.G.	476
Nagler, R.G.	483
NASA	61,213,214,265,266,267, 363,484,485
National Communicable Disease Center	268,269,364
Nelson, B.A.	365
Nelson, P.L.	321
Newsom, B.C.	158
Nicholas, R.C.	136
Nikander, J.	486
Nikiforova, E.N.	239

Norcross, N.L. 9
 Nordgren, G. 1
 North American Aviation,
 Incorporated 75
 Nowitsky, A.M. 62,148,215

Olson, R.L. 270,487
 Opfell, J.B. 18,104,105,149,
 216
 Oxborrow, G.S. 128,223,500
 Oyama, V.I. 488

Packer, E. 76,107
 Paik, W. 144,145,217,366
 Paillous, A. 380
 Pailthorp, O.C. 17
 Parker, J. 288
 Paul, F.W. 489
 Paulus, H.J. 271
 Pesch, W.A. 490
 Petersen, N.J. 223,379,401,
 491

Petrasovits, A. 492,493
 Pflug, I.J. 8,17,26,136,251,
 317,343,362,367,372,407,408,
 444,448,482,494,495,531

Phillips, C.R. 4,5,6,23,36,
 45,68,155,196,318
 Phillips, G.B. 150,151,152,
 218,219,319,496

Pilgrim, A.J. 270
 Pisano, M.A. 153,220,243
 Ponnampertuma, C. 497
 Popat, P.V. 248
 Portner, D.M. 27,28,29,30,31,
 32,33,46,47,48,77,106,154,
 155,221,222,498

Prince, A.E. 34
 Prishchep, A.G. 277
 Puleo, J.R. 128,223,499,500

Quesnel, L.B. 272
 Quick, R.G. 501
 Quimby, F.H. 63

Rahn, O. 2

Ramkova, N.V. 239
 Ramquist, J. 372
 Read, R.B., Jr. 9,502,503,
 504,505
 Redmann, G.H. 320,370
 Reed, L.L. 64,78
 Reichert, R.J. 450
 Renninger, G.M. 371
 Reynolds, M.C. 506,507,508
 Rider, T.H. 175,242
 Roark, A.L. 509,510
 Roberts, D.L. 232
 Roper, W.D. 511
 Rothstein, A.A. 238,321,322
 Rubbo, S.D. 323
 Russell, S. 171
 Rydelek, R.F. 156

Sagan, C. 35,76,107,157,309,
 324

Sanders, J.F. 512
 Sandia Laboratories 513,514,
 515,516,517

Sandia Laboratory 224,225,
 226,273

Sawicki, E. 243
 Schafer, W.J. 175
 Schalkowsky, S. 121,325,326,
 360,518

Schenk, V.G. 359

Scher, S. 107

Schissel, G.Z. 327

Schley, D.G. 36

Schmidt, C.F. 317

Schneider, H.W. 519

Seligmann, E.B., Jr. 9

Serrell, A.K. 281

Shaia, C.P. 490,520

Shefner, A.M. 37

Sheinmel, J.E. 498

Sherry, E.J. 227

Shipley, W. 141

Short, L.L. 158

Shull, J.J. 54,55,79

Shumaeva, Iu.F. 334

Silver, R.H. 228,257,305

Silverman, G.J. 80,108

Silverman, M.P. 488

Sivinski, H.D. 351,521,522,
 523,524

Slepecky, R.A. 159

Smith, C. 144,278

Smith G.	279,280,373,448, 532,533
Sneath, P.H.A.	49
Soffen, G.	81
Sontowski, J.F.	396
Speck, M.L.	125,126
Spiner, D.R.	38,194,386,453
Stahler, M.R.	296
Sterilization Group	369
Stern, J.A.	187,217,274,300, 328,329
Stevens, J.	229
Steward, D.L.	275
Stierli, H.	64
Stuart, J.	81
Suess, R.H.	42
Sullivan, L.	230
Swift, J.	82
Sykes, G.	330

Tarver, P.	131
Taylor, D.M.	370,371,445,470, 525,526,527,528
Tenney, J.B., Jr.	160,161
Thompson, T.	177
Thun, Y.	373,482
Tobey, W.H.	231
Tolkacz, V.K.	299
Tortora, G.	243
Trauth, C.A., Jr.	227.350
Trexler, P.C.	39
Trujillo, R.E.	529,530
Truscello, V.C.	479
Tulis, J.J.	331,332

Ungar, A.	232,333
United States Government	233
Urhin, R.A.	498
Ushakov, A.S.	354

Van Allen, R.T.	276
Varga, R.J.	83,84
Vashkov, V.I.	239,277,334
Vesley, D.	211,278,279,280, 372,373,531,532,533
Vishniac, W.	259

Wachter, J.P.	534
Walker, B., Jr.	254,535
Wang, Y.L.	105
Wardle, M.D.	371,536,537
Warshowsky, B.	13
Watkins, H.D.	162,234
Watson, D.C.	85
Weidner, D.K.	538,539
West, K.L.	406
West, M.W.	497
Wheeler, R.E.	232
Whitbourne, J.E.	406
Whitehouse, C.E.	113
Whitfield, W.J.	210,374,375, 540,541,542
Wilkes, C.E.	12
Willard, M.Y.	42,65,66,109, 335
Wilson, D.A.	336
Winge-Heden, K.	86
Winterton, G.	177
Wolfson, R.R.	247
Wolgin, A.	158
Woodall, J.L.	377
Wright, D.E.	281
Wynne, E.S.	50

Yalof, S.	87
Young, R.S.	88,110

Zanks, J.F.	186
Zeits, R.	135
Zhukova, A.I.	282,283

PERMUTED TITLE INDEX

activation and of thermal death of bacterial spores/Kinetics of	79
aeolian erosion/The release of buried contamination by	377
aerosols/The sterilizing action of gaseous ethylene oxide.III.The ef	3
Air filtration of microbial particles/	70
air or touched by the human hand/Microbial contamination obtained on	77
airborne particulate contamination/Monitoring	360
(airflow)Bacterial penetration of the millipore microtube cartridge	56
alcohol sporulation method/Evaluation of	356
alcohols/The reversible inhibition of spore germination by	530
(Apollo)A search for viable organisms in a lunar sample/	488
(Apollo)An approach to computerized bacterial identification/	403
Apollo and contamination control. McDonnell Douglas' role/	359
Apollo and contamination control. Rocketdyne's role/	341
Apollo program/Handbook for contamination control on the	213
Apollo 6 spacecraft during final assembly and testing/Microbial cont	499
Apollo 10 and 11 spacecraft/Quantitative and qualitative microbiolog	500
(Apollo)User's manual for the planetary quarantine lunar information	510
aseptic maintenance by pressurization/A study of	396
(assembly)A microscopic method of particulate contamination/	501
(assembly)A research study to definitize a bio-isolation suit system	252
assembly and development laboratory routine cleaning and decontamina	260
(assembly)Apollo and contamination control. McDonnell Douglas' role	359
(assembly)Apollo and contamination control. Rocketdyne's role/	341
(assembly)Bacterial growth in agar subjected to freezing and thawing	338
(assembly)Class 100 clean room program. Phase I/	314
assembly/Compatibility of sterilization and contamination control wi	.94
(assembly)Contamination and sterilization/	191
(assembly)Contamination control/	276
assembly contamination model/An	227
(assembly)Development of mechanical sterile insertion engineering mo	404
(assembly)EASL/SADL test and operation. Phase II/	320
(assembly)Effect of current cleaning procedures on sterilization of	275
(assembly)Evaluation of microbiological filters for liquids and gase	97
assembly facility operations/Microbiological monitoring of spacecraf	342
assembly facility operations/Microbiological monitoring of spacecraf	526
(assembly)Heat-sterilizable, remotely activated battery development	387
assembly in the sterilization assembly development laboratory/Biolog	370
Assembly of CMTM for purposes of determining areas of contact during	245
(assembly)Recommendations for determination of spacecraft sterilizat	274
(assembly)Space hardware assay methodology/	280
(assembly)Spacecraft preparation and sterilization as state of the a	240
(assembly)Status review of technology developments for spacecraft st	293
assembly/sterilizer - A facility for the sterilization and assembly	186

assembly techniques/An experimental study of sterile	100
assembly techniques. Vol.1/Experimental study of sterile	135
assembly techniques/Experimental study of sterile	143
(assembly)Terminal sterilization process calculation for spacecraft/	300
(assembly)Testing and fabrication of plastic vacuum probe surface sa	496
(assembly)Valve bioload reduction and sterilization study/	304
Astronautics and aeronautics, 1968. Chronology of science, technolo	363
atmosphere/A feasibility study of an experiment for determining the	164
(atmosphere)An approach to contamination identification/	413
atmosphere entry/A study of thermal kill of viable organisms during	288
(atmosphere)The development of two closely controlled humidity system	442
atmospheres of different water contents/Heat resistance of <u>Bacillus</u>	136
(automation)Study of contamination sensors. Vol.I/	170
(Aw)A Martian surface simulation facility for bacterial studies/	290
(Aw)Bacteria under simulated Martian conditions/	110
(Aw)Biophysical analysis of the spore/	476
(Aw)Environmental microbiology as related to planetary quarantine/	495
(Aw)Estimation of microbial survival in heat sterilization/	326
(Aw)Microbiological aspects of ethylene oxide sterilization. III.	468
(Aw)Planetary quarantine program/	517
(Aw)The sterilising properties of ethylene oxide/	45
bacteria/Effect of diurnal freeze-thawing on survival and growth of	88
(bacteria)Heat injury of <u>Bacillus subtilis</u> spores at ultrahigh tempe	125
bacteria.I.Sterilization of suspensions of <u>Serratia marcescens</u> and s	9
Bacteria under simulated Martian conditions/	110
bacterial aerosols/The sterilizing action of gaseous ethylene oxide.	3
bacterial collector/Balloon-borne	81
bacterial contamination inside electronic components/A technique for	23
bacterial contamination inside electronic components. Test I/Invest	29
bacterial contamination inside electronic components. Test II/Inves	30
bacterial contamination inside electronic components. Test III/Inve	31
bacterial contamination inside electronic components. Test IV/Inves	46
bacterial contamination inside solar panel/Investigation of	32
bacterial contamination of surfaces/A comparative evaluation of meth	10
bacterial contamination on nonporous surfaces/A direct surface agar	11
bacterial contamination on surfaces/Services provided in support of	117
bacterial contamination on surfaces/Services provided in support of	118
bacterial contamination on surfaces/Services provided in support of	119
bacterial contamination on surfaces/Services provided in support of	120
Bacterial growth in agar subjected to freezing and thawing/	338
Bacterial growth in agar subjected to freezing and thawing. II./	390
bacterial identification/An approach to computerized	403
bacterial inactivation/Optimizing thermal and radiation effects for	506
bacterial isolants from rigorous environments/Systematic description	174
Bacterial penetration of Robbins BCO filter/	52
Bacterial penetration of the millipore microtube cartridge filter/	56

bacterial spore test piece for the control of ethylene oxide sterili	113
bacterial spores/A probit method to interpret thermal inactivation o	12
bacterial spores/Effect of dry heat upon	27
bacterial spores/Effect of Gamma and X-rays upon dry	28
bacterial spores/Kinetics of heat activation and of thermal death of	79
bacterial spores/Studies on trace elements in the sporulation of bac	159
bacterial sterilization/Thermoradiation as a means of	508
bacterial studies/A Martian surface simulation facility for	290
bacteriology of "clean rooms"/The	147
Balloon-borne bacterial collector/	81
(barrier)Design feasibility study of sterile insertion techniques/	238
barrier equipment and techniques. A state of the art report/Microbi	173
barrier equipment and techniques/Microbiological	219
barrier techniques/Microbiological	151
battery development program/Heat-sterilizable, remotely activated	387
<u>Beta</u> -propiolactone/Sterilization of instruments and materials with	19
<u>Beta</u> -propiolactone vapor as a disinfectant/	13
<u>Beta</u> -propiolactone vapor decontamination/	194
<u>Beta</u> -propiolactone vapor/Decontamination of enclosed spaces with	40
<u>Beta</u> -propiolactone vapor.I.Effect of <u>Beta</u> -propiolactone vapor on Ven	14
<u>Beta</u> -propiolactone vapor.II.Effect on the etiological agents of smal	22
<u>Beta</u> -propiolactone vapor/Method for disinfecting large enclosures wi	38
(bioassay)Assembly of CMTM for purposes of determining areas of cont	245
(bioassay)Basic studies in environmental microbiology as related to	278
(bioassay)Biological evaluation of the Biodetection Grinder/	520
(bioassay)Estimation of the parameters in exponential decontaminatio	246
(bioassay)Life in the clouds/	376
(bioassay technique)Ninth monthly status report on Contract NASw-173	368
(bioassay)The types of biological indicators used in monitoring ster	480
(biobarrier)Basic studies in environmental microbiology as related t	212
(biobarrier)Biological contamination control/	218
(biobarrier)Development of a typical Mars landing capsule sterilizat	209
bio-barrier meteoroid holes/Flight capsule contamination probability	231
(biobarrier)The assembly/sterilizer - A facility for the sterilizati	186
(bioburden)An assembly contamination model/	227
(bioburden)Biocontamination control/	203
(bioburden)Class 100 clean room program. Phase I/	314
(bioburden)Class 100 clean room program. Phase II/	315
(bioburden)Class 100 clean room program. Phase III/	316
(bioburden)Comparative studies of conceptual design and qualificatio	198
(bioburden)Comparative studies of conceptual design and qualificatio	199
(bioburden)Contamination and sterilization/	191
(bioburden)Decontamination of AIMP-D spacecraft/	258
(bioburden)Effect of current cleaning procedures on sterilization of	361
(bioburden)Effect of microbial release probabilities on spacecraft s	325
bioburden estimation and prediction. A preliminary report/A stochas	509
(bioburden)Mariner Mars 1971 planetary quarantine plan/	450
(bioburden)Mathematical models for contamination and pollution predi	365
(bioburden)Microbiological monitoring of spacecraft assembly facilit	342

Bioburden modeling/	521
(bioburden)New approaches to contaminant control in spacecraft/	171
(bioburden)Planetary Quarantine Department/	224
(bioburden)Planetary Quarantine Department/	225
(bioburden)Planetary quarantine program/	514
(bioburden)Planetary quarantine, SPT (OSSA Program)/	461
(bioburden)Recommendations for determination of spacecraft steriliza	274
(bioburden)Re-evaluation of planetary quarantine constraints/	419
(bioburden)Spacecraft sterilization - A new engineering and sanitati	133
(bioburden)Standard procedures for the microbiological examination o	211
(bioburden)Sterilization procedures for planetary landers/	441
(bioburden)The National Aeronautics and Space Administration positio	96
(bioburden)The objectives and technology of spacecraft sterilization	131
(bioburden)The objectives and technology of spacecraft sterilization	192
(bioburden)User's manual for the planetary quarantine lunar informat	510
Biochemical activities of terrestrial microorganisms in simulated pl	115
Biocontamination control/	203
Biodetection grinder/	490
Biodetection Grinder/Biological evaluation of the	520
(bioinstrumentation)An approach to contamination identification/	413
(bioinstrumentation)Antarctic soil algal crusts: scanning electron	389
(bioinstrumentation)Compatibility and shielding analysis of science	479
(bioinstrumentation)Contamination control/	276
(bioinstrumentation)Life detection systems/	474
(bioinstrumentation)Mechanical sterile insertion system. Quality as	405
(bioinstrumentation)Quantitative and qualitative microbiological pro	500
bio-isolator suit system/A research study to definitize a	253
bio-isolation suit system (BISS)/A research study to definitize a	252
bioload reduction and sterilization study/Valve	304
biological aerosols (microorganisms)/Air pollution aspects of	347
Biological burden estimation of Mars probes and capsules and a metho	175
Biological-chemical indicator for ethylene oxide sterilization/	176
Biological contamination control/	218
biological contamination control: Policy and responsibility/Outbound	266
biological contamination control: Policy and responsibility/Outbound	265
Biological contamination of Mars. II. Cold and aridity as constrai	76
biological contamination of Mars/Probability of	232
Biological contamination of Mars. I. Survival of terrestrial micro	107
Biological contamination of the Moon/	35
biological contamination/The sterilization of space vehicles to prev	21
Biological monitoring of the capsule mechanical training model durin	370
(biometry)Biostatistics and space exploration: Microbiology and ster	399
Biophysical analysis of the spore/	476
(BISS)The Model Assembly Sterilizer for Testing (MAST/	433
(buried contamination)A study of dry heat sterilization of microorga	222
(buried contamination)Analysis of microbial release probabilities/	420
(buried contamination)Basic studies in environmental microbiology as	212
(buried contamination)Biodetection grinder/	490
buried contamination by aeolian erosion/The release of	377

(buried contamination)Dry heat destruction rates for microorganisms	494
(buried contamination)Ecology and thermal inactivation of microbes i	284
(buried contamination)Effect of relative humidity on the penetrabili	453
(buried contamination)Ethylene oxide resistance of nondesiccated and	406
(buried contamination)Evaluation of a quantal response model with es	401
(buried contamination)Microbial contaminants in the interiors of spa	216
(buried contamination)Microorganisms in solid materials. Phases I,	146
(buried contamination)Multiplication of certain soil micro-organisms	456
(buried contamination)Ninth monthly status report on Contract NASw-1	368
(buried contamination)Planetary quarantine program/	515
(buried contamination)Release of microorganisms from solids after si	487
(buried contamination)Services provided in support of the planetary	223
(buried contamination)Services provided in support of the planetary	437
(buried contamination)Survey of electronic components/	25
(buried contamination)The objectives and technology of spacecraft st	131
(buried contamination)Twenty-first semiannual report to Congress/	485
capsule contamination probability from viable organism penetration o	231
capsule flight equipment type approval and flight acceptance test pr	229
capsule mechanical training model during assembly in the sterilizati	370
Capsule sterilization canister separation joint/	292
capsule sterilization container/Development of a typical Mars landin	207
capsule sterilization container/Development of a typical Mars landin	208
capsule sterilization container/Development of a typical Mars landin	209
capsule sterilization/Engineering problems in	205
cells/Effect of heat treatment on the growth of surviving	17
Centaur/Surveyor materials with Freon-12 ethylene oxide sterilant ga	87
(CETEX)Sterilization of lunar and planetary space vehicles/	53
(chemical)An approach to contamination identification/	413
(chemical)Analytical techniques in planetary quarantine/	416
chemical approaches/Detection of low levels of microbial contaminati	271
chemical approaches/Detection of low levels of microbial contaminati	352
chemical approaches/Detection of low levels of microbial contaminati	444
(chemical)Astronautics information: Effects of sterilizing agents on	82
(chemical)Development of mechanical sterile insertion engineering mo	404
Chemical evolution and the origin of life/	497
(chemical)Investigation of spacecraft materials that support microor	465
(chemical)Investigations on sterilizable polymeric battery separator	291
(chemical)Life in the clouds/	376
(chemical)Mechanical sterile insertion system. Quality assurance/	405
(chemical)Microbial sterilization in ultra-high vacuum and outer spa	384
(chemical)New approaches to contaminant control in spacecraft/	171
(chemical)Organic constituent inventory for planetary flight mission	427
(chemical)Quarterly status report of NASA contract R-35/	348
(chemical)Sterilization handbook/	91
chemical sterilization in space research/A general review of	104
(chemical)Sterilization literature abstracts/	201

