

AD A 111 351

AD

17

TECHNICAL REPORT
NATICK/TR-82/001

**BIBLIOGRAPHY OF TECHNICAL
PUBLICATIONS AND PAPERS
October 1980 - September 1981**

S
DUC
SELECTED
FEB 25 1982
A

November 1981

APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION UNLIMITED.

**UNITED STATES ARMY
RESEARCH and DEVELOPMENT LABORATORIES
NATICK, MASSACHUSETTS 01760**



Report Control Symbol
DNA-TRL-100

82 02 25 011

Approved for public release; distribution unlimited.

Citation of trade names in this report does not constitute an official indorsement or approval of the use of such items.

Destroy this report when no longer needed. Do not return it to the originator.

PREFACE

This bibliography is a list of technical publications and papers by personnel of the US Army Natick Research and Development Laboratories and its contractors for the period October 1980 through September 1981. The arrangement is by organizational elements.

Reprints of journal articles, in some cases, are available from the individual authors. Copies of technical reports may be obtained from (1) Defense Technical Information Center, Cameron Station, Alexandria, Virginia 22314, or (2) the National Technical Information Service, Springfield, Virginia 22161. The "AD" number should be cited when ordering copies of reports. Those reports marked with an asterisk (*) are not available for distribution outside the agencies of the US Government. Technical papers refer to presentations for which no printed copies exist.

Technical Library

AD
Accession For
DATE 03/01/81
SEARCHED
SERIALIZED
INDEXED
FILED
A

CONTENTS

	<u>Page</u>
Office of the Commander	5
Office of the Technical Director	7
Engineering Programs Management Office	8
Operations Research and Systems Analysis Office	9
Technical Library	11
Aero-Mechanical Engineering Laboratory	12
Clothing, Equipment and Materials Engineering Laboratory	13
Food Engineering Laboratory	17
Science and Advanced Technology Laboratory	22
Index to Authors	31

US ARMY NATICK RESEARCH AND DEVELOPMENT LABORATORIES

OFFICE OF THE COMMANDER

Journal Articles

1. CUTHBERTSON, R. J. Welcome and remarks. Act. Rep. R&D Assoc., 33(1): 1-2 (1981).
2. _____ Current programs and accomplishments of the US Army Natick Research and Development Laboratories. Act. Rep. R&D Assoc., 33(2): 1-4 (1981).

Technical Papers

3. CUTHBERTSON, R. J. Update on US Army Natick Research and Development Laboratories. Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA. 8 October 1980.
4. _____ Veterans Day Address. Town of Natick Veterans Day Observance, Natick, MA, 11 November 1980.
5. _____ Current programs & accomplishments of the US Army Natick Research and Development Laboratories. Research and Development Associates for Military Food and Packaging Systems, Inc., Bellevue Stratford Hotel, Philadelphia, PA, 24 March 1981.
6. _____ US Army Natick Research and Development Laboratories Presentation. Miller School, Holliston, MA. 30 March and 9 April 1981.
7. _____ Memorial Day Address. Town of Natick Memorial Day Observance, Natick, MA, 25 May 1981.
8. _____ US Army Natick Research and Development Laboratories Overview. US Military Academy Admissions Annual Meeting, Natick, MA. 26 May 1981.
9. _____ Welcome Remarks. American Society of Military Comptrollers, Yankee Chapter, Natick, MA, 22 June 1981.

OFFICE OF THE COMMANDER

Technical Papers (continued)

10. HAYES, J. S. Current programs and policies of the US Army Natick Research and Development Laboratories. Research and Development Associates for Military Food and Packaging Systems, Inc., Natick, MA, 16 September 1981.

OFFICE OF TECHNICAL DIRECTOR

Journal Articles

11. HERTWECK, G. New concepts in feeding Army & Air Force troops in combat. Act. Rep. R&D Assoc., 33(1): 19-22 (1981).
12. _____ The vital role of the half steam tray in military feeding. Act. Rep. R&D Assoc., 33(2): 125-127 (1981).

Technical Papers

13. BERENDT, S. E. Future Air Force food service needs & objectives. Fall Meeting, Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 16-17 September 1981.
14. BIANCO, T. A., JR. Future Navy food service needs & objectives. Fall Meeting, Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 16-17 September 1981.
15. HERTWECK, G. New concepts in feeding Army & Air Force troops in combat. Fall Meeting, Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 8-9 October 1980.
16. _____ Strategy for acquisition of tray pack food for military applications. AFPEC Meeting, Philadelphia, PA, 6 November 1980.
17. _____ The vital role of the half steam tray in military feeding. Spring Meeting, Research and Development Associates for Military Food and Packaging Systems, Inc., Philadelphia, PA, 24-25 March 1981.
18. KASTNER, W. W., III. Future Marine food service needs & objectives. Fall Meeting, Research and Development Associates for Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 16-17 September 1981.