(chemical)Sterilizing techniques with ethylene oxide/	85
(chemical)Surveyor spacecraft system. Vol.II/	84
(chemical)Synergistic effects of ethylene oxide and other agents/	307
(chemical)Technical manuals and planning study in planetary quaranti	313
(chemical)Water on Venus?/	475
clean areas/Monitoring	210
Clean room and work station requirements, controlled environment/	233
(clean room)Apollo and contamination control. McDonnell Douglas' ro	359
(clean room)Apollo and contamination control. Rocketdyne's role/	341
(clean room)Basic studies in environmental microbiology as related t	212
(clean room)Bibliography. Codes, standards, procedures, specificati	472
(clean room)Contamination control in the manufacturing sequence/	335
clean room during an eleven week test period/The level of microbial	106
(clean room)Industrial applications of laminar airflow/	434
(clean room)JPL spacecraft sterilization technology program: A stat	123
(clean room)Microbiologic filters - liquid and gas/	99
(clean room)Planetary quarantine/	273
(clean room)Planetary Quarantine Department/	224
clean room program. Phase I/Class 100	314
clean room program. Phase II/Class 100	315
clean room program. Phase III/Class 100	316
(clean room)Services provided in support of the planetary quarantine	439
(clean room)Sterilization. A selected bibliography from the literat	190
(clean room)Sterilization facility concepts/	24
(clean room)Ultraclean technology/	449
(clean room)Vacuum probe: new approach to the microbiological sampl	375
clean rooms. A classified list of selected references, 1955-1964/De	93
clean rooms in medical and life science research/Present day usage o	351
clean rooms/Microbial contamination in	155
"clean rooms"/The bacteriology of	147
cleaning: A bibliography/Ultrasonic	75
collector/Balloon-borne bacterial	81
(components)A study of critical sterilization problems on a Mars atm	177
(components)A study of the effectiveness of thermoradiation steriliz	507
components/A technique for the investigation of bacterial contaminat	23
(components)An automatic ethylene oxide decontamination system/	228
(components)An experimental study of sterile assembly techniques/	100
(components)An improved method of spacecraft sterilization/	513
components are subjected during manufacture/Detection and quantitati	128
(components)Biodection grinder/	490
(components)Biological burden estimation of Mars probes and capsules	175
(components)Capsule sterilization canister separation joint/	292
(components)Class 100 clean room program. Phase I/	314
(components)Contamination control handbook for ground fluid systems/	337
(components)Contamination control in the manufacturing sequence/	335
(components)Decontamination, cleaning, coating and encapsulation of	103
(components)Degradation due to contaminants throughout the test cycl	489
(components)Design feasibility study of sterile insertion techniques	238
(components)Design of clean rooms. A classified list of selected re	93
(components)Design requirements for the sterilization containers of	160

(components)Determination of terminal sterilization process paramete	328
(components)Development of a typical Mars probe sterilization contai	142
(components)Development of concepts for improved spacecraft steriliz	158
(components)Development of the sterilizable battery/	312
components/Ecology and thermal inactivation of microbes in and on in	502
components/Ecology and thermal inactivation of microbes in and on in	503
components/Ecology and thermal inactivation of microbes in and on in	111
components/Ecology and thermal inactivation of microbes in and on in	112
components/Ecology and thermal inactivation of microbes in and on in	165
components/Ecology and thermal inactivation of microbes in and on in	166
components/Ecology and thermal inactivation of microbes in and on in	167
components/Ecology and thermal inactivation of microbes in and on in	168
components/Ecology and thermal inactivation of microbes in and on in	235
components/Ecology and thermal inactivation of microbes in and on in	284
components/Ecology and thermal inactivation of microbes in and on in	504
components/Ecology and thermal inactivation of microbes in and on in	505
components/Effect of current cleaning procedures on sterilization of	275
components/Effect of current cleaning procedures on sterilization of	361
(components)Electronic parts sterilization program at the Jet Propul	202
(components)Ethylene oxide sterilization studies/	78
components for planetary quarantine. Vol.1/Definition of requiremen	121
(components)Handling, cleaning, decontamination and encapsulation of	140
(components)Heat-sterilizable, remotely activated battery developmen	387
components/Investigation of microbial contamination inside irradiate	154
(components)Investigation of the reliability of sterile insertion te	230
(components)Investigations on sterilizable polymeric battery separat	291
(components)Literature review of the compatibility of commerical mat	156
(components)Maintainability design criteria for packaging of spacecr	446
(components)Matrix test of sterilizable piece parts/	477
(components)Matrix test of sterilizable piece parts/	478
(components)Mechanical sterile insertion system. Quality assurance/	405
(components)Methodology of measuring internal contamination in space	254
components/Microbial contaminants in the interiors of spacecraft	216
(components)Microbiological contamination control in spacecraft ster	188
(components)Microbiological studies conducted in the Experimental As	145
(components)Microorganisms in solid materials. Phases I, II, III, I	146
components of exobiological space probes; Dry-heat sterilization: I	67
components of spacecraft/Controlled contamination: A practical appr	69
(components)Optimization of oven-heating profiles in spacecraft ster	426
(components)Planetary quarantine program/	329
(components)RTG radiation test laboratory/	340
(components)Space hardware assay methodology/	280
(components)Spacecraft sterilization - A new engineering and sanitat	133
(components)Standard procedures for the microbiological examination	211
(components)Sterilizable accelerometer development program/	464
(components)Sterilizable battery/	204
(components)Sterilizable photomultiplier tubes/	124
(components)Sterilizable status sheets/	250
components/Sterilization of space probe	51

components/Sterilization of space probe	59
(components)Sterilizing techniques with ethylene oxide/	85
components/Studies for sterilization of space probe	73
components/Studies for sterilization of space probe	101
components/Studies for sterilization of space probe	138
components/Survey of electronic	25
(components)Surveyor spacecraft system. Vol.I/	83
components. Test I/Investigation of bacterial contamination inside	29
components. Test II/Investigation of bacterial contamination inside	30
components. Test III/Investigation of bacterial contamination inside	31
components. Test IV/Investigation of bacterial contamination inside	46
(components)The Model Assembly Sterilizer for Testing (MAST)/	433
components/Thermal death studies on microbial spores and some consid	102
(components)Thermal sterilization of spacecraft structures/	161
(components)Thermoradiation as a means of bacterial sterilization/	508
(components)Valve bioload reduction and sterilization study/	304
components with heat and ethylene oxide-Freon 12/Research study: Su	65
computerized bacterial identification/An approach to	403
(computerized identification)Planetary quarantine program/	517
(computerized simulation)Dry heat sterilization	383
(computerized simulation)Planetary quarantine program/	514
Concentration and temperature effects/Ethylene oxide gaseous sterili	54
constraints. I. An introduction to the problems of planetary quara	259
(constraints)Analysis of microbial release probabilities/	420
(constraints)Contamination and sterilization/	473
(constraints)Development of a typical Mars landing capsule steriliza	209
(constraints)EASL/SADL test and operations. Phase II/	320
(constraints)Estimation of planetary contamination probabilities by	422
(constraints)New concepts on sterilization. I. Alternatives to red	322
(constraints)Planetary contamination. II. Soviet and U.S. practice	264
(constraints)Planetary microbiological contamination/	417
(constraints)Sterilization assembly and development laboratory routi	260
contaminant control in spacecraft/New approaches to	171
contaminants/Basic studies in environmental microbiology as related	278
contaminants from spacecraft optical systems/A system for removing	443
contaminants in the interiors of spacecraft components/Microbial	216
(contaminants)Microbiological barrier equipment and techniques. A s	173
(contaminants)Microbiological barrier techniques/	151
contaminants throughout the test cycle/Degradation due to	489
contaminated Mars?/Panspermia revisited, or have we already	302
contaminating Mars/A nomenclature of symbols relevant to the probabi	182
(contamination)A discussion of the planetary quarantine constraints.	259
contamination/A microscopic method of particulate	501
contamination: A practical approach for developing sterilizing proc	69
contamination. A recurring problem/Biological and chemical surface	95
(contamination)Adaptive allocation of planetary quarantine violation	289
(contamination)Analytical method for calculating heat sterilization	15
(contamination)Analytical techniques in planetary quarantine/	416
contamination and pollution prediction/Mathematical models for	365

Contamination and sterilization/	191
Contamination and sterilization/	473
(contamination)Assembly of CMTM for purposes of determining areas of	245
contamination associated with the Apollo 6 spacecraft during final a	499
contamination by aeolian erosion/The release of buried	377
contamination by space probes/The probability of planetary	187
contamination by terrestrial microorganisms/Analytical basis for the	421
(contamination)Capsule sterilization canister separation joint/	292
(contamination)Clean room and work station requirements, controlled	233
(contamination)Contributions of microbiological safety to space rese	150
Contamination control/	276
Contamination control -- a state-of-the-art review/	540
Contamination control: a very old, new field/	350
contamination control/Bibliography. Codes, standards, procedures, s	472
contamination control/Biological	218
contamination control for Tital IIIB program/Some new concepts in	262
Contamination control handbook for ground fluid systems/	377
contamination control in spacecraft sterilization/microbiological	188
Contamination control in the manufacturing sequence/	335
contamination control/Microbiological	152
contamination control on the Apollo program/Handbook for	213
contamination control/Outbound spacecraft: Basic policy relating to	267
(contamination control)Planetary quarantine program/	329
contamination control: Policy and responsibility/Outbound lunar biol	265
contamination control: Policy and responsibility/Outbound planetary	266
contamination control. Rocketdyne's role/Apollo and	341
(contamination control)Sterile access studies in the Pilot Assembly	345
(contamination control)Twenty-first semiannual report to Congress/	485
contamination control with application to spacecraft assembly/Compat	94
(contamination)Develop and test of a sterile insertion repair techni	321
contamination/Die-off of microbial	279
(contamination)Dry-heat inactivation kinetics of naturally occurring	379
(contamination)Eleventh annual COSPAR session/	354
(contamination)Environmental microbiology as related to planetary qu	263
(contamination)Estimation of planetary contamination probabilities b	422
(contamination)Evaluation of alcohol sporulation method	356
(contamination)Exponential decontamination models for count data/	402
(contamination)Gaseous sterilization/	41
contamination identification/An approach to	413
contamination in a clean room during an eleven week test period/The	106
contamination in clean rooms/Microbial	155
contamination in space hardware/Methodology of measuring internal co	254
(contamination)Industrial applications of laminar airflow/	434
contamination inside balsa wood and explosive charges(squibs, pyrote	47
contamination inside cured solid propellant/Investigation of	48
contamination inside electronic components/A technique for the inves	24
contamination inside electronic components, Test I/Investigation of	29
contamination inside electronic components. Test II/Investigation of	30
contamination inside electronic components. Test III/Investigation o	31

contamination inside electronic components. Test IV/Investigation o	46
contamination inside irradiated and heated electronic components/Inv	154
contamination inside solar panel/Investigation of bacterial	32
contamination/Instrumentation and methodology in measurement of viab	374
(contamination)Investigation of the reliability of sterile insertion	230
contamination located between mated surfaces and on exterior surface	221
contamination log/Planetary microbiological	417
(contamination)Mariner Mars 1971 planetary quarantine plan/	450
(contamination)Microbiological studies conducted in the Experimental	145
(contamination)Microbiological studies on planetary quarantine/	308
(contamination)Microbiological survey of environmentally controlled	217
contamination model/An assembly	227
contamination/Monitoring airborne particulate	360
(contamination)Monitoring clean areas/	210
contamination obtained on surfaces exposed to room air or touched by	77
contamination of a planet/Analysis and sensitivity studies related t	460
Contamination of Mars/	324
contamination of Mars. II. Cold and aridity as constraints on the	76
contamination of Mars/Probability of biological	232
contamination of Mars/Spacecraft sterilization and	157
contamination of Mars. I. Survival of terrestrial microorganisms i	107
contamination of planets and the Earth/Dangers of	49
contamination of surfaces/A comparative evaluation of methods for de	10
contamination of the Moon/Biological	35
contamination of the planets by unsterilized spaceflight hardware/Pl	247
contamination on nonporous surfaces/A direct surface agar plate labo	11
contamination on surfaces by chemical approaches/Detection of low le	271
contamination on surfaces by chemical approaches/Detection of low le	352
contamination on surfaces by chemical approaches/Detection of low le	444
contamination on surfaces. Evaluation of leakage of microbial contam	268
contamination on surfaces. Evaluation of leakage of microbial contam	269
contamination on surfaces/Services provided in support of the planet	117
contamination on surfaces/Services provided in support of the planet	118
contamination on surfaces/Services provided in support of the planet	119
contamination on surfaces/Services provided in support of the planet	120
contamination on surfaces/Services provided in support of the planet	180
(contamination)Organic constituent inventory for planetary flight mi	427
(contamination)Planetary Quarantine Department/	226
contamination probabilities by non-landing vehicles/Estimation of pl	422
contamination probability from viable organism penetration of bio-ba	231
contamination/Procedures necessary for the prevention of planetary	132
(contamination)Re-evaluation of planetary quarantine constraints/	419
(contamination)Research on microbiological sterilization problems/	116
(contamination)Scale-up of heat sterilization operations/	43
(contamination)Semiannual review of research and advanced developmen	358
contamination sensors. Vol.I/Study of	170
(contamination)Services provided in support of the planetary quarant	364
contamination/Some statistical problems in the standardization of a	137
contamination/Spacecraft sterilization and the prevention of planeta	134

(contamination)Spacecraft sterilization, techniques and equipment/	148
contamination/Sterilization of space vehicles: the problem of mutual	50
(contamination)Sterilizing space probes/	193
(contamination)Study of the biological cleanability of surfaces usin	298
(contamination)Survey of electronic components/	25
(contamination)Synergistic effects of ethylene oxide and other agent	307
(contamination)Testing and fabrication of plastic vacuum probe surfa	496
contamination/The sterilization of space vehicles to prevent extrate	21
contamination to which spacecraft components are subjected during ma	128
(contamination)Ultraclean technology/	449
(COSPAR)Contamination and sterilization/	473
COSPAR. French space program/Report to	484
(COSPAR)Microbial survival after simulated meteoroid impact/	270
(COSPAR)Planetary microbiological contamination log/	417
(COSPAR)Planetary quarantine plan Voyager project/	256
(COSPAR)Potentially harmful effects of space experiments/	184
(COSPAR)Probability of biological contamination of Mars/	232
(COSPAR)Procedures necessary for the prevention of planetary contami	132
(COSPAR)Relationship of planetary quarantine to biological search st	309
COSPAR Resolution 26.5. Draft/The National Aeronautics and Space Adm	96
COSPAR session/Eleventh annual	354
COSPAR/Soviet spacecraft sterilization methods aired at	172
(COSPAR)Spacecraft sterilization and contamination of Mars/	157
(COSPAR)Spacecraft-sterilization issue may effect pace of Mars and V	237
decontamination/Adsorption of formaldehyde by various surfaces durin	386
decontamination and encapsulation of MOSFETS circuitry/Handling, cle	140
decontamination/Beta-propiolactone vapor	194
(decontamination)Bibliography. Codes, standards, procedures, specifi	472
(decontamination)Biostatistics of space exploration: microbiology an	400
Decontamination, cleaning, coating and encapsulation of electronic c	103
(decontamination)Efficiency of sterilants in terrestrial and extrate	323
decontamination environments/Environmental specification Voyager cap	229
(decontamination)Method for disinfecting large enclosures with Beta-	38
decontamination models/Estimation of the parameters in exponential	246
decontamination models for count data/Exponential	402
Decontamination of AIMP-D spacecraft/	258
Decontamination of enclosed spaces with Beta-propiolactone vapor/	40
decontamination of SADL facility/Sterilization assembly and developm	260
(decontamination)Planetary quarantine program/	514
decontamination procedure B. The quantitative estimation of ethylene	305
decontamination procedure: Reactions in the decontamination chamber	257
Decontamination procedures/	457
(decontamination)Semiannual review of research and advanced developm	463
(decontamination)Sterilization. A selected bibliography from the lit	190
decontamination, sterilization and thermal vacuum exposures/Spacecra	511
decontamination system/An automatic ethylene oxide	228

(decontamination)The sporicidal activity of ethylene oxide/	310
(decontamination)The sterilising properties of ethylene oxide/	45
(decontamination)Valve bioload reduction and sterilization study/	304
Desert microflora/	339
Desert microflora/	391
Desert microflora. XI. Desert soil algae survival at extremely low t	178
(design)An engineer looks at spacecraft sterilization/	215
(design)Noncontamination separation systems for spacecraft (Project	200
(die-off)Exponential decontamination models for count data/	402
die-off of contaminants/Basic studies in environmental microbiology	278
Die-off of microbial contamination/	279
(die-off)Thermal destruction of microorganisms/	317
(dimethyl sulfoxide)Quarterly report on NASA contract R-35/	295
disinfectant/Beta-propiolactone vapor as a	13
disinfecting large enclosures with Beta-propiolactone vapor/Method f	38
disinfection/Gaseous	388
Disinfection of heat-sensitive material by low-temperature steam and	163
diurnal freeze-thawing on survival and growth of selected bacteria/	88
DNA in wet heat sterilization of microorganisms/On the role of	385
dry bacterial spores/Effect of Gamma and X-rays upon	28
(dry heat)An analysis of vacuum effects in the sterilization of micr	382
(dry heat)An experimental study of sterile assembly techniques/	100
dry heat and ethylene oxide gas upon spore contamination located bet	221
(dry heat)Controlled contamination: A practical approach for develop	69
dry heat; Design of apparatus, operational problems and preliminary	26
dry heat destruction of <u>B. subtilis</u> var. <u>niger</u> spores located betwee	343
Dry-heat destruction of <u>Bacillus subtilis</u> spores on surfaces: effect	407
dry heat destruction of <u>Bacillus subtilis</u> var. <u>niger</u> spores located	408
Dry heat destruction rates for microorganisms on open surfaces, in	494
Dry heat destruction rates of <u>B. subtilis</u> var. <u>niger</u> in a closed sys	362
Dry heat destruction rates of <u>Bacillus subtilis</u> var. <u>niger</u> in a clos	482
Dry heat destruction rates of microorganisms on surfaces as a functi	531
Dry heat destruction rates of microorganisms on surfaces as a functi	372
Dry heat destruction rates of microorganisms on surfaces: studies to	448
(dry heat)Determination of terminal sterilization process parameters	328
(dry heat)Ecology and thermal inactivation of microbes in and on int	503
(dry heat)Ecology and thermal inactivation of microbes in and on int	502
(dry heat)Effect of microbial release probabilities on spacecraft st	325
(dry heat)Environmental microbiology as related to planetary quarant	495
(dry heat)Feasibility of thermoradiation sterilization of spacecraft	459
Dry-heat inactivation kinetics of naturally occurring spore populati	379
(dry heat)Investigation of bacterial contamination inside electronic	46
(dry heat)JPL spacecraft sterilization technology program: A status	123
(dry heat)Mathematical basis for a diffusion model of microbial spor	425
dry heat/Measurement of the destruction of bacterial spores by	394
(dry heat)Methods for spacecraft sterilization/	239
(dry heat)Microbiologic filters - liquid and gas/	99
(dry heat)Optimizing thermal and radiation effects for bacterial ina	506
(dry heat)Physical methods of sterilization of microorganisms/	2

(dry heat)Planetary quarantine/	357
(dry heat)Planetary quarantine program/	516
(dry heat)Procedures for the microbiological examination of space ha	346
(dry heat)Recent advances in microbiological environmental control/	319
dry heat resistance studies/Reproducibility of results in	481
(dry heat)Semiannual review of research and advanced development. Vo	358
(dry heat)Spacecraft sterilization, techniques and equipment/	148
(dry heat)Spacecraft sterilization. Thermal considerations/	129
(dry heat)Sterilizable photomultiplier tubes/	124
dry heat sterilization: A general review/Some biological and physica	89
(dry heat sterilization)Contamination control in the manufacturing s	335
(dry heat sterilization)Electrostatic deposition device to deposit m	541
(dry heat sterilization)Ground simulation of a Mars-entry-capsule ae	483
Dry-heat sterilization: Its development and application to component	67
Dry heat sterilization modeling/	383
Dry heat sterilization modeling/	409
dry heat sterilization of microorganisms at 105°C/A study of	222
(dry heat)Sterilization of space probe components/	51
(dry heat)Sterilization of space probe components/	59
(dry heat)Sterilization procedures for planetary landers/	441
(dry heat)Studies for sterilization of space probe component/	101
(dry heat)Studies for sterilization of space probe components/	73
(dry heat)Terminal sterilization process calculation for spacecraft/	300
(dry heat)The development of two closely controlled humidity systems	442
(dry heat)Thermal destruction of microorganisms/	317
dry heat upon dry bacterial spores/Effect of	27
(dry heat)Voyager effort focused on sterilization/	234
(D-value)A study of dry heat sterilization of microorganisms at 105°	222
(D-value)Contamination control in the manufacturing sequence/	335
(D-value)Detection of low levels of microbial contamination on surfa	444
(D-value)Dry heat destruction rates of <u>B. subtilis</u> var. <u>niger</u> in a c	362
(D-value)Dry-heat destruction of <u>Bacillus subtilis</u> spores on surface	407
(D-value)Dry heat destruction rates of <u>Bacillus subtilis</u> var. <u>niger</u>	482
D-value/Dry heat destruction rates of microorganisms on surfaces as	531
(D-value)Dry heat destruction rates of microorganisms on surfaces: s	448
(D-value)Ecology and thermal inactivation of microbes in and on inte	235
(D-value)Effect of relative humidity on the penetrability and sporic	453
D-value experiments/Inter-laboratory	532
(D-value)Measurement of the destruction of bacterial spores by dry h	394
(D-value)Methodology of measuring internal contamination in space ha	254
(D-value)Microbial resistance to ethylene oxide/	297
(D-value)Microbial sterilization in ultra-high vacuum and outer spac	384
(D-value)Microbiological aspects of ethylene oxide sterilization. I.	466
(D-value)Microbiological aspects of ethylene oxide sterilization. IV	469
(D-value)Planetary quarantine program/	515
(D-value)Quarterly status report on NASA contract R-35/	349
(D-value)Reproducibility of results in dry heat resistance studies/	481
(D-value)Services provided in support of the planetary quarantine re	435
(D-value)Services provided in support of the planetary quarantine re	436

(D-value)Services provided in support of the planetary quarantine re	437
(D-value)The effect of humidity, location, surface finish and separa	408
(D-value)The space vehicle sterilization problem/	189
(D-value)The sporicidal activity of ethylene oxide/	310
(D-value)Twenty-first semiannual report to Congress/	485
Earth/Dangers of contamination of planets and the	49
(EASL)Microbiological survey of environmentally controlled areas/	217
EASL/SADL test and operations. Phase II/	320
eccof foam/Encapsulation, electronics	139
electromagnetic radiation in space/The biological effectiveness of s	311
electronic components/A technique for the investigation of bacterial	23
(electronic components)Decontamination of AIMP-D spacecraft/	258
(electronic components)Encapsulation, electronics, eccof foam/	139
(electronic components)Experimental study of sterile assembly techni	135
(electronic components)Experimental study of sterile assembly techni	143
electronic components/Survey of	25
electronic components, Test I/Investigation of bacterial contaminati	29
electronic components. Test II/Investigation of bacterial contaminat	30
electronic components. Test III/Investigation of bacterial contamina	31
electronic components. Test IV/Investigation of bacterial contaminat	46
electronic equipment/Maintainability design criteria for packaging o	446
Electronic parts sterilization program at the Jet Propulsion Laborat	202
electronics, eccof foam/Encapsulation	139
(electrostatic precipitation)Air filtration of microbial particles/	70
Encapsulation, electronics, eccof foam/	139
encapsulation of MOSFETS circuitry/Handling, cleaning, decontaminati	140
(environment)A feasibility study of an experiment for determining th	164
(environment)A Martian surface simulation facility for bacterial stu	290
(environment)A mathematical model for the thermoradiation inactivati	410
(environment)A preliminary analysis of the radiation burden of a typ	412
(environment)A research study to definitize a bio-isolator suit syst	253
(environment)A study of critical sterilization problems on a Mars at	177
(environment)Analytical basis for the estimation of planetary contam	421
(environment)Apollo and contamination control. McDonnell Douglas' ro	359
(environment)Bacteria under simulated Martian conditions/	110
(environment)Biological evaluation of the Biodetection Grinder/	520
(environment)Class 100 clean room program. Phase III/	316
environment/Clean room and work station requirements, controlled	233
(environment)Contamination control: a very old, new field/	350
(environment)Contributions of microbiological safety to space resear	150
environment criteria for the NASA Space Station Program/Natural	538
environment criteria guidelines for use in space vehicle development	539
(environment)Detection of low levels of microbial contamination on s	271
(environment)Die-off of microbial contamination/	279
(environment)Dry heat destruction rates of <u>Bacillus subtilis</u> var. <u>ni</u>	482
(environment)Dry heat sterilization modeling/	383

(environment)Effect of ultraviolet on the survival of bacteria airbo	447
(environment)Ethylene oxide sterilization rates and protective influ	301
(environment)Handbook for contamination control on the Apollo progra	213
(environment)Heat resistance of <u>Bacillus subtilis</u> spores in atmosphe	136
(environment)JPL develops double vacuum chamber for spacecraft tests	236
(environment)Life in the clouds/	376
(environment)Microbiological analysis of snow and ice from the Antar	471
(environment)Microbiological monitoring of spacecraft assembly facil	342
(environment)Microbiological studies on planetary quarantine/	308
environment/Microorganism study: bacterial isolants from harsh	378
environment/Microorganisms under simulated Martian	57
(environment)Monitoring clean areas/	210
(environment)New approaches to contaminant control in spacecraft	171
(environment)Panspermia revisited, or have we already contaminated M	302
(environment)Planetary Quarantine Department/	225
(environment)Planetary quarantine program/	517
(environment)Present day usage of clean rooms in medical and life sc	351
(environment)Reproducibility of results in dry heat resistance studi	481
(environment)Services provided in support of the planetary quarantin	438
(environment)Soil microbial and ecological investigations in the Ant	392
(environment)Soil studies - Desert microflora. XI. Desert soil algae	178
(environment)Some new concepts in contamination control for Tital II	262
(environment)Some problems posed by the planet Venus/	486
environment/Space and spacecraft	380
(environment)Space hardware assay methodology/	280
(environment)Spacecraft polymeric material interactions during decon	511
(environment)Sterilization group report No.1/	141
(environment)Study of attributes of mated surfaces that affect the h	251
(environment)Survival of microbial spores under several temperature	533
environment/The effect of ultraviolet radiation upon microorganisms	92
environment/The space	440
(environment)The survival of microorganisms in space. Further rocket	255
(environment)The survival of terrestrial microorganisms in space at	303
(environment)Viability of microorganisms in the desert soils of Turk	283
(environment)Water on Venus?/	475
environmental control/Recent advances in	319
environmental exposure/Viruses respond to	535
environmental history/Ground simulation of a Mars-entry-capsule aero	483
Environmental microbiology as related to planetary quarantine/	263
Environmental microbiology as related to planetary quarantine/	367
Environmental microbiology as related to planetary quarantine/	495
environmental microbiology as related to planetary quarantine. I. As	278
environmental microbiology as related to planetary quarantine/Basic	212
environmentally controlled areas/Microbiological survey of	217
environments/Ability of microorganisms to establish ecological niche	299
environments associated with the sterilization of planetary capsules	197
environments/Biochemical activities of terrestrial microorganisms in	115
environments/Biological contamination of Mars. II. Cold and aridity	76
environments/Biological contamination of Mars. I. Survival of terres	107

environments/Efficiency of sterilants in terrestrial and extraterrestrial	323
environments/Environmental specification Voyager capsule flight equipment	229
environments/Ethylene oxide sterilization of spores in hygroscopic	18
environments/Life in extraterrestrial	130
(environments)On the role of DNA in wet heat sterilization of microorganisms	385
environments on the viability of microorganisms/Effects of simulated	80
environments/Studies with microorganisms and plants under simulated	44
environments/Systematic description of bacterial isolants from rigor	174
(equipment)Development of an ultrasonic/Vacuum sampling device/	519
(equipment)Electrostatic deposition device to deposit monolayers of	541
(equipment)The vacuum probe sampler/	542
(ethylene oxide)An investigation of a sono-chemical approach in sterilization	153
ethylene oxide and methyl bromide against microorganisms on various	498
ethylene oxide and methyl bromide mixture/Efficiency of sterilization	277
ethylene oxide and other agents/Synergistic effects of	307
(ethylene oxide)Assembly of CMTM for purposes of determining areas of	245
ethylene oxide/Bibliography on applications of	281
ethylene oxide decontamination environments/Environmental specification	229
(ethylene oxide)Decontamination procedures/	457
ethylene oxide decontamination system/An automatic	228
(ethylene oxide)Evaluation of sterilization by gaseous oxide/	64
ethylene oxide-Freon 12 decontamination procedure B. The quantitative	305
Ethylene oxide-Freon 12 decontamination procedure: Reactions in the	257
(ethylene oxide-Freon 12)Experimental study of sterile assembly technique	135
(ethylene oxide-Freon 12)Experimental study of sterile assembly technique	143
ethylene oxide-Freon 12/Research study: Surveyor sterilization. Part I	65
ethylene oxide-Freon 12 sterilant gas mixture/Literature review of the	156
(ethylene oxide-Freon 12)Surveyor sterilization. Part IV. Studies of	66
ethylene oxide gas mixtures/Sterilization with	179
ethylene oxide gas on Scotch tape/Penetrability and effect of	33
ethylene oxide gas upon spore contamination located between mated surfaces	221
(ethylene oxide)Gaseous disinfection/	388
(ethylene oxide)Gaseous sterilization/	41
Ethylene oxide gaseous sterilization. I. Concentration and temperature	54
Ethylene oxide gaseous sterilization. II. Influence of method of humidity	55
(ethylene oxide)Investigation of microbial contamination inside cure chambers	48
ethylene oxide/Microbial resistance to	297
(ethylene oxide)Penetration by gases to sterilize interior surfaces	105
(ethylene oxide)Planetary quarantine/	357
ethylene oxide process specifications and procedures/Development of	355
ethylene oxide process specifications and procedures/Development of	458
ethylene oxide/Properties and essential information for safe handling	7
(ethylene oxide)Quarterly report on NASA contract R-35/	295
(ethylene oxide)Recent advances in microbiological environmental control	319
ethylene oxide; reduction of bacterial contamination on surfaces/Ser	117
ethylene oxide; reduction of bacterial contamination on surfaces/Ser	118
ethylene oxide; reduction of bacterial contamination on surfaces/Ser	119
ethylene oxide; reduction of bacterial contamination on surfaces/Ser	120
ethylene oxide; reduction of microbial contamination on surfaces. Evaluation	181

ethylene oxide; reduction of microbial contamination on surfaces. Ev	268
ethylene oxide; reduction of microbial contamination on surfaces. Ev	269
ethylene oxide; reduction of microbial contamination on surfaces/Ser	180
ethylene oxide; reduction of microbial dissemination/Services provid	364
Ethylene oxide resistance of nondesiccated and desiccated spores of	406
ethylene oxide. I. Review/The sterilizing action of gaseous	5
(ethylene oxide)Semiannual review of research and advanced developme	462
(ethylene oxide)Services provided in support of the planetary quaran	90
(ethylene oxide)Severe Voyager sterilization criteria set/	162
ethylene oxide/Simple improvised chambers for gas sterilization with	36
(ethylene oxide)Spacecraft preparation and sterilization as state of	240
(ethylene oxide)Status review of technology developments for spacecr	294
ethylene oxide sterilant gases/Compatibility of Centaur/Surveyor mat	87
ethylene oxide sterilization/A bacterial spore test piece for the co	113
ethylene oxide sterilization/Biological-chemical indicator for	176
ethylene oxide sterilization. I. Experimental apparatus and methods/	466
ethylene oxide sterilization. II. Microbial resistance to ethylene o	467
ethylene oxide sterilization. III. Effects of humidity and water act	468
ethylene oxide sterilization. IV. Influence of thickness of polyethy	469
ethylene oxide. II. Sterilization of contaminated objects with ethyl	6
(ethylene oxide)Sterilization of interplanetary spacecraft/	454
(ethylene oxide)Sterilization of spacecraft/	318
Ethylene oxide sterilization of spores in hygroscopic environments/	18
Ethylene oxide sterilization rates and protective influences/	301
Ethylene oxide sterilization studies/	78
Ethylene oxide sterilization without special equipment/	86
ethylene oxide/Sterilizing techniques with	85
(ethylene oxide)Synergistic effects in sonochemical sterilization/	243
(ethylene oxide)Test environments associated with the sterilization	197
ethylene oxide/The age of <u>Bacillus subtilis</u> spores and their resista	286
ethylene oxide. III. The effect of ethylene oxide and related compou	3
ethylene oxide. IV. The effect of moisture/The sterilizing action of	4
(ethylene oxide)The Model Assembly Sterilizer for Testing (MAST)/	433
(ethylene oxide)The space vehicle sterilization problem/	189
ethylene oxide/The sporicidal activity of	310
ethylene oxide/The sterilising properties of	45
(ethylene oxide)Voyager effort focused on sterilization/	234
exobiological space probes/Dry-heat sterilization: Its development a	67
(exobiology)A general review of chemical sterilization in space rese	104
(exobiology)Bacterial growth in agar subjected to freezing and thawi	338
(exobiology)Contamination control/	276
(exobiology)Dangers of contamination of planets and the Earth/	49
(exobiology)Effects of sterilization in spacecraft design/	62
(exobiology)Life detection systems/	474
(exobiology)Life in extraterrestiral environments/	130
(exobiology)Life in the clouds/	376
(exobiology)Mathematical models for contamination and pollution pred	365
(exobiology)Space probe sterilization/	61
(exobiology)Sterilizing unmanned spacecraft/	71

(exobiology)Viruses respond to environmental exposure/	535
Experimental Assembly and Sterilization Lab(EASL)microbiological ass	242
Experimental Assembly and Sterilization Laboratory(EASL)/Microbiolog	144
Experimental Assembly and Sterilization Laboratory(EASL)/Microbiolog	145
exterior surfaces of various materials/Effectiveness of dry heat and	221
extraterrestrial biological contamination/The sterilization of space	21
extraterrestrial environments/Efficiency of sterilants in terrestria	323
extraterrestrial environments/Life in	130
extraterrestrial life/The biological significance of search for	195
filter/Bacterial penetration of Robbins BCO	52
filter/Bacterial penetration of the millipore microtube cartridge	56
(filter)Clean room and work station requirements, controlled environ	233
(filter)Methods for spacecraft sterilization/	239
(filter)Microbiological barrier equipment and techniques. A state of	173
(filter)Monitoring airborne particulate contamination/	360
(filter)Recent advances in microbiological environmental control/	319
(filter)Services provided in support of the planetary quarantine req	439
(filter)The biological effectiveness of solar electromagnetic radiat	311
(filter)The space vehicle sterilization problem/	189
(filter)Ultraclean technology/	449
filters for liquids and gases/Evaluation of microbiological	97
filters - liquid and gas/Microbiologic	99
filters to sterilize liquids and gases/Evaluation of the efficiency	127
filtration of microbial particles/Air	70
formaldehyde by various surfaces during gaseous decontamination/Adso	386
formaldehyde/Disinfection of heat-sensitive material by low-temperat	163
formaldehyde/Effect of relative humidity on the penetrability and sp	453
(formaldehyde)Gaseous disinfection/	388
(formaldehyde)Investigation of methods for the sterilization of pott	331
(formaldehyde)Investigation of methods for the sterilization of pott	332
formaldehyde/Investigation on the sterilization efficacy of gaseous	1
formaldehyde-methanol solutions with formaldehyde-water solutions/Co	109
(formaldehyde)Quarterly status report on NASA contract R-35/	349
(formaldehyde)Surveyor sterilization. Part IV. Studies of sterilizat	66
formaldehyde-water solutions/Comparison of sterilizing properties of	109
(freeze-thaw cycling)Ability of microorganisms to establish ecologic	296
freeze-thawing on survival and growth of selected bacteria/Effect of	88
freezing and thawing/Bacterial growth in agar subjected to	338
Freon-12 ethylene oxide sterilant gases/Compatibility of Centaur/Sur	87
Gamma and X-rays upon dry bacterial spores/Effect of	28
(Gamma radiation)A study of the effectiveness of thermoradiation ste	507
(Gamma radiation)Thermoradiation as a means of bacterial sterilizati	508
gaseous oxide/Evaluation of sterilization	64