ENGINEERING PROGRAMS MANAGEMENT OFFICE

Technical Papers

19. DOYLE, W. J. US Army Natick Research and Development Laboratories' specification management process. Defense Specification Management Course, US Army Logistics Management Center, Fort Lee, VA, 9 December 1980.
20. _____ US Army Natick Research and Development Laboratories' standardization and specification program. Army-Wide Standardization Meeting, Natick, MA, 13 May 1981.
21. LEVELL, E. F. The materiel acquisition process. Integrated Logistics Support (ILS) Planning Conference, TSARCOM, St. Louis, MO, 4 February 1981.
22. _____ What is under development at the Army Natick Laboratories. Massachusetts Engineers Council, Natick, MA, 19 November 1980.

OPERATIONS RESEARCH AND SYSTEMS ANALYSIS OFFICE

Technical Reports

23. BIRNBAUM, L. R., and D. P. LEITCH. Automated headcount systems - a state-of-the-art survey. NATICK/TR-80/035. June 1980 (AD 096 395).
24. BRANDLER, P., T. T. MATTUS, and R. J. BYRNE. New systems of food service management for the Air Force. NATICK/TR-81/004, September 1979.
25. BYRNE, R., S. BARITZ, R. DECAREAU, G. HERTWECK, H. KIREJCZYK, and I. NII. A proposed combat food service system for the Army in 1990. NATICK/TR-80/027, January 1980.
26. DAVIS, M., P. BRANDLER, W. WILKINSON, H. MEISELMAN, L. BIRNBAUM, L. SYMINGTON, and B. BISSONNETTE. An evaluation of the new "multi-restaurant" food service system for the Marine Corps. NATICK/TR-81/023, July 1980.
27. DAVIS, M. M. Recommendations for improving the food service operations at MCB Camp Pendleton, CA, MCAS El Toro MCAS (H) Santa Ana, CA, MCB Camp Lejeune, NC. and MCDEC, Quantico, VA. NATICK/TR-80/026, December 1979.

Journal Articles

28. BYRNE, R. J. Contributions of new food service systems research to winning the first battle. Act. Rep. R&D Assoc., 33(1): 18 (1981).
29. LEITCH, D. P. New Marine Corps containerized galley for converting container ships to troop carriers. Act. Rep. R&D Assoc., 33(1): 23-26 (1981).
30. RICHARDSON, R. P. A new concept for feeding Air Force ground launched cruise missile personnel. Act. Rep. R&D Assoc., 33(1): 27-31 (1981).

Technical Papers

31. BRANDLER, P., M. HERZ, J. BENDRICK, K. HIBBARD, and J. SUNDELL. Foodservice in an NBC environment. Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 16 September 1981.

OPERATIONS RESEARCH AND SYSTEMS ANALYSIS OFFICE

Technical Papers (continued)

32. DAVIS, M. M. A systems approach to military food service: The design and evaluation of a garrison food service system for the Marine Corps. Tenth Annual Regional Conference, American Institute for Decision Sciences, Boston, MA, 8-10 April 1981.
33. _____, and G. DARSCH. Current and projected foodservice requirements in military feeding. Research and Development Associates for Military Food and Packaging Systems, US Army Natick Research and Development Laboratories, Natick, MA, 16 September 1981.
34. LEITCH, D. P. New Marine Corps containerized galley for converting container ships to troop carriers. Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 8 October 1980.
35. RICHARDSON, R. P. A new concept for feeding Air Force ground launched cruise missile personnel. Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 8 October 1980.
36. _____ Systems analysis for health care food service. Foodservice Systems '81: Perspective 1990: Planning Health Care Food Service Systems in the 80's, Dallas, TX, 7-9 April 1981.

TECHNICAL LIBRARY

Technical Reports

37. Bibliography of technical publications and papers: October 1980-September 1981. US Army Natick Research and Development Laboratories. NATICK/TR-81/001, November 1980 (AD A094 125).

AERO-MECHANICAL ENGINEERING LABORATORY

Technical Reports

38. JOHNSON, A. R. Response of a two-for-one tactical shelter to racking loads. NATICK/TR-81/016, January 1981.
39. MONEGO, C. J., and M. N. PILSWORTH, JR. Development of an apparatus for biaxial and shear stress-strain testing of fabrics and films. NATICK/TR-80/028, October 1980.
40. ROBERTS, N. D., A. L. MURPHY, JR., and R. J. BUFFONE. Marine Corps shelterized expeditionary food service system. NATICK/TR-80/033, August 1980.