Gemini satellite experiments/The survival of terrestrial microorgani	303
generators/Parametric study of radioisotope thermoelectric and therm	74
Gnotobiotics in relation to space biology/	39
(gnotobiotics)Sterilization literature abstracts/	201
(gnotobiotics)Ultraclean technology/	449
growth of selected bacteria/Effect of diurnal freeze-thawing on surv	88
growth of surviving cells/Effect of heat treatment on the	17
(hardware)Assembly of CMTM for purposes of determining areas of cont	245
(hardware)Class 100 clean room program. Phase II/	315
(hardware)Development of a typical Mars landing capsule sterilizatio	207
hardware/Development of mechanical sterile insertion engineering mod	404
(hardware)JPL spacecraft sterilization technology program: A status	123
(hardware)Microbiological activities conducted during the Phase I op	144
(hardware)Monitoring clean areas/	210
hardware: NASA's current edition/Precedures for the microbiological	346
hardware/Planetary quarantine. Techniques for the prevention of cont	247
(hardware)Recommendations for determination of spacecraft sterilizat	274
(hardware)Spacecraft sterilization and the prevention of planetary c	134
(hardware)Status review of technology developments for spacecraft st	293
hardware sterility/Experimental Assembly and Sterilization Lab (EASL	242
(hardware)The assembly/sterilizer - A facility for the sterilization	186
(hardware)The objectives and technology of spacecraft sterilization/	131
(heat)A mathematical model for the thermoradiation inactivation of d	410
heat activation and of thermal death of bacterial spores/Kinetics of	79
(heat)An improved method of spacecraft sterilization/	513
heat and ethylene oxide-Freon 12/Research study: Surveyor sterilizat	65
heat and radiation/A study of the factors influencing sterilization	336
heat chamber for sterilization of large interplanetary structures/Ex	287
heat destruction of microorganisms located in these areas/Study of a	251
(heat)Development of a typical Mars landing capsule sterilization co	208
(heat)Development of the sterilizable battery/	312
(heat)Effect of sterilization in spacecraft design/	62
(heat)Electronic parts sterilization program at the Jet Propulsion L	202
(heat)Hot air sterilization at 200°/	272
Heat injury of <u>Bacillus subtilis</u> spores at ultrahigh temperatures/	125
(heat)Investigation of microbial contamination inside irradiated and	154
(heat)Investigations on sterilizable polymeric battery separator/	291
(heat)Microbiological aspects of ethylene oxide sterilization. I. Ex	466
(heat)Optimization of oven-heating profiles in spacecraft sterilizat	426
(heat)Planning, evaluation and analytical studies in planetary quara	418
(heat resistance)Biophysical analysis of the spore/	476
Heat resistance of <u>Bacillus subtilis</u> spores in atmospheres of differ	136
(heat resistance)The bacteriology of "clean rooms"/	147
heat-sensitive material by low-temperature steam and formaldehyde/Di	163
(heat)Spacecraft sterilization procedures in the USSR/	206
heat specifications/Review of	366

heat specifications/Review of	536
heat specifications/Review of	537
(heat)Sterilizable accelerometer development program/	464
heat sterilizable and impact resistant Ni-Cd battery development. Vo	248
Heat-sterilizable, remotely activated battery development program/	387
heat sterilization and ethylene oxide decontamination environments/E	229
heat sterilization/Estimation of microbial survival in	326
(heat)Sterilization literature abstracts/	201
heat sterilization/New concepts on sterilization. I. Alternatives to	322
heat sterilization operations/Scale-up of	43
heat sterilization time/Analytical method for calculating	15
(heat)The place of radiation sterilization in combined techniques/	306
heat treatment of bacteria. I. Sterilization of suspensions of <u>Serra</u>	9
heat treatment on the growth of surviving cells/Effect of	17
heat upon dry bacterial spores/Effect of dry	27
heating/Development of quality assurance requirements for planetary	296
(histogram)A study program on the development of mathematical model(	432
humidification/Ethylene oxide gaseous sterilization. II. Influence o	55
(humidity)A research study to definitize a bio-isolator suit system/	253
humidity and water activity on the sporicidal activity of ethylene o	468
humidity conditions/Survival of microbial spores under several tempe	533
(humidity)Ethylene oxide-Freon 12 decontamination procedure: Reactio	257
humidity, location, surface finish and separator thickness on the dr	343
humidity, location, surface finish and separator thickness on the dr	408
(humidity)Measurement of the destruction of bacterial spores by dry	394
humidity systems/The development of two closely controlled	442
hydrogen peroxide mixed with a detergent to reduce microbial contami	334
hygroscopic environments/Ethylene oxide sterilization of spores in	18
(identification)Antarctic soil algal crusts: scanning electron and o	389
inactivation characteristics of <u>Bacillus subtilis</u> at ultrahigh tempe	126
inactivation kinetics of naturally occurring spore populations/	379
inactivation/Mechanisms of spore	529
inactivation of bacterial spores/A probit method to interpret therma	12
inactivation of dry <u>Bacillus subtilis</u> var. <u>niger</u> spores/A mathematic	410
inactivation of microbes in and on interplanetary space vehicle comp	111
inactivation of microbes in and on interplanetary space vehicle comp	112
inactivation of microbes in and on interplanetary space vehicle comp	165
inactivation of microbes in and on interplanetary space vehicle comp	166
inactivation of microbes in and on interplanetary space vehicle comp	167
inactivation of microbes in and on interplanetary space vehicle comp	168
inactivation of microbes in and on interplanetary space vehicle comp	235
inactivation of microbes in and on interplanetary space vehicle comp	284
inactivation of microbes in and on interplanetary space vehicle comp	502
inactivation of microbes in and on interplanetary space vehicle comp	503
inactivation of microbes in and on interplanetary space vehicle comp	504
inactivation of microbes in and on interplanetary space vehicle comp	505

inactivation/Optimizing thermal and radiation effects for bacterial inhibition of spore germination by alcohols/The reversible	506
Instrumentation and methodology in measurement of viable and nonviable	530
interior surfaces of confined spaces/Penetration by gases to sterilize	374
interplanetary space vehicle components/Ecology and thermal inactivation	105
interplanetary space vehicle components/Ecology and thermal inactivation	111
interplanetary space vehicle components/Ecology and thermal inactivation	112
interplanetary space vehicle components/Ecology and thermal inactivation	165
interplanetary space vehicle components/Ecology and thermal inactivation	166
interplanetary space vehicle components/Ecology and thermal inactivation	167
interplanetary space vehicle components/Ecology and thermal inactivation	168
interplanetary space vehicle components/Ecology and thermal inactivation	235
interplanetary space vehicle components/Ecology and thermal inactivation	284
interplanetary space vehicle components/Ecology and thermal inactivation	502
interplanetary space vehicle components/Ecology and thermal inactivation	503
interplanetary space vehicle components/Ecology and thermal inactivation	504
interplanetary space vehicle components/Ecology and thermal inactivation	505
interplanetary structures/Experimental heat chamber for sterilization	287
Laminar air flow in planetary quarantine/	523
laminar airflow/Industrial applications of	434
(laminar airflow)Present day usage of clean rooms in medical and life	351
(laminar airflow)The bacteriology of "clean rooms"/	147
laminar flow biological safety cabinet/Services provided in support	491
(lander)Analysis and sensitivity studies related to post-launch recovery	460
lander/Estimation of microbial release probabilities from a Martian	518
(lander)Life detection systems/	474
lander mission/A preliminary analysis of the radiation burden of a mission	412
(lander)Thermal sterilization of spacecraft structures/	161
lander. Vol. IV. Sterilization, Appendix C (with 8 nomogram enclosures)	199
lander. Vol. IV. Sterilization/Comparative studies of conceptual designs	198
landers/Design requirements for the sterilization containers of planetary	160
landers/Sterilization procedures for planetary	441
(landing capsule)Planetary Quarantine Department/	224
landing capsule sterilization container/Development of a typical Mars	207
landing capsule sterilization container/Development of a typical Mars	208
landing capsule sterilization container/Development of a typical Mars	209
Life detection systems/	474
lunar and planetary missions/Examination of engineering requirements	58
lunar and planetary space vehicles/Sterilization of	53
lunar space vehicles. An engineering examination/Sterilization of unmanned	72
manufacture/Detection and quantitation of microbial contamination to	128
Mariner Mars 1969 planetary quarantine plan/	327
(Mariner-Mars '69)Services provided in support of the planetary quarantine	436
(Mariner Mars '71)Implications of change in probability of microbial	423

Mariner Mars 1971 planetary quarantine plan/	450
(Mariner)Relationship of planetary quarantine to biological search s	309
(Mariner)Some problems posed by the planet Venus/	486
(Mars)A discussion of the planetary quarantine constraints. I. An in	259
Mars/A nomenclature of symbols relevant to the probability of conta	182
(Mars)A study program on the development of mathematical model(s) fo	431
Mars and Venus exploration/Spacecraft-sterilization issue may affect	237
Mars atmosphere/A feasibility study of an experiment for determining	164
Mars atmosphere entry/A study of thermal kill of viable organisms du	288
Mars atmospheric entry probe. Vol. I and II/A study of critical ster	177
(Mars)Capsule sterilization canister separation joint/	292
Mars. II. Cold and aridity as constraints on the survival of terrest	76
Mars/Contamination of	324
(Mars)Definition of requirements for advanced sterilizable component	121
(Mars)Efficiency of sterilants in terrestrial and extraterrestrial e	323
Mars-entry-capsule aeroshell environmental history/Ground simulation	483
(Mars)Evaluation of current technology in attaining planetary quara	249
(Mars)Experimental study of sterile assembly techniques. Vol. 1/	135
Mars/Implications of change in probability of microbial growth for	423
(Mars)JPL develops double vacuum chamber for spacecraft tests/	236
Mars lander mission/A preliminary analysis of the radiation burden o	412
Mars landing capsule sterilization container/Development of a typica	207
Mars landing capsule sterilization container/Development of a typica	208
Mars landing capsule sterilization container/Development of a typica	209
(Mars)Microbial contaminants in the interiors of spacecraft componen	216
(Mars)Microbial survival after simulated meteoroid impact/	270
Mars missions/Implications of 1970 COSPAR recommendations on PQ requ	424
Mars?/Panspermia revisited, or have we already contaminated	302
(Mars)Planetary microbiological contamination log/	417
(Mars)Planetary quarantine plan Voyager project/	256
Mars/Probability of biological contamination of	232
Mars/Probability of biological contamination of	333
Mars probe/lander. Vol. IV. Sterilization, Appendix C(with 8 nomogra	199
Mars probe/lander. Vol. IV. Sterilization/Comparative studies of con	198
Mars probe sterilization container/Development of a typical	142
Mars probes and capsules and a method of burden control/Biological b	175
(Mars)Procedures necessary for the prevention of planetary contamina	132
(Mars)Quarantine document system operations manual/	430
(Mars)Re-evaluation of planetary quarantine constraints/	419
(Mars)Relationship of planetary quarantine to biological search stra	309
(Mars)Resistance of certain strains of microorganisms to ultraviolet	282
(Mars)Soil studies - Desert microflora. XI. Desert soil algae surviv	178
Mars/Spacecraft sterilization and contamination of	157
Mars/Spacecraft sterilization. Immaculate Voyager will visit	169
(Mars)Status review of technology developments for spacecraft steril	294
(Mars)Sterilization of space vehicles: the problem of mutual contami	50
(Mars)Sterilization procedures for planetary landers/	441
Mars. I. Survival of terrestrial microorganisms in simulated Martiæn	107
(Mars)The space environment/	440

Martian atmospheric models/Effective sky temperatures for several	534
Martian conditions/Bacteria under simulated	110
Martian conditions/Multiplication of certain soil microorganisms und	456
Martian dust clouds/Effect of ultraviolet on the survival of bacteri	447
Martian environment/Microorganisms under simulated	57
Martian environments/Biological contamination of Mars. II. Cold and	76
Martian environments/Studies with microorganisms and plants under si	44
(Martian lander)Biocontamination control/	203
Martian lander/Estimation of microbial release probabilities from a	518
Martian surface simulation facility for bacterial studies/A	290
mated surface areas and encapsulated in solids of spacecraft hardwar	494
mated surfaces and on exterior surfaces of various materials/Effecti	221
(mated surfaces)Environmental microbiology as related to planetary q	263
mated surfaces/Investigation of methods for the sterilization of pot	331
mated surfaces/Investigation of methods for the sterilization of pot	332
(mated surfaces)Planetary quarantine, SPT (OSSA program)/	461
(mated surfaces)Semiannual review of research and advanced developme	358
mated surfaces that affect the heat destruction of microorganisms lo	251
mated surfaces/The effect of humidity, location, surface finish and	343
mated surfaces/The effect of humidity, location, surface finish and	408
(mathematical model)Planetary Quarantine Department/	225
(mathematical model)Planetary quarantine. Techniques for the prevent.	247
mathematical model(s) for microbial burden prediction. Vol. VIII. R	431
mathematical model(s) for microbial burden prediction. Vol. X. Final	432
(mathematical models)Some new concepts in contamination control for	262
(membrane)A study of aseptic maintenance by pressurization/	396
(membrane filter)Services provided in support of the planetary quara	223
(membrane filter)Some new concepts in contamination control for Tita	262
meteoroid impact/Microbial survival after simulated	270
methyl bromide against microorganisms on various types of surfaces/B	498
(methyl bromide)Gaseous sterilization/	410
methyl bromide mixture/Efficiency of sterilization by making use of	277
(methyl bromide)Quarterly report on NASA contract R-35/	295
(methyl bromide)Quarterly status report on NASA contract R-35/	349
(methyl bromide)Soviet spacecraft sterilization methods aired at COS	172
(methyl bromide)Sterilization of interplanetary spacecraft/	454
(methyl bromide)Sterilization of spacecraft/	318
methyl bromide vapor/Sterilization with	196
microbes in and on interplanetary space vehicle components/Ecology a	111
microbes in and on interplanetary space vehicle components/Ecology a	112
microbes in and on interplanetary space vehicle components/Ecology a	165
microbes in and on interplanetary space vehicle components/Ecology a	166
microbes in and on interplanetary space vehicle components/Ecology a	167
microbes in and on interplanetary space vehicle components/Ecology a	168
microbes in and on interplanetary space vehicle components/Ecology a	235
microbes in and on interplanetary space vehicle components/Ecology a	284
microbes in and on interplanetary space vehicle components/Ecology a	502
microbes in and on interplanetary space vehicle components/Ecology a	503
microbes in and on interplanetary space vehicle components/Ecology a	504

microbes in and on interplanetary space vehicle components/Ecology a	505
microbial burden prediction. Vol. VIII. Revisions to Vol. VI User's	431
microbial burden prediction. Vol. X. Final report addendum on Phase	432
Microbial contaminants in the interiors of spacecraft components/	216
Microbial contamination associated with the Apollo 6 spacecraft duri	499
(microbial contamination)Control and sampling in sterile rooms/	330
microbial contamination/Die-off of	279
microbial contamination in a clean room during an eleven week test p	106
Microbial contamination in clean rooms/	155
(microbial contamination)Industrial applications of laminar airflow/	434
microbial contamination inside balsa wood and explosive charges (squ	47
microbial contamination inside cured solid propellant/Investigation	48
microbial contamination inside irradiated and heated electronic comp	154
Microbial contamination obtained on surfaces exposed to room air or	77
microbial contamination on surfaces by chemical approaches/Detection	271
microbial contamination on surfaces by chemical approaches/Detection	352
microbial contamination on surfaces by chemical approaches/Detection	444
microbial contamination on surfaces. Evaluation of leakage of microb	181
microbial contamination on surfaces. Evaluation of leakage of microb	268
microbial contamination on surfaces. Evaluation of leakage of microb	269
microbial contamination on surfaces/Services provided in support of	180
microbial contamination/The possibility of using hydrogen peroxide m	334
microbial contamination to which spacecraft components are subjected	128
microbial growth for Mars/Implications of change in probability of	423
microbial particles/Air filtration of	70
microbial release probabilities/Analysis of	420
microbial release probabilities from a Martian lander/Estimation of	518
Microbial resistance to ethylene oxide/	297
Microbial resistance to ethylene oxide/Microbiological aspects of et	467
microbial spore destruction/Mathematical basis for a diffusion model	425
microbial spores and some considerations for the sterilization of sp	102
microbial spores under several temperature and humidity conditions/S	373
microbial spores under several temperature and humidity conditions/S	533
Microbial sterilization in ultra-high vacuum and outer space: a kine	384
Microbial survival after simulated meteoroid impact/	270
(microbial survival)Analytical techniques in planetary quarantine/	416
microbial survival in heat sterilization/Estimation of	326
Microbiologic filters - liquid and gas/	99
Microbiological activities conducted during the Phase I operation in	144
microbiological assay and certification of spacecraft hardware steri	242
Microbiological barrier equipment and techniques/	219
Microbiological barrier equipment and techniques. A state of the art	173
Microbiological barrier techniques/	151
microbiological challenge in space/	20
Microbiological contamination control. A state of the art report/	152
Microbiological contamination control in spacecraft sterilization/	188
microbiological contamination log/Planetary	417
microbiological contamination/Some statistical problems in the stand	137
microbiological environmental control/Recent advances in	319

microbiological examination of space hardware: NASA's current editio	346
microbiological examination of space hardware/Standard procedures fo	211
microbiological filters for liquids and gases/Evaluation of	97
Microbiological monitoring of spacecraft assembly facility operation	342
Microbiological monitoring of spacecraft assembly facility operation	398
Microbiological monitoring of spacecraft assembly facility operation	526
microbiological profiles of the Apollo 10 and 11 spacecraft/Quantita	500
microbiological safety to space research/Contributions of	150
microbiological sampling of surfaces/Vacuum probe: new approach to t	375
(microbiological)Services provided in support of the planetary quara	491
microbiological sterilization problems/Research on	116
Microbiological studies conducted in the Experimental Assembly and S	145
Microbiological studies on planetary quarantine/	308
Microbiological survey of environmentally controlled areas/	217
Microbiology and sterilization/Biostatistics of space exploration:	399
microbiology and sterilization/Biostatistics of space exploration:	400
microbiology as related to planetary quarantine. I. Assay methodolog	278
microbiology as related to planetary quarantine/Basic studies in env	212
microbiology as related to planetary quarantine/Environmental	263
microbiology as related to planetary quarantine/Environmental	367
microbiology/Space age	34
microflora/Desert	339
microflora/Desert	391
microflora. XI. Desert soil algae survival at extremely low temperat	178
(microflora)Microbiological analysis of snow and ice from the Antarc	471
microorganism/Effects of continuous and interrupted radiation on	241
microorganism growth/Investigation of spacecraft materials that supp	465
Microorganism study: bacterial isolants from harsh environment/	378
(microorganisms)A study of aseptic maintenance by pressurization/	396
(microorganisms)A study of the factors influencing sterilization by	336
microorganisms/An analysis of vacuum effects in the sterilization of	382
microorganisms/Analytical basis for the estimation of planetary cont	421
microorganisms and plants under simulated Martian environments/Studi	44
microorganisms as a principal extremal factor of space environment/T	92
microorganisms/Astronautics information: Effects of sterilizing agen	82
microorganisms at 105°C/A study of dry heat sterilization of	222
(microorganisms)Balloon-borne bacterial collector/	81
(microorganisms)Class 100 clean room program. Phase II/	315
(microorganisms)Contamination control: a very old, new field/	350
(microorganisms)Decontamination of AIMP-D spacecraft/	258
(microorganisms)Develop and test of a sterile insertion repair techn	321
(microorganisms)Effect of ultra-high vacuum on <u>Bacillus subtilis</u> var	60
microorganisms/Effects of simulated space environments on the viabil	80
(microorganisms)Electrostatic deposition device to deposit monolayer	541
(microorganisms)Ethylene oxide sterilization rates and protective in	301
(microorganisms)Evaluation of a quantal response model with estimate	401
microorganisms from solids after simulated hard landings/Release of	487
(microorganisms)Gaseous disinfection/	388
microorganisms in desert soil exposed to five years of continuous ve	393

microorganisms in nitrogen gas/Enumeration of viable	68
microorganisms in simulated Martian environments/Biological contamin	107
microorganisms in simulated planetary environments/Biochemical activ	115
microorganisms in simulated space/Study of viability of	108
Microorganisms in solid materials. Phases I, II, III, IV/	146
microorganisms in space at orbital altitudes during Gemini satellite	303
microorganisms in space. Further rocket and ballon borne exposure ex	255
microorganisms in the desert soils of Turkmenia/Viability of	283
microorganisms in ultra-high vacuum/The viability of	42
(microorganisms)Investigations on the sterilization efficacy of gase	1
microorganisms located in these areas/Study of attributes of mated s	251
(microorganisms)Ninth monthly status report on Contract NASw-1734/	368
microorganisms on open surfaces, in mated surface areas and encapsul	494
microorganisms on surfaces as a function of relative humidity; devel	531
microorganisms on surfaces as a function of relative humidity/Dry he	372
microorganisms on surfaces: studies to evaluate possible sources of	448
microorganisms/On the role of DNA in wet heat sterilization of	385
microorganisms on various types of surfaces/Bactericidal activity of	498
microorganisms/Physical methods of sterilization of	2
(microorganisms)Planetary quarantine/	273
(microorganisms)Planetary quarantine/	357
(microorganisms)Planning, evaluation and analytical studies in plane	418
(microorganisms)Quarterly report on NASA contract R-35/	295
(microorganisms)Quarterly status report on NASA contract R-35/	348
(microorganisms)Services provided in support of the planetary requir	90
(microorganisms)The biological effectiveness of solar electromagneti	311
(microorganisms)The development of two closely controlled hum s	442
(microorganisms)The place of radiation sterilization in combined tec	306
microorganisms/Thermal destruction of	317
microorganisms to dry heat: Design of apparatus, operational problem	27
microorganisms to establish ecological niches in different soils and	299
microorganisms to radiation/Adaptation of	37
microorganisms to ultraviolet rays/Resistance of certain strains of	282
micro-organisms under simulated Martian conditions/Multiplication	456
Microorganisms under simulated Martian environment/	57
(model)A stochastic approach to bioburden estimation and prediction.	509
(model)A study of thermal kill of viable organisms during Mars atmos	288
(model)Adaptive allocation of planetary quarantine violation probabi	289
(model)An analysis of vacuum effects in the sterilization of microor	382
model/An assembly contamination	227
(model)Analytical basis for the estimation of planetary contaminatio	421
(model)Approximations to the Bayes estimate for a quantal assay with	492
Model Assembly Sterilizer for Testing (MAST)/	433
model/Bayesian analysis for an exponential surveillance	493
(model)Determination of terminal sterilization process parameters/	328
(model)Development of a typical Mars landing capsule sterilization c	207
(model)Development of a typical Mars landing capsule sterilization c	208
model during assembly in the sterilization assembly development labo	370
(model)Estimation of planetary contamination probabilities by non-la	422

model for spacecraft sterilization/Development and application of a	344
model for spacecraft sterilization requirements/A rational	244
model for the thermoradiation inactivation of dry <u>Bacillus subtilis</u>	410
model hardware/Development of mechanical sterile insertion engineeri	404
(model)Mariner Mars 1969 planetary quarantine plan/	327
(model)Microbiological studies on planetary quarantine/	308
model of microbial spore destruction/Mathematical basis for a diffus	425
(model)Planetary quarantine/	273
(model)Planetary Quarantine Department/	224
(model)Planetary Quarantine Department/	226
(model)Planetary quarantine program/	516
(model)Planning, evaluation, and analytical studies in planetary qua	428
(model)Planning, evaluation and analytical studies in planetary quar	429
(model)Probability of biological contamination of Mars/	232
(model)Probability of biological contamination of Mars/	333
model/Stochastic math	451
model/Stochastic math	452
(model)Terminal sterilization process calculation for spacecraft/	300
model with estimated concentrations/Evaluation of a quantal response	401
modeling/Bioburden	521
modeling/Dry heat sterilization	383
modeling/Dry heat sterilization	409
modeling of thermoradiation synergism/Mathematical	411
models/Effective sky temperatures for several Martian atmospheric	534
models/Estimation of the parameters in exponential decontamination	246
models for contamination and pollution prediction/Mathematical	365
models for count data/Exponential decontamination	402
model(s) for microbial burden prediction. Vol. VIII. Revisions to Vo	431
model(s) for microbial burden prediction. Vol. X. Final report adden	432
moisture/The sterilizing action of gaseous ethylene oxide. IV. The e	3
(MOLSINK)JPL develops double vacuum chamber for spacecraft tests/	236
(Moon)A search for viable organisms in a lunar sample/	488
(Moon)An approach to computerized bacterial identification/	403
Moon/Biological contamination of the	35
(Moon)Outbound lunar biological contamination control: Policy and re	265
(Moon)Outbound spacecraft: Basic policy relating to lunar and planet	267
(Moon)Planetary quarantine/	273
(Moon)Sterilizing space probes/	193
(Moon)Technical manuals and planning study in planetary quarantine/	261
(Moon)Technical manuals and planning study in planetary quarantine/	313
(Moon)User's manual for the planetary quarantine lunar information s	510
 Ni-Cd battery development. Vol. 1. Electrochemistry of heat steriliz	 248
nitrogen gas/Enumeration of viable microorganisms in	68
Noncontaminating separation systems for spacecraft (Project Zip)/	200

Organic constituent inventory for planetary flight missions/ oxide/Evaluation of sterilization by gaseous	427 64
Panspermia revisited, or have we already contaminated Mars?/ particle physics/Fine	302 522
particulate contamination/A microscopic method of	501
particulate contamination/Monitoring airborne	360
(particulates)A preliminary analysis of the radiation burden of a ty	412
(particulates)Air filtration of microbial particles/	70
(particulates)Bacterial penetration of Robbins BCO filter/	52
(particulates)Bibliography. Codes, standards, procedures, specificat	472
(particulates)Contamination control: a very old, new field/	350
(particulates)Contamination control handbook for ground fluid system	337
(particulates)Degradation due to contaminants throughout the test cy	489
(particulates)Design of clean rooms. A classified list of selected r	93
(particulates)Some new concepts in contamination control for Tital I	262
(particulates)Some problems posed by the planet Venus/	486
(particulates)The vacuum probe sampler/	542
Pilot Assembly Sterilizer System (PASS)/Sterile access studies in th	345
planetary and lunar space vehicles. An engineering examination/Steri	72
planetary biological contamination control/Outbound	266
planetary capsules/Test environments associated with the sterilizati	197
planetary contamination by space probes/The probability of	187
planetary contamination by terrestrial microorganisms/Analytical bas	421
planetary contamination control/Outbound spacecraft: Basic policy re	267
planetary contamination probabilities by non-landing vehicles/Estima	422
planetary contamination/Procedures necessary for the prevention of	132
Planetary contamination. II. Soviet and U.S. practices and policies/	264
planetary contamination/Spacecraft sterilization and the prevention	134
(planetary environments)Release of microorganisms from solids after	487
planetary landers/Design requirements for the sterilization containe	160
planetary landers/Sterilization procedures for	441
(planetary landers)Study of the biological cleanability of surfaces	298
Planetary microbiological contamination log/	417
planetary missions/Examination of engineering requirements and proce	58
Planetary quarantine/	273
Planetary quarantine/	357
Planetary quarantine analysis/	353
Planetary quarantine analysis/	445
Planetary quarantine analysis/	470
planetary quarantine/Analytical techniques in	416
planetary quarantine and spacecraft sterilization/Planning, evaluati	418
planetary quarantine and spacecraft sterilization/Planning, evaluati	428
planetary quarantine and spacecraft sterilization/Planning, evaluati	429
planetary quarantine. I. Assay methodology. II. Natural die-off of c	278
planetary quarantine/Basic studies in environmental microbiology as	212
planetary quarantine constraints. I. An introduction to the problems	259

planetary quarantine constraints/Re-evaluation of	419
Planetary Quarantine Department/	224
Planetary Quarantine Department/	225
Planetary Quarantine Department/	226
(planetary quarantine)Detection of low levels of microbial contamina	271
(planetary quarantine)Die-off of microbial contamination/	279
(planetary)Quarantine document system operations manual/	430
planetary quarantine/Environmental microbiology as related to	263
planetary quarantine/Environmental microbiology as related to	367
planetary quarantine/Environmental microbiology as related to	495
(planetary quarantine)Estimation of microbial release probabilities	518
planetary quarantine/Laminar air flow in	523
planetary quarantine lunar information system/User's manual for the	510
planetary quarantine/Microbiological studies on	308
Planetary quarantine operations/	414
Planetary quarantine operations/	415
planetary quarantine plan/Mariner Mars 1969	327
planetary quarantine plan/Mariner Mars 1971	450
Planetary quarantine plan Voyager project/	256
Planetary quarantine program/	329
Planetary quarantine program/	514
Planetary quarantine program/	515
Planetary quarantine program/	516
Planetary quarantine program/	517
planetary quarantine requirements for spacecraft sterilization. Vol.	249
planetary quarantine requirements of NASA. Evaluation of a vertical	491
planetary quarantine requirements of NASA; germicidal activity of et	364
planetary quarantine requirements of NASA. Reduction of bacterial di	117
planetary quarantine requirements of NASA. Reduction of bacterial di	118
planetary quarantine requirements of NASA. Reduction of bacterial di	119
planetary quarantine requirements of NASA. Reduction of bacterial di	120
planetary quarantine requirements of NASA. Reduction of microbial di	180
planetary quarantine requirements of NASA. Reduction of microbial di	181
planetary quarantine requirements of NASA. Reduction of microbial di	268
planetary quarantine requirements of NASA. Reduction of microbial di	269
planetary quarantine requirements of NASA/Services provided in suppo	90
planetary quarantine requirements of NASA/Services provided in suppo	223
planetary quarantine requirements of NASA/Services provided in suppo	436
planetary quarantine requirements of NASA/Services provided in suppo	437
planetary quarantine requirements of NASA/Services provided in suppo	438
planetary quarantine requirements of NASA/Services provided in suppo	439
planetary quarantine requirements of NASA under Contract W-13,062/Se	435
planetary quarantine/Scientific publications and presentations relat	381
(planetary quarantine)Semiannual review of research and advanced dev	462
(planetary quarantine)Semiannual review of research and advanced dev	463
(planetary quarantine)Space hardware assay methodology/	280
planetary quarantine/Spacecraft sterilization and	285
Planetary quarantine, SPT(OSSA program)/	461
(planetary quarantine)Sterilization and quarantine parameters for co	185

(planetary quarantine)Sterilization of space vehicles: The problem o	50
(planetary quarantine)Study of attributes of mated surfaces that aff	251
planetary quarantine/Technical manuals and planning study in	261
planetary quarantine/Technical manuals and planning study in	313
Planetary quarantine. Techniques for the prevention of contamination	247
planetary quarantine to biological search strategy/Relationship of	309
planetary quarantine violation probabilities/Adaptive allocation of	289
(planetary quarantine)Viruses respond to environmental exposure/	535
planetary quarantine. Vol. 1/Definition of requirements for advanced	121
planetary space vehicles/Sterilization of lunar and	53
planetary spacecraft to be sterilized by heating/Development of qual	296
planetary vehicles/Sterilization and quarantine parameters for consi	185
planets and the Earth/Dangers of contamination of	49
polymeric battery separator/Investigations on sterilizable	291
potting compounds and mated surfaces/Investigation of methods for th	331
potting compounds and mated surfaces/Investigation of methods for th	332
PQ requirements for Mars missions/Implications of 1970 COSPAR recomm	424
pressurization/A study of aseptic maintenance by	396
Probability of biological contamination of Mars/	333
(probability of contamination)A discussion of the planetary quaranti	259
(probability of contamination)A rational model for spacecraft steril	244
(probability of contamination)Biocontamination control/	203
(probability of contamination)Estimation of the parameters in expone	246
(probability of contamination)Mariner Mars 1969 planetary quarantine	237
(probability of contamination)Microbial survival after simulated met	270
probability of contamination of a planet/Analysis and sensitivity st	460
(probability of contamination)Planetary contamination. II. Soviet an	264
probe components/Sterilization of space	51
probe components/Sterilization of space	59
probe components/Studies for sterilization of space	73
probe components/Studies for sterilization of space	101
probe components/Studies for sterilization of space	138
probe/lander. Vol. IV. Sterilization, Appendix C (with 8 nomogram en	199
probe-lander. Vol. IV. Sterilization/Comparative studies of conceptu	198
probe: new approach to the microbiological sampling of surfaces/Vacu	375
probe sampler/The vacuum	542
probe sterilization container/Development of a typical Mars	142
probe sterilization/Space	61
(probe vehicle)A feasibility study of an experiment for determining	164
probe. Vol. I and II/A study of critical sterilization problems on a	177
probes and capsules and a method of burden control/Biological burden	175
probes/Dry-heat sterilization: Its development and application to co	67
probes/Sterilizing space	193
probes/The probability of planetary contamination by space	187
propellant)/Investigation of microbial contamination inside balsa wo	47
propellant/Investigation of microbial contamination inside cured sol	48
(propylene oxide)Synergistic effects in sonochemical sterilization/	243

radiation/A study of the factors influencing sterilization by heat a	336
radiation/Adaptation of microorganisms to	37
(radiation)An improved method of spacecraft sterilization/	513
(radiation)An investigation of a sono-chemical approach in steriliza	153
radiation burden of a typical Mars lander mission/A preliminary anal	412
(radiation)Contamination control: a very old, new field/	350
(radiation)Effect of ultraviolet on the survival of bacterial airbor	447
radiation effects for bacterial inactivation/Optimizing thermal and	506
(radiation)Efficiency of sterilization by making use of ethylene oxi	277
radiation in space/The biological effectiveness of solar electromagn	311
(radiation)Instrumentation and methodology in measurement of viable	374
(radiation)Investigation of microbial contamination inside irradiate	154
(radiation)Natural environment criteria for the NASA Space Station P	538
radiation on microorganisms/Effects of continuous and interrupted	241
(radiation)Physical methods of sterilization of microorganisms/	2
(radiation)Recent advances in microbiological environmental control/	319
(radiation)Space environment criteria guidelines for use in space ve	539
(radiation)Spacecraft preparation and sterilization as state of the	240
radiation sterilization in combined techniques/	306
(radiation)Sterilization literature abstracts/	201
(radiation)Survey of electronic components/	25
radiation test laboratory/RTG	340
radioisotope thermoelectric and thermionic power generators/Parametr	74
(radioisotope thermoelectric generator)A preliminary analysis of the	412
radioisotope thermoelectric generator/Compatibility and shielding an	479
RTG [radioisotope thermo-electric generator] radiation test laborato	340
radioisotope thermoelectric generators for outer planet missions/Rev	395
radioisotope tracer techniques/Study of the biological cleanability	298
recontamination of spacecraft and the probability of contamination o	460
(recontamination)Spacecraft sterilization - A new engineering and sa	133
(recontamination)The objectives and technology of spacecraft sterili	192
(relative humidity)Adsorption of formaldehyde by various surfaces du	386
(relative humidity)An automatic ethylene oxide decontamination syste	228
(relative humidity)Beta-propiolactone vapor as a disinfectant/	13
relative humidity/developing dry heat D-values/Dry heat destruction	531
relative humidity/Dry heat destruction rates of microorganisms on su	372
(relative humidity)Dry heat destruction rates of microorganisms on s	448
(relative humidity)Encapsulation, electronics, eccofoam/	139
(relative humidity)Microbiological aspects of ethylene oxide sterili	469
(relative humidity)Microbiological aspects of ethylene oxide sterili	467
relative humidity on the penetrability and sporicidal activity of fo	453
(relative humidity)Quarterly status report on NASA contract R-35/	348
(relative humidity)Quarterly status report on NASA contract R-35/	349
(relative humidity)Sterilization of interplanetary spacecraft/	454
(relative humidity)Sterilization of spacecraft/	318
(relative humidity)Sterilization with methyl bromide vapor/	196
(relative humidity)Sterilizing techniques with ethylene oxide/	85
(relative humidity)Studies for sterilization of space probe componen	138
(relative humidity)The types of biological indicators used in monito	480

(relative humidity)Thermal destruction of microorganisms/	317
(relative humidity)Virucidal activity of <u>Beta</u> -propiolactone vapor. II	22
(relative humidity)Viruses respond to environmental exposure/	535
requirements/A rational model for spacecraft sterilization	244
(requirements)Adaptive allocation of planetary quarantine violation	289
(requirements)An experimental study of sterile assembly techniques/	100
(requirements)Analytical techniques in planetary quarantine	416
requirements and procedures for sterilization of unmanned lunar and	58
(requirements)Biological burden estimation of Mars probes and capsul	175
(requirements)Class 100 clean room program. Phase I/	314
(requirements)Class 100 clean room program. Phase II/	315
(requirements)Class 100 clean room program. Phase III/	316
(requirements)Contamination control handbook for ground fluid system	337
requirements, controlled environment/Clean room and work station	233
(requirements)Design of clean rooms. A classified list of selected r	93
(requirements)Development and application of a system model for spac	344
(requirements)Development of concepts for improved spacecraft steril	158
requirements/Effect of microbial release probabilities on spacecraft	325
(requirements)Engineering problems in capsule sterilization/	205
requirements for advanced sterilizable components for planetary quar	121
requirements for planetary spacecraft to be sterilized by heating/De	296
requirements for spacecraft sterilization. Vol. 1/Evaluation of curr	249
requirements for the sterilization containers of planetary landers/D	160
(requirements)Investigation of microbial contamination inside balsa	47
(requirements)Investigation of microbial contamination inside cured	48
(requirements)Mariner Mars 1971 planetary quarantine plan/	450
(requirements)Microbial contamination associated with the Apollo 6 s	499
(requirements)Microbiological contamination control/	152
(requirements)Monitoring clean areas/	210
requirements of NASA. Evaluation of a vertical laminar flow biologic	491
requirements of NASA; germicidal activity of ethylene oxide; reducti	364
requirements of NASA. Reduction of bacterial dissemination; germicid	117
requirements of NASA. Reduction of bacterial dissemination; germicid	118
requirements of NASA. Reduction of bacterial dissemination; germicid	119
requirements of NASA. Reduction of bacterial dissemination; germicid	120
requirements of NASA. Reduction of microbial dissemination; germicid	180
requirements of NASA. Reduction of microbial dissemination; germicid	181
requirements of NASA. Reduction of microbial dissemination; germicid	268
requirements of NASA. Reduction of microbial dissemination; germicid	269
requirements of NASA/Services provided in support of the planetary q	90
requirements of NASA/Services provided in support of the planetary q	223
requirements of NASA/Services provided in support of the planetary q	436
requirements of NASA/Services provided in support of the planetary q	437
requirements of NASA/Services provided in support of the planetary q	438
requirements of NASA/Services provided in support of the planetary q	439
(requirements)Organic constituent inventory for planetary flight mis	427
(requirements)Planetary quarantine plan Voyager project/	256
(requirements)Planetary quarantine program/	329
(requirements)Planning, evaluation and analytical studies in planeta	429

(requirements)Potentially harmful effects of space experiments/	184
(requirements)Probability of biological contamination of Mars/	232
(requirements)Quarantine document system operations manual/	430
(requirements)Severe Voyager sterilization criteria set/	162
(requirements)Space probe sterilization/	61
(requirements)Spacecraft sterilization/	169
(requirements)Spacecraft-sterilization issue may effect pace of Mars	237
(requirements)Standard procedures for the microbiological examinatio	211
(requirements)Status review of technology developments for spacecraf	293
(requirements)Sterile access studies in the Pilot Assembly Sterilize	345
requirements/Sterilization	183
(requirements)Sterilization and quarantine parameters for considerat	185
(requirements)Sterilization group report No. 1/	141
(requirements)Sterilizing space probes/	193
(requirements)Surveyor spacecraft system. Vol. I/	83
(requirements)Surveyor spacecraft system. Vol. II/	84
(requirements)Test environments associated with the sterilization of	197
(requirements)The National Aeronautics and Space Administration posi	96
(resistance)Effects of continuous and interrupted radiation on micro	241
(resistance)Microbiological aspects of ethylene oxide sterilization.	466
Resistance of certain strains of microorganisms to ultraviolet rays	282
resistance of microorganisms to dry heat: Design of apparatus, opera	27
(resistance)Some biological and physical factors in dry heat sterili	89
resistance studies/Reproducibility of results in dry heat	481
(resistance)The types of biological indicators used in monitoring st	480
resistance to ethylene oxide/Microbial	297
resistance to ethylene oxide/The age of <u>Bacillus subtilis</u> spores and	286
 SADL facility/Sterilization assembly and development laboratory rout	 260
sampler/The vacuum probe	542
(sampling)A distribution-free test for parallelism/	455
(sampling)A stochastic approach to bioburden estimation and predicti	509
(sampling)A study program on the development of mathematical model(s	431
(sampling)An approach to computerized bacterial identification/	403
(sampling)Approximations to the Bayes estimate for a quantal assay w	492
(sampling)Bayesian analysis for an exponential surveillance model	493
(sampling)Biodection grinder/	490
(sampling)Decontamination of enclosed spaces with <u>Beta</u> -propiolactone	40
sampling device/Development of an ultrasonic/vacuum	397
sampling device/Development of an ultrasonic/vacuum	519
sampling in sterile rooms/Control and	330
(sampling)Life in the clouds/	376
(sampling)Microbiological analysis of snow and ice from the Antarcti	471
(sampling)Microbiological barrier equipment and techniques. A state	173
(sampling)Microbiological barrier techniques/	151
(sampling)Microbiological survey of environmentally controlled areas	217
(sampling)Monitoring airborne particulate contamination/	360