Technical Papers

41. JOHNSON, A. R. Comparison of computed and measured accelerations in a dynamically loaded tactical shelter. Army Symposium on Solid Mechanics, Bass River, Cape Cod, MA, 30 September-2 October 1980.
42. MCCLAIN, L. A. Field shelters program. DOD Materials and Structures Technology Conference, Institute for Defense Analysis, Arlington, VA, 18-20 November 1980.
43. WEITZLER, I. M. Management of Aero-Mechanical Engineering Laboratory technical programs. National Research Council Advisory Board on Military Personnel Supplies, US Army Natick Research and Development Laboratories, Natick, MA, 22 October 1980.
44. _____ Professional opportunities at US Army Natick Research and Development Laboratories through upward mobility, apprentice programs, and self-development. Federal Women's Program Committee Meeting, US Army Natick Research and Development Laboratories, Natick, MA, 18 February 1981.

Other Publications

45. JOHNSON, A. R. Finite element analysis of axisymmetric rubber membranes. Ph.D. Dissertation, Boston University Graduate School, 1981.

CLOTHING, EQUIPMENT AND MATERIALS ENGINEERING LABORATORY

Technical Reports

46. ALLEN, E., and B. YUHAS. Investigation to define acceptable tolerance ranges in various regions of color space. Lehigh University, Contract No. DAAK60-78-C-0084. NATICK/TR-80/036, (CEMEL-225), September 1980.
47. BENSEL, C. K., D. S. FINK, and S. A. MELLIAN. The psychomotor performance of men and women wearing two types of body armor. NATICK/TR-80/014, March 1980 (AD A086 742).
48. CHURCHILL, T., K. M. ROBINETTE, and G. POTTER. Selected bivariate frequency tables: US Army men & women. Anthropology Research Project, Inc., Contract No. DAAK60-79-C-0097. NATICK/TR-81/012, (CEMEL-226), January 1981.
49. FLOOD, J. H. Production of insulated footwear using liquid injection molding equipment 1. Method. Uniroyal, Inc., Contract No. DAAK60-77-C-0071. NATICK/TR-80/019, (CEMEL-216), September 1980.
50. _____ Production of insulated footwear using liquid injection molding equipment 2. Instruction Manual. Uniroyal, Inc., Contract No. DAAK60-77-C-0071. NATICK/TR-80/020, (CEMEL-217), September 1980 (AD A094 386).
51. IACONO, V., J. FRATANUONO, R. MARTONE, and E. ALIBERTE. Chemical protective suit - Environmental Protection Agency. NATICK/TR-81/009, (CEMEL-223), June 1981.
52. JOHNSON, R. F. Effect of explosive ordnance disposal (EOD) armor on the gross body mobility, psychomotor performance, speech intelligibility & visual field of men & women. NATICK/TR-81/031, (CEMEL-235), May 1981.
53. JUDGE, T. H. Combat vehicle crewman's helmet survey. NATICK/TR 80/034, (CEMEL-219), September 1980 (AD A091 799).
54. MANSUR, R., C. PENTHENY, and A. KAPRIELIAN. Evaluation of candidate materials for silhouette layout mat (SLM) for general mechanics tool kit. NATICK/TR-81/024, (CEMEL-228), August 1980.

CLOTHING, EQUIPMENT AND MATERIALS ENGINEERING LABORATORY

Technical Reports (continued)

55. MIKELSON, D. A. Evaluation of staple polyester/microfibrous polyolefin blended batting as a potential thermal insulating material for clothing. NATICK/TR-81/007, (CEMEL-213), June 1980 (AD A100 774).
56. RAMSLEY, A. O., and W. B. BUSHNELL. Development of the U.S. woodland battledress uniform. NATICK/TR-81/008, (CEMEL-227), January 1981 (AD A096 884).
57. _____ Selection of standard colors for the woodland camouflage pattern. NATICK/TR-81/030, (CEMEL-234), August 1981.
58. RANNENBERG, G. C. Study to determine the CB threat & define alternative crew protection systems for the advanced attack helicopter. United Technologies Corp, Contract No. DAAK60-79-C-0136. NATICK/TR-81/021, (CEMEL-238), June 1981.
59. ROBINETTE, K. M., T. CHURCHILL, and J. T. MCCONVILLE. Anthropometric sizing systems for Army women's field clothing. Anthropology Research Project, Inc., Contract No. DAAK60-79-C-0097. NATICK/TR-81/026, (CEMEL-233), March 1981.
60. WHITE, R. Comparative anthropometry of the hand. NATICK/TR-81/010, (CEMEL-229), December 1980.