sampling of surfaces/Vacuum probe; new approach to the microbiologic	375
(sampling)Planetary Quarantine Department/	224
(sampling)Research on microbiological sterilization problems/	116
(sampling)Semiannual review of research and advanced development/	463
(sampling)Semiannual review of research and advanced development. Vo	358
(sampling)Soil microbial and ecological investigations in the Antarc	392
(sampling)Sterilization with ethylene oxide gas mixtures/	179
(sampling)Study of contamination sensors. Vol. I/	170
sampling surfaces for microbiological contamination/Some statistical	137
(sampling)The ethylene oxide-Freon 12 decontamination procedure B. T	305
sensors. Vol. I/Study of contamination	170
separation systems for spacecraft (Project Zip)/Noncontaminating	200
simulated hard landings/Release of microorganisms from solids after	487
simulated Martian conditions/Bacteria	110
simulated Martian conditions/Multiplication of certain soil micro-or	456
simulated Martian dust clouds/Effect of ultraviolet on the survival	447
simulated Martian environment/Microorganisms under	57
simulated Martian environments/Biological contamination of Mars. I.	107
simulated Martian environments/Biological contamination of Mars. II.	76
simulated Martian environments/Studies with microorganisms and plant	44
simulated meteoroid impact/Microbial survival after	270
simulated planetary environments/Biochemical activities of terrestri	115
simulated space environments on the viability of microorganisms/Effe	80
simulated space/Study of vaibility of microorganisms in	108
(simulation)Bacterial growth in agar subjected to freezing and thawi	390
(simulation)Biostatistics and space exploration: Microbiology and st	399
(simulation)Biostatistics of space exploration: microbiology and ste	400
(simulation)Estimation of microbial survival in heat sterilization/	326
simulation facility for bacterial studies/A Martian surface	290
(simulation)Ninth monthly status report on Contract NASw-1734/	368
simulation of a Mars-entry-capsule aeroshell environmental history/	483
(simulation)Optimization of oven-heating profiles in spacecraft ster	426
(simulation)Planetary quarantine/	357
(simulation)Planetary quarantine, SPT (OSSA program)/	461
(simulation)Semiannual review of research and advanced development/	463
(simulation)Semiannual review of research and advanced development.	358
(simulation)Semiannual review of research and advanced development.	462
(simulation)Services provided in support of the planetary quarantine	491
soil algal crusts: scanning electron and optical microscope study/An	389
(soil)Bacterial growth in agar subjected to freezing and thawing. I/	338
(soil)Bacterial growth in agar subjected to freezing and thawing. II	390
(soil)Desert microflora/	391
(soil)Dry-heat inactivation kinetics of naturally occurring spore po	379
soil exposed to five years of continuous very high vacuum/Survival o	393
Soil microbial and ecological investigations in the Antarctic interi	392
(soil)Microbiological analysis of snow and ice from the Antarctic in	471
(soil)Microorganism study: Bacterial isolants from harsh	378
soil micro-organisms under simulated Martian conditions/Multiplicati	456
(soil)Systematic description of bacterial isolants from rigorous env	174

soils and environments/Ability of microorganisms to establish ecolog	299
solar electromagnetic radiation in space/The biological effectiveness	311
solar panel/Investigation of bacterial contamination inside	32
sonic and ultrasonic waves/Sterilizing effects of high intensity air	220
sono-chemical approach in sterilization problems/An investigation of	153
sonochemical sterilization/Synergistic effects in	243
space: a kinetic comparison/Microbial sterilization in ultra-high va	384
Space age microbiology/	34
Space and spacecraft environment/	380
space at orbital altitudes during Gemini satellite experiments/The s	303
space biology/Gnotobiotics in relation to	39
(space capsule)Voyager effort focused on sterilization/	234
Space environment criteria guidelines for use in space vehicle devel	539
space environment/The	440
space environment/The effect of ultraviolet radiation upon microorga	92
space environment/The interaction of living systems with the	512
space environments on the viability of microorganisms/Effects of sim	80
space experiments/Potentially harmful effects of	184
space exploration: Microbiology and sterilization/Biostatistics and	399
space exploration: microbiology and sterilization/Biostatistics of	400
space. Further rocket and ballon borne exposure experiments/The surv	255
Space hardware assay methodology/	280
(space hardware)Environmental microbiology as related to planetary q	263
space hardware/Methodology of measuring internal contamination in	254
space hardware: NASA's current edition/Procedures for the microbiolo	346
space hardware/Standard procedures for the microbiological examinati	211
space probe components/Sterilization of	51
space probe components/Sterilization of	59
space probe components/Studies for sterilization of	73
space probe components/Studies for sterilization of	101
space probe components/Studies for sterilization of	138
(space probe)Development of a typical Mars probe sterilization conta	142
Space probe sterilization/	61
space probes/Dry-heat sterilization: Its development and application	67
space probes/Sterilizing	193
space probes/The probability of planetary contamination by	187
space program/Report to COSPAR. French	484
space research/A general review of chemical sterilization in	104
space research/Contributions of microbiological safety to	150
space/Study of viability of microorganisms in simulated	108
space suits/Services provided in support of the planetary quarantine	181
space suits/Services provided in support of the planetary quarantine	268
space suits/Services provided in support of the planetary quarantine	269
space/The biological effectiveness of solar electromagnetic radiatio	311
space/The microbiological challenge in	20
(space vehicle)Adaptive allocation of planetary quarantine violation	289
(space vehicle)An investigation of a sono-chemical approach in steri	153
space vehicle components/Ecology and thermal inactivation of microbe	111
space vehicle components/Ecology and thermal inactivation of microbe	112

space vehicle components/Ecology and thermal inactivation of microbe	165
space vehicle components/Ecology and thermal inactivation of microbe	166
space vehicle components/Ecology and thermal inactivation of microbe	167
space vehicle components/Ecology and thermal inactivation of microbe	168
space vehicle components/Ecology and thermal inactivation of microbe	235
space vehicle components/Ecology and thermal inactivation of microbe	284
space vehicle components/Ecology and thermal inactivation of microbe	502
space vehicle components/Ecology and thermal inactivation of microbe	503
space vehicle components/Ecology and thermal inactivation of microbe	504
space vehicle components/Ecology and thermal inactivation of microbe	505
(space vehicle)Contributions of microbiological safety to space rese	150
space vehicle development (1969 revision)/Space environment criteria	539
(space vehicle)Engineering problems in capsule sterilization/	205
(space vehicle)Estimation of planetary contamination probabilities b	422
(space vehicle)New concepts on sterilization. I. Alternatives to red	322
(space vehicle)Spacecraft sterilization procedures in the USSR. Meet	206
space vehicle sterilization problem/The	189
space vehicles. An engineering examination/Sterilization of unmanned	72
space vehicles/Sterilization of lunar and planetary	53
space vehicles: the problem of mutual contamination/Sterilization of	50
space vehicles to prevent extraterrestrial biological contamination/	21
(spacecraft)A feasibility study of liquid sterile insertion/	371
(spacecraft)A research study to definitize a bio-isolation suit syst	252
(spacecraft)A study program on the development of mathematical model	431
(spacecraft)A study program on the development of mathematical model	432
(spacecraft)An approach to computerized bacterial identification/	403
(spacecraft)Analysis of microbial release probabilities/	420
spacecraft and the probability of contamination of a planet/Analysis	460
(spacecraft assembly areas)Ability of microorganisms to establish ec	299
(spacecraft assembly)Class 100 clean room program. Phase III/	316
spacecraft assembly/Compatibility of sterilization and contamination	94
spacecraft assembly facility operations/Microbiological monitoring o	342
spacecraft assembly facility operations/Microbiological monitoring o	398
spacecraft assembly facility operations/Microbiological monitoring o	526
spacecraft: Basic policy relating to lunar and planetary contaminati	267
(spacecraft)Biocontamination control/	203
(spacecraft)Compatibility of Centaur/Surveyor materials with Freon-1	87
(spacecraft components)A microscopic method of particulate contamina	501
spacecraft components are subjected during manufacture/Detection and	128
spacecraft components/Effect of current cleaning procedures on steri	275
spacecraft components/Effect of current cleaning procedures on steri	361
spacecraft components/Microbial contaminants in the interiors of	216
(spacecraft components)Research on microbiological sterilization pro	116
spacecraft components/Thermal death studies on microbial spores and	102
spacecraft containing a radioisotope thermoelectric generator/Compat	479
(spacecraft)Contamination of Mars/	324
spacecraft/Controlled contamination: A practical approach for develo	69
spacecraft/Decontamination of AIMP-D	258
(spacecraft)Degradation due to contaminants throughout the test cycl	489

spacecraft design/Effect of sterilization in	62
(spacecraft)Design of clean rooms. A classified list of selected ref	93
(spacecraft)Determination of terminal sterilization process paramete	328
(spacecraft)EASL/SADL test and operations. Phase II/	320
(spacecraft)Efficiency of sterilants in terrestrial and extraterrest	323
(spacecraft)Efficiency of sterilization by making use of ethylene ox	277
(spacecraft)Eleventh COSPAR session/	354
(spacecraft)Enumeration of viable microorganisms in nitrogen gas/	68
spacecraft environment/Space and	380
(spacecraft)Estimation of microbial release probabilities from a Mar	518
(spacecraft)Estimation of microbial survival in heat sterilization/	326
(spacecraft)Ethylene oxide sterilization studies/	78
(spacecraft)Evaluation of microbiological filters for liquids and ga	97
(spacecraft)Experimental heat chamber for sterilization of large int	287
(spacecraft)Experimental study of sterile assembly techniques/	143
(spacecraft)Exponential decontamination models for count data/	402
(spacecraft)Feasibility study for combined method of sterilization/	122
(spacecraft hardware)Biological evaluation of the Biodetection Grind	520
spacecraft hardware/Dry heat destruction rates for microorganisms on	494
spacecraft hardware sterility/Experimental Assembly and Sterilizatio	242
(spacecraft)Implications of change in probability of microbial growt	423
(spacecraft)Industrial applications of laminar airflow/	434
spacecraft/Investigation of the reliability of sterile insertion tec	230
(spacecraft)Mariner Mars 1969 planetary quarantine plan/	327
spacecraft materials that support microorganism growth/Investigation	465
(spacecraft)Mathematical basis for a diffusion model of microbial sp	425
(spacecraft)Mathematical models for contamination and pollution pred	365
(spacecraft)Mechanical sterile insertion system. Quality assurance/	405
(spacecraft)Microbial contamination in clean rooms/	155
(spacecraft)Microbiological studies conducted in the Experimental As	145
spacecraft/New approaches to contaminant control in	171
spacecraft optical systems/A system for removing contaminants from	443
(spacecraft)Organic constituent inventory for planetary flight missi	427
(spacecraft)Outbound lunar biological contamination control: Policy	265
(spacecraft)Parametric study of radioisotope thermoelectric and ther	74
(spacecraft)Planetary Quarantine Department/	226
Spacecraft polymeric material interactions during decontamination, s	511
Spacecraft preparation and sterilization as state of the art/	240
(spacecraft)Problems in sterilization of unmanned space vehicles/	98
spacecraft (Project Zip)/Noncontaminating separation systems for	200
spacecraft/Quantitative and qualitative microbiological profiles of	500
spacecraft replaceable electronic equipment/Maintainability design c	446
(spacecraft)RTG radiation test laboratory/	340
(spacecraft)Semiannual review of research and advanced development.	462
(spacecraft)Services provided in support of the planetary quarantine	438
(spacecraft)Sterile access studies in the Pilot Assembly Sterilizer	345
(spacecraft)Sterilizable status sheets/	250
Spacecraft sterilization - A new engineering and sanitation technolo	133
(spacecraft)Sterilization. A selected bibliography from the literatu	190

spacecraft sterilization/An engineer looks at	215
spacecraft sterilization/An improved method of	513
Spacecraft sterilization and contamination of Mars/	157
Spacecraft sterilization and planetary quarantine/	285
Spacecraft sterilization and the prevention of planetary contaminati	134
(spacecraft sterilization)Contamination control/	276
spacecraft sterilization/Development and application of a system mod	344
spacecraft sterilization/Development of concepts for improved	158
Spacecraft sterilization. Immaculate Voyager will visit Mars/	169
Spacecraft-Sterilization issue may effect pace of Mars and Venus exp	237
spacecraft sterilization methods aired at COSPAR/Soviet	172
spacecraft sterilization/Methods for	239
spacecraft sterilization/Microbiological contamination control in	188
spacecraft/Sterilization of	318
spacecraft/Sterilization of interplanetary	454
spacecraft sterilization/Optimization of oven-heating profiles in	426
(spacecraft sterilization)Optimizing thermal and radiation effects f	506
spacecraft sterilization/Planning, evaluation and analytical studies	418
spacecraft sterilization/Planning, evaluation, and analytical studie	428
spacecraft sterilization/Planning, evaluation and analytical studies	429
Spacecraft sterilization procedures in the USSR. Meeting on steriliz	206
spacecraft sterilization/Proceedings of the conference on	63
spacecraft sterilization process times/Recommendations for determina	274
spacecraft sterilization processes/Some observations about and a bib	149
spacecraft sterilization requirements/A rational model for	244
spacecraft sterilization requirements/Effect of microbial release pr	325
spacecraft sterilization/Status review of technology developments fo	293
spacecraft sterilization/Status review of technology developments fo	294
spacecraft sterilization, techniques and equipment/	148
Spacecraft sterilization technology/	214
spacecraft sterilization technology program: A status report/JPL	123
spacecraft sterilization/The objectives and technology of	131
spacecraft sterilization/The objectives and technology of	192
(spacecraft sterilization)The sporicidal activity of ethylene oxide/	310
Spacecraft sterilization. Thermal considerations/	129
spacecraft sterilization. Vol. 1/Evaluation of current technology in	249
spacecraft/Sterilizing unmanned	71
spacecraft structures/Thermal sterilization of	161
spacecraft system. Vol. I/Surveyor	83
spacecraft system. Vol. II/Surveyor	84
(spacecraft)Technical manuals and planning study in planetary quaran	261
spacecraft/Terminal sterilization process calculation for	300
spacecraft tests/JPL develops double vacuum chamber for	236
spacecraft/The assembly/sterilizer - A facility for the sterilizatio	186
(spacecraft)The level of microbial contamination in a clean room dur	106
(spacecraft)The Model Assembly Sterilizer for Testing (MAST)/	433
(spacecraft)The National Aeronautics and Space Administration positi	96
(spacecraft)The space environment/	440
(spacecraft)Thermoradiation as a means of bacterial sterilization/	508

spacecraft to be sterilized by heating/Development of quality assurance	296
(spacecraft)Twenty-first semiannual report to Congress/	485
(spacecraft)User's manual for the planetary quarantine lunar information	510
spacecraft using Cobalt 60/Feasibility of thermoradiation sterilization	459
spaceflight hardware/Planetary quarantine. Techniques for the prevention	247
specifications/Review of heat	536
specifications/Review of heat	537
spore/Biophysical analysis of the	476
spore contamination located between mated surfaces and on exterior surfaces	221
spore destruction/Mathematical basis for a diffusion model of microbial	425
spore germination by alcohols/The reversible inhibition of	530
spore inactivation/Mechanisms of	529
(spore inactivation)Planetary quarantine program/	516
spore populations/Dry-heat inactivation kinetics of naturally occurring	379
(spore resistance)The survival of terrestrial microorganisms in space	303
spore test piece for the control of ethylene oxide sterilization/A batch	113
spores/A probit method to interpret thermal inactivation of bacteria	12
(spores)A study of aseptic maintenance by pressurization/	396
(spores)Adsorption of formaldehyde by various surfaces during gaseous	386
(spores)Analytical method for calculating heat sterilization times/	15
spores and some considerations for the sterilization of spacecraft components	102
spores and their resistance to ethylene oxide/The age of <u>Bacillus subtilis</u>	286
spores at ultrahigh temperatures/Heat injury of <u>Bacillus subtilis</u>	125
(spores)Bacterial penetration of the millipore microtube cartridge filter	56
(spores) <u>Beta</u> -propiolactone vapor as a disinfectant/	13
(spores)Biological-chemical indicator for ethylene oxide sterilization	176
spores by dry heat/Measurement of the destruction of bacterial	394
(spores)Design of thermal destruction apparatus/	8
(spores)Detection of low levels of microbial contamination on surfaces	444
(spores)Ecology and thermal inactivation of microbes in and on inter	504
spores/Effect of dry heat upon bacterial	27
spores/Effect of Gamma and X-rays upon dry bacterial	28
(spores)Effect of ultra-high vacuum on <u>Bacillus subtilis</u> var. <u>niger</u> /	60
(spores)Effects of continuous and interrupted radiation on microorganisms	241
(spores)Environmental microbiology as related to planetary quarantine	495
(spores)Ethylene oxide gaseous sterilization. II. Influence of methanol	55
(spores)Evaluation of a quantal response model with estimated concentration	401
(spores)Hot air sterilization at 200°/	272
spores in atmospheres of different water contents/Heat resistance of	136
spores in hygroscopic environments/Ethylene oxide sterilization of surfaces	18
(spores)Investigation of methods for the sterilization of potting components	331
spores/Kinetics of heat activation and of thermal death of bacterial	79
(spores)Life in extraterrestrial environments/	130
spores located between mated surfaces/The effect of humidity, location	343
spores located between mated surfaces/The effect of humidity, location	408
(spores)Microbial resistance to ethylene oxide/	297
(spores)Microbiological aspects of ethylene oxide sterilization. II.	467
spores of <u>Bacillus subtilis</u> var. <u>niger</u> hermetically sealed in various	406
spores of <u>Bacillus subtilis</u> var. <u>niger</u> /Rapid heat treatment of bacteria	9

spores on surfaces: effect of humidity in an open system/Dry-heat de	407
spores on test surfaces/Electrostatic deposition device to deposit m	541
(spores)Planetary Quarantine Department/	225
(spores)Planetary quarantine program/	515
(spores)Planetary quarantine, SPT (OSSA program)/	461
(spores)Quarterly report on NASA contract R-35/	295
(spores)Quarterly status report on NASA contract R-35/	348
(spores)Quarterly status report on NASA contract R-35/	349
(spores)Reproducibility of results in dry heat resistance studies/	481
(spores)Services provided in support of the planetary quarantine req	223
(spores)Services provided in support of the planetary quarantine req	364
(spores)Services provided in support of the planetary quarantine req	435
(spores)Services provided in support of the planetary quarantine req	436
(spores)Services provided in support of the planetary quarantine req	437
(spores)Services provided in support of the planetary quarantine req	439
(spores)Some biological and physical factors in dry heat sterilizati	89
(spores)Sterilization with methyl bromide vapor/	196
(spores)Sterilizing effects of high intensity airborne sonic and ult	220
spores/Studies on trace elements in the sporulation of bacteria and	159
(spores)Synergistic effects in sonochemical sterilization/	243
(spores)The bacteriology of "clean rooms"/	147
(spores)The possibility of using hydrogen peroxide mixed with a dete	334
(spores)The probability of planetary contamination by space probes/	187
(spores)The sterilizing action of gaseous ethylene oxide. II. Steril	6
(spores)The sterilizing action of gaseous ethylene oxide. IV. The ef	4
(spores)The survival of microorganisms in space. Further rocket and	225
(spores)Twenty-first semiannual report to Congress/	485
spores under several temperature and humidity conditions/Survival of	533
(spores)Vacuum probe: new approach to the microbiological sampling o	375
sporicidal activity of ethylene oxide/Microbiological aspects of eth	468
sporicidal activity of ethylene oxide/Microbiological aspects of eth	469
sporicidal activity of ethylene oxide/The	310
sporicidal activity of formaldehyde/Effect of relative humidity on t	453
sporulation of bacteria and the germination of bacterial spores/Stud	159
standardization of a method for sampling surfaces for microbiologica	137
steam and formaldehyde/Disinfection of heat-sensitive material by lo	163
sterilant gases/Compatibility of Centaur/Surveyor materials with Fre	87
sterilants in terrestrial and extraterrestrial environments/Efficien	323
sterile assembly techniques/An experimental study of	100
sterile assembly techniques/Experimental study of	143
sterile assembly techniques. Vol. 1/Experimental study of	135
sterile insertion/A feasibility study of liquid	371
sterile insertion engineering model hardware/Development of mechanic	404
sterile insertion/Liquid	525
sterile insertion repair technique/Develop and test of a	321
sterile insertion system. Quality assurance/Mechanical	405
sterile insertion techniques/Design feasibility study of	238
sterile insertion techniques for spacecraft/Investigation of the rel	230
sterilising properties of ethylene oxide/The	45

Sterilizable accelerometer development program/	464
sterilizable and impact resistant Ni-Cd battery development. Vol. 1.	248
Sterilizable battery/	204
sterilizable battery/Development of the	312
sterilizable components for planetary quarantine. Vol. 1/Definition	121
Sterilizable photomultiplier tubes/	124
sterilizable piece parts/Matrix test of	477
sterilizable piece parts/Matrix test of	478
sterilizable polymeric battery separator/Investigations on	291
Sterilizable status sheets. Vol. II/	250
sterilization/A bacterial spore test piece for the control of ethyle	113
(sterilization)A feasibility study of liquid sterile insertion/	371
sterilization: A general review/Some biological and physical factors	89
sterilization - A new engineering and sanitation technology/Spacecra	133
Sterilization. A selected bibliography from the literature retrieval	190
sterilization/A study of the effectiveness of thermoradiation	507
sterilization. I. Alternatives to reduce the problems from terminal	322
sterilization/An engineer looks at spacecraft	215
sterilization/An improved method of spacecraft	513
sterilization and assembly of spacecraft/The assembly/sterilizer - A	186
sterilization and contamination control with application to spacecra	94
sterilization and contamination of Mars/Spacecraft	157
sterilization and ethylene oxide decontamination environments/Enviro	229
sterilization and planetary quarantine/Spacecraft	285
Sterilization and quarantine parameters for consideration during the	185
sterilization and the prevention of planetary contamination/Spacecra	134
sterilization and thermal vacuum exposures/Spacecraft polymeric mate	511
Sterilization, Appendix C (with 8 nomogram enclosures)/Comparative s	199
sterilization as state of the art/Spacecraft preparation and	240
Sterilization assembly and development laboratory routine cleaning a	260
sterilization assembly development laboratory/Biological monitoring	370
sterilization at 200°/Hot air	272
(sterilization)Bactericidal activity of ethylene oxide and methyl br	498
sterilization/Biological-chemical indicator for ethylene oxide	176
(sterilization)Biological contamination control/	218
sterilization/Biostatistics of space exploration: Microbiology and	399
sterilization/Biostatistics of space exploration: microbiology and	400
sterilization by gaseous oxide/Evaluation of	64
sterilization by heat and radiation/A study of the factors influenci	336
sterilization by making use of ethylene oxide and methyl bromide mix	277
sterilization canister separation joint/Capsule	292
Sterilization/Comparative studies of conceptual design and qualifica	198
sterilization. I: Compatibility of materials and components with hea	65
sterilization. I. Concentration and temperature effects/Ethylene oxi	54
sterilization container/Development of a typical Mars landing capsul	207
sterilization container/Development of a typical Mars landing capsul	208
sterilization container/Development of a typical Mars landing capsul	209
sterilization container/Development of a typical Mars probe	142
sterilization containers of planetary landers/Design requirements fo	160

sterilization/Contamination and	191
sterilization/Contamination and	473
(sterilization)Contamination of Mars/	324
sterilization criteria set/Severe Voyager	162
(sterilization cycles)Services provided in support of the planetary	438
(sterilization)Dangers of contamination of planets and the Earth/	49
sterilization/Development and application of a system model for spac	344
sterilization/Development of concepts for improved spacecraft	158
(sterilization)EASL/SADL test and operations. Phase II/	320
(sterilization)Ecology and thermal inactivation of microbes in and o	504
(sterilization)Ecology and thermal inactivation of microbes in and o	505
sterilization. III. Effects of humidity and water activity on the sp	468
sterilization efficacy of gaseous formaldehyde/Investigations on the	1
(sterilization)Eleventh COSPAR session/	354
sterilization/Engineering problems in capsule	205
(sterilization)Estimation of microbial release probabilities from a	518
sterilization/Estimation of microbial survival in heat	326
(sterilization)Ethylene oxide-Freon 12 decontamination procedure: Re	257
(sterilization)Ethylene oxide resistance of nondesiccated and desicc	406
(sterilization)Evaluation of alcohol sporulation method/	356
sterilization. I. Experimental apparatus and methods/Microbiological	466
Sterilization facility concepts/	24
sterilization/Feasibility study for combined method of	122
sterilization/Gaseous	41
Sterilization group report No. 1/	141
Sterilization handbook/	91
sterilization. Immaculate Voyager will visit Mars/Spacecraft	169
sterilization in combined techniques/The place of	306
sterilization in space research/A general review of chemical	104
sterilization in spacecraft design/Effect of	62
sterilization in ultra-high vacuum and outer space: a kinetic compar	384
(sterilization)Industrial applications of laminar airflow/	434
sterilization. II. Influence of method of humidification/Ethylene ox	55
sterilization. IV. Influence of thickness of polyethylene film on th	469
(sterilization)Investi tion of spacecraft materials that support mi	465
sterilization: Its development and application to components of exob	67
Sterilization literature abstracts/	201
(sterilization)Mathematical basis for a diffusion model of microbial	425
sterilization methods aired at COSPAR/Soviet spacecraft	172
sterilization/Methods for spacecraft	239
(sterilization)Microbial contamination in clean rooms/	155
sterilization. II. Microbial resistance to ethylene oxide/Microbiolo	467
(sterilization)Microbiologic filters - liquid and gas/	99
(sterilization)Microbiological barrier techniques/	151
sterilization/Microbiological contamination control in spacecraft	188
sterilization modeling/Dry heat	383
sterilization modeling/Dry heat	409
(sterilization)Ninth monthly status report on Contract NASw-1734/	368
Sterilization of instruments and materials with <u>Beta</u> -propiolactone/	19

Sterilization of interplanetary spacecraft/	454
sterilization of large interplanetary structures/Experimental heat c	287
Sterilization of lunar and planetary space vehicles/	53
sterilization of microorganisms/An analysis of vacuum effects in the	382
sterilization of microorganisms at 105°C/A study of dry heat	222
sterilization of microorganisms/On the role of DNA in wet heat	385
sterilization of microorganisms/Physical methods of	2
sterilization of planetary capsules/Test environments associated wit	197
sterilization of potting compounds and mated surfaces/Investigation	331
sterilization of potting compounds and mated surfaces/Investigation	332
Sterilization of space probe components/	51
Sterilization of space probe components/	59
sterilization of space probe components/Studies for	73
sterilization of space probe components/Studies for	101
sterilization of space probe components/Studies for	138
Sterilization of space vehicles: the problem of mutual contamination	50
sterilization of space vehicles to prevent extraterrestrial biologic	21
Sterilization of spacecraft/	318
Sterilization of spacecraft components/Effect of current cleaning pr	275
sterilization of spacecraft components/Effect of current cleaning pr	361
sterilization of spacecraft components/Thermal death studies on micr	102
sterilization of spacecraft structures/Thermal	161
sterilization of spacecraft using Cobalt 60/Feasibility of thermorad	459
sterilization of spores in hygroscopic environments/Ethylene oxide	18
Sterilization of suspensions of <u>Serratia marcescens</u> and spores of <u>Ba</u>	9
sterilization of unmanned lunar and planetary missions/Examination o	58
Sterilization of unmanned planetary and lunar space vehicles. An eng	72
sterilization of unmanned space vehicles/Problems in	98
sterilization operations/Scale-up of heat	43
sterilization/Optimization of oven-heating profiles in spacecraft	426
(sterilization)Planetary quarantine analysis/	445
(sterilization)Planetary Quarantine Department/	226
(sterilization)Planetary quarantine program/	329
sterilization/Planning, evaluation and analytical studies in planeta	418
sterilization/Planning, evaluation, and analytical studies in planet	428
sterilization/Planning, evaluation and analytical studies in spacecr	429
(sterilization)Potentially harmful effects of space experiments/	184
(sterilization)Present day usage of clean rooms in medical and life	351
sterilization problem/The space	189
sterilization problems/An investigation of a sono-chemical approach	153
sterilization problems on a Mars atmospheric entry probe. Vol. I and	177
sterilization problems/Research on microbiological	116
Sterilization procedures for planetary landers/	441
(sterilization)Procedures for the microbiological examination of spa	346
sterilization procedures in the USSR. Meeting on sterilization of sp	206
(sterilization)Procedures necessary for the prevention of planetary	132
sterilization/Proceedings of the conference on spacecraft	63
sterilization process calculation for spacecraft/Terminal	300
sterilization process parameters/Determination of terminal	328

sterilization process times/Recommendations for determination of spa	274
sterilization processes/Some observations about and a bibliography o	149
sterilization processes/The types of biological indicators used in m	480
sterilization program at the Jet Propulsion Laboratory/Electronic pa	202
sterilization rates and protective influences/Ethylene oxide	301
Sterilization requirements/	183
sterilization requirements/A rational model for spacecraft	244
sterilization requirements/Effect of microbial release probabilities	325
(sterilization)Semiannual review of research and advanced developmen	463
(sterilization)Semiannual review of research and advanced developmen	462
sterilization/Space probe	61
sterilization/Status review of technology developments for spacecraf	293
sterilization/Status review of technology developments for spacecraf	294
sterilization studies/Ethylene oxide	78
sterilization. IV. Studies of sterilization techniques/	66
sterilization study/Valve bioload reduction and	304
Sterilization supporting activities/	369
Sterilization supporting activities/	527
Sterilization supporting activities/	528
sterilization/Synergistic effects in sonochemical	243
(sterilization)Synergistic effects of ethylene oxide and other agent	307
sterilization, techniques and equipment/Spacecraft	148
sterilization techniques on thermal control surfaces/Study of the ef	114
sterilization technology program: A status report/JPL spacecraft	123
sterilization technology/Spacecraft	214
(sterilization)The National Aeronautics and Space Administration pos	96
sterilization/The objectives and technology of spacecraft	131
sterilization/The objectives and technology of spacecraft	192
(sterilization)The possibility of using hydrogen peroxide mixed with	334
sterilization. Thermal considerations/Spacecraft	129
sterilization/Thermoradiation as a means of bacterial	508
sterilization times/Analytical method for calculating heat	15
(sterilization)Ultraclean technology/	449
sterilization. Vol. 1/Evaluation of current technology in attaining	249
sterilization/Voyager effort focused on	234
Sterilization with ethylene oxide gas mixtures/	179
sterilization with ethylene oxide/Simple improvised chambers for gas	36
Sterilization with methyl bromide vapor/	196
sterilization without special equipment/Ethylene oxide	86
sterilize interior surfaces of confined spaces/Penetration by gases	105
sterilize liquids and gases/Evaluation of the efficiency and reliabi	127
sterilized by heating/Development of quality assurance requirements	296
sterilizers/Principles in the design of continuous	16
sterilizing action of gaseous ethylene oxide. I. Review.	5
sterilizing action of gaseous ethylene oxide. II. Sterilization of c	6
sterilizing action of gaseous ethylene oxide. III. The effect of eth	3
sterilizing action of gaseous ethylene oxide. IV. The effect of mois	4
sterilizing agents on microorganisms/Astronautics information: Effec	82
Sterilizing effects of high intensity airborne sonic and ultrasonic	220

sterilizing procedures for sealed components of spacecraft/Controlle	69
sterilizing properties of formaldehyde-methanol solutions with forma	109
Sterilizing space probes/	193
Sterilizing techniques with ethylene oxide/	85
Sterilizing unmanned spacecraft/	71
surface agar plate laboratory method for qualitatively detecting bac	11
(surface contamination)A bacterial spore test piece for the control	113
(surface contamination)A microscopic method of particulate contamina	501
surface contamination. A recurring problem/Biological and chemical	95
(surface contamination)A stochastic approach to bioburden estimation	509
(surface contamination)Decontamination of enclosed spaces with Beta-	40
(surface contamination)Instrumentation and methodology in measuremen	374
(surface contamination)Investigation of spacecraft materials that su	465
(surface contamination)Microbial resistance to ethylene oxide/	297
(surface contamination)New concepts on sterilization. I. Alternative	322
(surface contamination)Penetrability and effect of ethylene oxide ga	33
(surface contamination)Present day usage of clean rooms in medical a	351
(surface contamination)Quantitative and qualitative microbiological	500
(surface contamination)Quarterly status report on NASA contract R-35	348
(surface contamination)Services provided in support of the planetary	90
(surface contamination)Services provided in support of the planetary	435
(surface contamination)Sterilization of instruments and materials wi	19
(surface contamination)Technical manuals and planning study in plane	261
(surface contamination)Testing and fabrication of plastic vacuum pro	496
(surface contamination)The possibility of using hydrogen peroxide mi	334
(surface contamination)The vacuum probe sampler/	542
(surface distribution)An assembly contamination model/	227
surface samples/Testing and fabrication of plastic vacuum probe	496
surfaces/A comparative evaluation of methods for determining the bac	10
surfaces as a function of relative humidity; developing dry heat D-v	531
surfaces as a function of relative humidity/Dry heat destruction rat	372
surfaces by chemical approaches/Detection of low levels of microbial	444
surfaces by chemical approaches/Detection of low levels of microbial	271
surfaces by chemical approaches/Detection of low levels of microbial	352
surfaces during gaseous decontamination/Adsorption of formaldehyde b	386
surfaces; effect of humidity in an open system/Dry-heat destruction	407
surfaces/Electrostatic deposition device to deposit monolayers of ba	541
surfaces. Evaluation of leakage of microbial contamination from Gemi	268
surfaces. Evaluation of leakage of microbial contamination from Gemi	269
surfaces. Evaluation of leakage of microbial contamination from spac	181
surfaces exposed to room air or touched by the human hand/Microbial	77
surfaces for microbiological contamination/Some statistical problems	137
surfaces, in mated surface areas and encapsulated in solids of space	494
surfaces of confined spaces/Penetration by gases to sterilize interi	105
surfaces/Services provided in support of the planetary quarantine re	117
surfaces/Services provided in support of the planetary quarantine re	118
surfaces/Services provided in support of the planetary quarantine re	119
surfaces/Services provided in support of the planetary quarantine re	120
surfaces/Services provided in support of the planetary quarantine re	180

surfaces: studies to evaluate possible sources of variation in the e	448
surfaces/Study of the effect of JPL sterilization techniques on ther	114
surfaces using radioisotope tracer techniques/Study of the biologica	298
surfaces/Vacuum probe: new approach to the microbiological sampling	375
Surveyor spacecraft system. Vol. I/	83
Surveyor spacecraft system. Vol. II/	84
Surveyor sterilization. I: Compatibility of materials and components	65
Surveyor sterilization. IV. Studies of sterilization techniques/	66
survival after simulated meteoroid impact/Microbial	270
survival and growth of selected bacteria/Effect of diurnal freeze-th	88
survival in heat sterilization/Estimation of microbial	326
survival of bacteria airborne in simulated Martian dust clouds/Effec	447
Survival of microbial spores under several temperature and humidity	373
Survival of microbial spores under several temperature and humidity	533
Survival of microorganisms in desert soil exposed to five years of c	393
survival of microorganisms in space. Further rocket and balloon born	255
Survival of terrestrial microorganisms in simulated Martian environm	107
surviving cells/Effect of heat treatment on the growth of	17
(temperature)A research study to definitize a bioisolator suit syste	253
(temperature)An automatic ethylene oxide decontamination system/	228
temperature and humidity conditions/Survival of microbial spores und	373
(temperature)Literature review of the compatibility of commercial ma	156
temperature relationships/The sterilizing action of gaseous ethylene	6
(temperature)Water on Venus?/	475
temperatures/Heat injury of <u>Bacillus subtilis</u> spores at ultrahigh	125
temperatures/Soil studies - Desert microflora. XI. Desert soil algae	178
temperatures/Thermal inactivation characteristics of <u>Bacillus subtil</u>	126
(terrestrial contaminants)Relationship of planetary quarantine to bi	309
terrestrial microorganisms in simulated Martian environments/Biologi	76
terrestrial microorganisms in simulated Martian environments/Biologi	107
terrestrial microorganisms in simulated planetary environments/Bioch	115
thermal and radiation effects for bacterial inactivation/	506
Thermal considerations/Spacecraft sterilization.	129
thermal control surfaces/Study of the effect of JPL sterilization te	114
thermal death of bacterial spores/Kinetics of heat activation and of	79
Thermal death studies on microbial spores and some considerations fo	102
thermal destruction apparatus/Design of	8
Thermal destruction of microorganisms/	317
Thermal inactivation characteristics of <u>Bacillus subtilis</u> at ultrahi	126
thermal inactivation of bacterial spores/A probit method to interpre	12
thermal inactivation of microbes in and on interplanetary space vehi	111
thermal inactivation of microbes in and on interplanetary space vehi	112
thermal inactivation of microbes in and on interplanetary space vehi	165
thermal inactivation of microbes in and on interplanetary space vehi	166
thermal inactivation of microbes in and on interplanetary space vehi	167
thermal inactivation of microbes in and on interplanetary space vehi	168

thermal inactivation of microbes in and on interplanetary space vehi	235
thermal inactivation of microbes in and on interplanetary space vehi	284
thermal inactivation of microbes in and on interplanetary space vehi	502
thermal inactivation of microbes in and on interplanetary space vehi	503
thermal inactivation of microbes in and on interplanetary space vehi	504
thermal inactivation of microbes in and on interplanetary space vehi	505
thermal kill of viable organisms during Mars atmosphere entry/A stud	288
(thermal resistance)Feasibility study for combined method of sterili	122
Thermal resistance of microorganisms to dry heat: Design of apparatu	26
Thermal sterilization of spacecraft structures/	161
thermal vacuum exposures/Spacecraft polymeric material interactions	511
Thermoradiation	524
Thermoradiation as a means of bacterial sterilization/	508
thermoradiation inactivation of dry <u>Bacillus subtilis</u> var. <u>niger</u> spo	410
(thermoradiation)Planetary quarantine program/	514
(thermoradiation)Planetary quarantine program/	515
(thermoradiation)Planetary quarantine program/	516
thermoradiation sterilization/A study of the effectiveness of	507
thermoradiation sterilization of spacecraft using Cobalt 60/Feasibil	459
(thermoradiation sterilization)Planetary quarantine program/	517
thermoradiation synergism/Mathematical modeling of	411
(thermoradiation)The development of two closely controlled humidity	442
time, concentration and temperature relationships/The sterilizing ac	6
(time-temperature relationships)Sterilization handbook/	91
ultrahigh temperatures/Heat injury of <u>Bacillus subtilis</u> spores at	125
ultrahigh temperatures/Thermal inactivation characteristics of <u>Bacil</u>	126
ultra-high vacuum and outer space: a kinetic comparison/Microbial st	384
ultra-high vacuum on <u>Bacillus subtilis</u> var. <u>niger</u> /Effect of	60
(ultrahigh vacuum)Study of viability of microorganisms in simulated	108
ultra-high vacuum/The viability of microorganisms in	42
Ultrasonic cleaning: A bibliography/	75
ultrasonic/Vacuum sampling device/Development of an	397
ultrasonic/vacuum sampling device/Development of an	519
ultrasonic waves/Sterilizing effects of high intensity airborne soni	220
(ultrasonics)Development of concepts for improved spacecraft sterili	158
(ultrasonics)Study of the biological cleanability of surfaces using	298
ultraviolet on the survival of bacteria airborne in simulated Martia	447
(ultraviolet radiation)Feasibility study for combined method of ster	122
(ultraviolet radiation)Multiplication of certain soil micro-organism	456
(ultraviolet radiation)Panspermia revisited, or have we already cont	302
(ultraviolet radiation)Sterilizable photomultiplier tubes/	124
ultraviolet radiation upon microorganisms as a principal extrenal fa	92
ultraviolet rays/Resistance of certain strains of microorganisms to	282
unmanned lunar and planetary missions/Examination of engineering req	58
unmanned planetary and lunar space vehicles. An engineering examinat	72
unmanned spacecraft/Sterilizing	71

unmanned space vehicles/Problems in sterilization of	98
(USSR)Eleventh annual COSPAR session/	354
USSR. Meeting on sterilization of space vehicles, University of Calif	206
(USSR)Methods for spacecraft sterilization/	239
(USSR)Planetary contamination. II. Soviet and U.S. practices and pol	264
(USSR)Resistance of certain strains of microorganisms to ultraviolet	282
(USSR)Severe Voyager sterilization criteria set/	162
(USSR)Some observations about and a bibliography on the technologica	149
(USSR)Soviet spacecraft sterilization methods aired at COSPAR	172
(USSR)Viability of microorganisms in the desert soils of Turkmenia/	283
(vacuum)An approach to contamination identification/	413
(vacuum)Biological and chemical surface contamination. A recurring p	95
vacuum chamber for spacecraft tests/JPL develops double	236
(vacuum)Disinfection of heat-sensitive material by low-temperature s	163
vacuum effects in the sterilization of microorganisms/An analysis of	382
(vacuum)Ethylene oxide-Freon 12 decontamination procedure: Reactions	257
vacuum on <u>Bacillus subtilis</u> var. <u>niger</u> /Effect of ultra-high	60
(vacuum)Planetary quarantine, SPT (OSSA program)/	461
Vacuum probe: new approach to the microbiological sampling of surfac	375
(vacuum probe)Planetary quarantine/	273
vacuum probe sampler/The	542
vacuum probe surface samples/Testing and fabrication of plastic	496
vacuum/Survival of microorganisms in desert soil exposed to five yea	393
vacuum/The viability of microorganisms in ultra-high	42
Venezuelan equine encephalomyelitis virus/Virucidal activity of <u>Beta</u>	14
Venus exploration/Spacecraft-sterilization issue may effect pace of	237
Venus/Some problems posed by the planet	486
(Venus)Status review of technology developments for spacecraft steri	294
(Venus)The space environment/	440
(viability)Analysis of microbial release probabilities/	420
(viability)Analytical basis for the estimation of planetary contamin	421
(viability)Bayesian analysis for an exponential surveillance model	493
(viability)Bibliography. Codes, standards, procedures, specification	472
(viability)Biological evaluation of the Biodetection Grinder/	520
(viability)Design of thermal destruction apparatus/	8
(viability)Die-off of microbial contamination/	279
(viability)Effect of diurnal freeze-thawing on survival and growth o	88
(viability)Effect of ultra-high vacuum on <u>Bacillus subtilis</u> var. <u>nig</u>	60
(viability)Evaluation of a quantal response model with estimated con	401
(viability)Evaluation of microbiological filters for liquids and gase	97
(viability)Life in extraterrestrial environments/	130
(viability)Methodology of measuring internal contamination in space	254
(viability)Microorganisms in solid materials. Phases I, II, III, IV/	146
(viability)Microorganisms under simulated Martian environment/	57
viability of microorganisms/Effects of simulated space environments	80
viability of microorganisms in simulated space/Study of	108

Viability of microorganisms in the desert soils of Turkmenia/	283
viability of microorganisms in ultra-high vacuum/The	42
(viability)Planetary Quarantine Department/	225
(viability)Release of microorganisms from solids after simulated har	487
(viability)Soil studies - Desert microflora. XI. Desert soil algae s	178
(viability)Sterilization. A selected bibliography from the literatur	190
(viability)Sterilizing effects of high intensity airborne sonic and	220
(viability)Studies on trace elements in the sporulation of bacteria	159
(viability)Studies with microorganisms and plants under simulated Ma	44
(viability)Survival of microorganisms in desert soil exposed to five	393
(viability)The biological effectiveness of solar electromagnetic rad	311
(viability)The effect of ultraviolet radiation upon microorganisms a	92
(viability)The level of microbial contamination in a clean room duri	106
(viability)The probability of planetary contamination by space probe	187
(viability)The sterilizing action of gaseous ethylene oxide. III. Th	3
(viability)The sterilizing action of gaseous ethylene oxide. IV. The	4
(viability)The types of biological indicators used in monitoring ste	480
(viability)Thermal destruction of microorganisms/	317
viable and nonviable contamination/Instrumentation and methodology i	374
(viable)Biodetection grinder/	490
(viable microorganisms)Development of quality assurance requirements	296
viable microorganisms in nitrogen gas/Enumeration of	68
viable organism penetration of bio-barrier meteoroid holes/Flight ca	231
viable organisms during Mars atmosphere entry/A study of thermal kil	288
viable organisms in a lunar sample/A search for	488
(Viking '75)Contamination and sterilization/	473
(Viking '75)Implications of change in probability of microbial growt	423
(Viking '75)Life detection systems/	474
(Viking '75)Planning, evaluation, and analytical studies in planetar	428
(Viking '75)Quarantine document system operations manual/	430
Virucidal activity of <u>Beta</u> -propiolactone vapor. II. Effect on the et	22
virus/Virucidal activity of <u>Beta</u> -propiolactone vapor. I. Effect of <u>B</u>	14
Voyager capsule flight equipment type approval and flight acceptance	229
(Voyager)Contamination and sterilization/	191
Voyager effort focused on sterilization/	234
(Voyager)Flight capsule contamination probability from viable organi	231
Voyager project/Planetary quarantine plan	256
(Voyager)Spacecraft-sterilization issue may effect pace of Mars and	237
(Voyager)Sterilization and quarantine parameters for consideration d	185
Voyager sterilization criteria set/Severe	162
Voyager will visit Mars/Spacecraft sterilization. Immaculate	169
water contents/Heat resistance of <u>Bacillus subtilis</u> spores in atmsp	136
Water on Venus?/	475
(wet heat)Physical methods of sterilization of microorganisms/	2
wet heat sterilization of microorganisms/On the role of DNA in	385

X-rays upon dry bacterial spores/Effect of Gamma and	28
--	----

JOURNALS PUBLISHING

PLANETARY QUARANTINE RELATED ARTICLES

Below is an alphabetical list of journals in which articles germane to planetary quarantine have been published. The number of articles from each journal cited in this bibliography is indicated parenthetically.

Acta Pathologica et Microbiologica Scandinavica (Denmark)	(2)
Aerospace Medicine	(1)
Aerospace Technology	(1)
Agricultural Engineering	(1)
American Journal of Hygiene	(5)
American Journal of Public Health	(1)
American Pharmaceutical Association Scientific Edition	(1)
Annual Review of Microbiology	(1)
Antarctic Journal of the United States	(2)
Applied Microbiology	(33)
Astronautics and Aeronautics	(3)
Astronautics and Aerospace Engineering	(1)
Aviation Week and Space Technology	(2)
Bacteriological Proceedings	(1)
Bacteriological Reviews	(1)
Biometrics	(1)
Contamination Control	(9)
Cryogenic Technology	(2)
Food Research	(2)
Food Technology	(1)
Health Laboratory Science	(1)
Hospitals	(1)
Inhalation Therapy	(1)
International Science and Technology Magazine	(1)
Journal of Applied Bacteriology	(2)
Journal of Bacteriology	(2)
Journal of Clinical Pathology	(1)
Journal of Spacecraft and Rockets	(2)
Journal of the American Medical Association	(1)
Journal of the American Statistical Association	(1)
Journal of the Medical Laboratory Technology	(1)
Journal of the Pharmaceutical Sciences	(1)
Machine Design	(1)
Michigan State University Agricultural Experimental Station Quarterly Bulletin	(1)
Missiles and Rockets	(1)
Nature (United Kingdom)	(3)

New York State Journal of Medicine	(1)
Planetary Space Science	(1)
Proceedings of the National Academy of Sciences	(1)
Science	(3)
Science Journal	(1)
Space Aeronautics	(1)
Space Life Sciences	(4)
Spaceflight (United Kingdom)	(1)
Spore Newsletter (Australia)	(1)
Time	(1)
Transactions of the American Microscopical Society	(1)

PROCEEDINGS PUBLISHING

PLANETARY QUARANTINE RELATED PAPERS

Below is an alphabetical list of proceedings in which papers germane to planetary quarantine have appeared. The number of papers from each meeting cited in this bibliography is indicated parenthetically.

- American Association for Contamination Control, Eighth Annual Technical Meeting and Exhibit, New York, May 1969. (2)
- American Association for the Advancement of Science, Symposium on Extraterrestrial Biochemistry and Biology, Denver, 1961. (1)
- American Astronautics Society, Symposium, Denver, February 1965. (1)
- American Institute of Aeronautics and Astronautics, Meeting on Unmanned Spacecraft, Los Angeles, March 1965. (1)
- American Institute of Aeronautics and Astronautics, Second Annual Meeting, San Francisco, July, 1965. (2)
- American Institute of Aeronautics and Astronautics, "Stepping Stones to Mars" Meeting, Baltimore, 1966. (3)
- American Institute of Aeronautics and Astronautics, Third Thermophysics Conference, Los Angeles, 1968. (1)
- American Public Health Association, Annual Meeting, Chicago, October 1965. (1)
- American Society for Microbiology, 65th Annual Meeting, Atlantic City, April 1965. (1)
- Conference on Spacecraft Sterilization, Washington, D.C., NASA, July 1962. (1)
- COSPAR, A Session of the Fourth International Space Science Symposium, Warsaw, June 1963. (Florkin, M. and A. Dollfus, Eds. Life Sciences and Space Research, Vol.II. Amsterdam, North-Holland Publishing Co., 1964). (5)

- COSPAR, A Session of the Fifth International Space Science Symposium, Florence, May 1964. (Florkin, M., Ed. Life Sciences and Space Research, Vol.III. Amsterdam, North-Holland Publishing Co., 1965). (1)
- COSPAR, A Session of the Sixth International Space Science Symposium, Mar del Plata, Argentina, May 1965. (Brown, A.H. and M. Florkin, Eds. Life Sciences and Space Research, Vol.IV. Washington, D.C., Spartan Books, 1966). (1)
- COSPAR, A Session of the Seventh International Space Science Symposium, Vienna, May 1966. (Brown, A.H. and F.G. Favorite, Eds. Life Sciences and Space Research, Vol.V. Amsterdam, North-Holland Publishing Co., 1967). (4)
- COSPAR, 10th Plenary Meeting of Working Group V, London, July 1967. (Brown, A.H. and F.G. Favorite, Eds. Life Sciences and Space Research, Vol.VI. Amsterdam, North-Holland Publishing Co., 1968). (3)
- COSPAR, 12th Plenary Meeting of Working Group V, Prague, 1969. (Vishniac, W. and F. Favorite, Eds., Life Sciences and Space Research, Vol.VIII. Amsterdam, North-Holland Publishing Co., 1970). (3)
- COSPAR, Sneath, P.H.A., Ed. Symposium on Sterilization Techniques for Instruments and Materials as Applied to Space Research, London, July, 1967. Paris, Muray-Print, 1968. (11)
- European Contamination Control Symposium, First, Stuttgart, June 1970. (1)
- IAS/NASA, National Meeting on Manned Space Flight, St. Louis, 1962. (1)
- Institute of Biology, 10th Symposium, London, England, 1961. (1)
- Institute of Environmental Sciences, 12th Annual Technical Meeting, Sterilization Technology Symposium, San Diego, April 1966. (3)
- Institute of Environmental Sciences, 14th Annual Technical Meeting, St. Louis, April, 1968. (1)
- Institute of Environmental Sciences, 15th Annual Technical Meeting, Anaheim, California, April 1969. (1)

- Instrument Society of America, Annual Conference, Houston,
Texas, October 1969. (3)
- International Astronautical Congress, 10th, London, 1959.
Vienna, Springer-Verlag, 1960. (1)
- International Astronautical Congress, 13th, Varna, Bulgaria,
September 1962. Vienna, Springer-Verlag, 1963. (1)
- International Congress for Microbiology, 10th, Mexico City,
August, 1970. (1)
- International Federation of Automatic Control, Third Symposium
On Automatic Control, Toulouse, France, March 1970. (1)
- Jet Propulsion Laboratory and Lockheed Missile and Space
Company, Proceedings of the First Symposium on Aero-
space Mechanisms, Santa Clara, California, May 1966. (1)
- NASA, Bio-space Technology Training Program, Wallops Island,
Va., August 1970. (3)
- NASA, Semiannual Spacecraft Sterilization Technology Seminar,
Atlanta, April, 1970. (6)
- NASA, Spacecraft Sterilization Technology Seminar, Cape Kennedy,
Florida, February 1969. (1)
- NASA/University of Virginia, Biospace Technology Training
Program, Wallops Island, Virginia, August 1966. (1)
- Operations Research Society of America, 34th National Meeting,
Philadelphia, November 1968. (1)
- Parenteral Drug Association, Annual Meeting, New York, 1970. (1)
- Society for Industrial Microbiology, 16th General Meeting, State
College, Pennsylvania, September 1959. (Develop-
ments in Industrial Microbiology. Vol.1. New York,
Plenum Press, 1960). (4)
- Society for Industrial Microbiology, 19th General Meeting,
Corvallis, Oregon, August 1962. (Developments in
Industrial Microbiology. Vol.4. Washington, D.C.,
American Institute of Biological Sciences, 1963). (1)
- Society for Industrial Microbiology, 21st General Meeting,
Boulder, Colorado, August 1964. (Developments in
Industrial Microbiology. Vol.5. Washington, D.C.,
American Institute of Biological Sciences, 1964). (1)

- Society for Industrial Microbiology, 23rd General Meeting,
College Park, Maryland, August 1966. (Developments in
Industrial Microbiology. Vol.7. Washington, D.C.,
American Institute of Biological Sciences, 1967. (1)
- Society for Industrial Microbiology, 24th General Meeting,
London, Ontario, August 1967. (Developments in
Industrial Microbiology. Vol.9. Washington, D.C.,
American Institute of Biological Sciences, 1968). (6)
- Society for Industrial Microbiology, 26th General Meeting,
Burlington, Vermont, August, 1969. (Developments in
Industrial Microbiology. Vol.11. Washington, D.C.,
American Institute of Biological Sciences, 1970). (1)
- Symposium on Recent Developments in the Sterilisation of
Surgical Materials, University of London, 1961. (1)
- Symposium on Surface Contamination, Gatlinburg, Tennessee,
June 1964. (1)
- U.S. Department of Agriculture, 10th Biological Safety
Conference, Plum Island Animal Disease Laboratory,
Greenport, Long Island, September 1965. (1)

CORPORATE SOURCES

Below is an alphabetical address list of NASA centers, NASA contractors, and other sources of the material cited in this bibliography.

Aerospace Technology Division
Library of Congress
1st St. between East Capitol St. and Independence Ave, S.E.
Washington, D.C. 20540

American Association for Contamination Control
6 Beacon Street
Boston, Massachusetts 02108

Avco Corporation
Lowell Industrial Park
Lowell, Massachusetts 01851

Battelle Memorial Institute
505 King Avenue
Columbus, Ohio 43201

Becton Dickinson Research Center
P.O. Box #11276
Raleigh, North Carolina 27604

Bell Aerospace Company
Textron Inc.
Sunnyvale, California 94088

Biological Sciences Communication Project
The Medical Center
The George Washington University
2001 S Street, N.W.
Washington, D.C. 20009

The Bionetics Corporation
3221 North Armistead Avenue
Hampton, Virginia 23366

Boeing Company, Aerospace Group
P.O. Box #3999
Seattle, Washington 98124

Brooks Air Force Base
San Antonio, Texas 78235

Center for Disease Control
Phoenix Laboratories
4402 North Seventh Street
Public Health Service
U.S. Department of Health, Education and Welfare
Phoenix, Arizona 85014

(See also: Communicable Disease Center and
National Communicable Disease Center)

Center for Disease Control
Public Health Service
Department of Health, Education and Welfare
Atlanta, Georgia 30333

(See also: Communicable Disease Center and
National Communicable Disease Center)

Cincinnati Research Laboratories
Food and Drug Administration
1090 Tusculum Avenue
Cincinnati, Ohio 54226

(See also: National Center for Urban and
Industrial Health and Robert A. Taft Sanitary
Engineering Center)

Dynamic Science Corporation
1900 Walker Avenue
Monrovia, California 91016

Eagle-Picher Industries, Inc.
(Electronics Division)
C and Porter Streets
Box #47
Joplin, Missouri 64801

Electro-Mechanical Research Corp.
Princeton, New Jersey 08540

Exotech Systems, Incorporated
525 School St., S.W.
Washington, D.C. 20024
(See also: Exotech, Incorporated)

Florida State University
Department of Statistics
Tallahassee, Florida 32306

Fort Detrick
U.S. Department of the Army
Frederick, Maryland 21701

General Dynamics/Convair Aerospace Division
P.O. Box #1128
San Diego, California 92112
(See also: General Dynamics Astronautics)

General Electric Company
Re-entry and Environmental Systems Division
3198 Chestnut Street
Philadelphia, Pennsylvania 19101

George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

Goddard Space Flight Center
Greenbelt, Maryland 20771

Grumman Aerospace Corporation
South Oyster Bay Road
Bethpage, New York 11714

Hayes International Corporation
P.O. Box #2287
Birmingham, Alabama 35201

Hughes Aircraft Company
Aerospace Group
Centinela Avenue and Teale Street
Culver City, California 90230

IIT Research Institute
10 West 35th Street
Chicago, Illinois 60616

Jet Propulsion Laboratory
California Institute of Technology
4800 Oak Grove Drive
Pasadena, California 91103

Langley Research Center
Langley Station
Hampton, Virginia 23365

Litton Industries, Incorporated, Applied Science Division
13010 County Road 6,
Minneapolis Industrial Park
Minneapolis, Minnesota 55427

Lockheed Missiles and Space Company
P.O. Box #504
Sunnyvale, California 94088

Manufacturing Chemists Association, Inc.
1825 Connecticut Ave., N.W.
Washington, D.C. 20009

Martin Marietta Corp., Aerospace Group
P.O. Box #179
Denver, Colorado 80201
(See also: Martin Company)

McDonnell Douglas Astronautics Company, Eastern Division
P.O. Box #516
St. Louis, Missouri 63166

National Aeronautics and Space Administration
400 Maryland Ave., S.W.
Washington, D.C. 20546

National Institutes of Health
Bethesda, Maryland 20014

National Research Corporation
70 Memorial Drive
Cambridge, Massachusetts 02142

North American Rockwell Corporation
Technical Information Division
12214 Lakewood Boulevard
Downey, California 90241
(See also: North American Aviation, Incorporated)

Northrop Corporate Laboratories
3401 West Broadway
Hawthorne, California 90250

Oregon State University
Corvallis, Oregon 97331

Philco-Ford Corporation
Aerospace and Defense Systems Operations
Ford Road
Newport Beach, California 92663

St. Johns University
Grand Central and Utopia Parkway
Jamaica, New York 11432

Sandia Corporation
Sandia Base
P.O. Box #5800
Albuquerque, New Mexico 87115
(See also: Sandia Laboratories and Sandia
Laboratory)

Syracuse University
Syracuse, New York 13210

Texas Instruments, Inc.
P.O. Box #5474
13500 North Central Expressway
Dallas, Texas 75222

University of California
Berkeley, California 94704

University of Minnesota
Space Science Center
School of Public Health
Minneapolis, Minnesota 55455

Wilmot Castle Company
Rochester, New York