Journal Articles

61. GROJEAN, R. E., J. A. SOUSA, and M. C. HENRY. The efficacy of solar conversion in a polar environment. Solar Energy, 25(6): 537-542 (1980).
62. _____, J. A. SOUSA, M. C. HENRY. Utilization of solar radiation by polar animals: an optical model for pelts. Appl. Opt., 20(11): 1896-1897 (1981).
63. HANSEN, J. V. E. Clothing for cold climates. Natural History, 90(10): 90, 92, 94-97 (1981).

CLOTHING, EQUIPMENT AND MATERIALS ENGINEERING LABORATORY

Journal Articles (continued)

64. HANSEN, J. V. E. Survivability of the infantry soldier. Military Technology, 5(25): 12, 14-16 (1981).
65. HENRY, M. C. New concepts in chemical protective clothing. Army RD&A Magazine, 21: 3-5 (1980).
- MANDELS, M., J. E. MEDEIROS, R. E. ANDREOTTI, and F. H. BISSETT. See entry no. 148.

Technical Papers

66. BENSEL, C. K. Army's integrated sizing system. Defense Advisory Committee on Women in the Services, Scottsdale, AZ, 19 November 1980.
67. _____ Boots for Army women. Defense Advisory Committee on Women in the Services. Scottsdale, AZ, 19 November 1980.
68. _____ Army's integrated sizing system. Defense Advisory Committee on Women in the Services, Washington, DC, 27 April 1981.
69. RAMSLEY, A., and W. BUSHNELL. Development of the US woodland battledress uniform. Countersurveillance Symposium (NATO), Brussels, Belgium, 20 May 1981.
70. WILLIAMS, C. R., F. FIGUCIA, W. KOZA, and B. KIRKWOOD. Response of textile systems to dynamic transverse impact. Gordon Research Conference on Fiber Science, Colby-Sayer College, New London, NH, 6-10 July 1981.

Other Publications

71. HENRY, M. C. Transparent armor. In Ballistic Materials and Penetration Mechanics. R. C. Laible (ed.). Elsevier Scientific Publishing Co., (1980). Chapter 5. pp. 117-134.
72. LAIBLE, R. C., ed. Ballistic Materials and Penetration Mechanics. Elsevier Scientific Publishing Co., (1980).

CLOTHING, EQUIPMENT AND MATERIALS ENGINEERING LABORATORY

Other Publications (continued)

73. LAIBLE, R. C. Ceramic composite armor. In Ballistic Materials and Penetration Mechanics. R. C. Laible (ed.). Elsevier Scientific Publishing Co., (1980). Chapter 6, pp. 135-143.
74. LAIBLE, R. C. Fibrous armor. In Ballistic Materials and Penetration Mechanics. R. C. Laible (ed.). Elsevier Scientific Publishing Co., (1980). Chapter 4, pp. 73-115.
75. _____, and E. BARRON. History of armor. In Ballistic Materials and Penetration Mechanics. R. C. Laible (ed.). Elsevier Scientific Publishing Co., (1980). Chapter 2, pp. 9-40.
76. _____ Introduction. In Ballistic Materials and Penetration Mechanics. R. C. Laible (ed.). Elsevier Scientific Publishing Co., (1980), pp. 1-7.

Patents

77. DIAS, G. M., and A. C. DELASANTA. Chemically protective, fire resistant composition. US Patent No. 4,256,786, 17 March 1981.

FOOD ENGINEERING LABORATORY

Technical Reports

78. BAUSH, E. R., P. L. CARON, R. L. STEPHAN, and J. M. TUOMY. Meat tempering practices and analysis of meat tempering systems at Army installations. NATICK/TR-80/030, (FEL-108), October 1980 (AD A098 231).
79. _____, R. MANSUR, J. SECRIST, and M. BRANAGAN. Storage study of vacuum packaged and non-vacuum packaged frozen boneless pork slices. NATICK/TR-80/031, (FEL-107), September 1980.
80. COSTANZA, F., J. K. PRIFTI, and J. M. TUOMY. Analysis of scientific, technological and engineering parameters of CFPS operation methodology and practices. NATICK/TR-79/027, (FEL-111), March 1981 (AD 098 255).
81. HOWKER, J., F. HEILIGMAN, and J. KILLORAN. Radappertized meats for aerospace meals. NATICK/TR-81/027, (FEL-106), June 1981.
82. HU, K. H., R. A. LAMPI, and M. MEYERS. Energy rating of food service equipment used in Army dining facilities. NATICK/TR-81/006, (FEL-105), October 1980 (AD A100 919).
83. MCNUTT, J., M. BRANAGAN, J. MCPHEE, L. ALBERTINI, and M. KLICKA. Entree production guides for modified diets at Walter Reed Army Medical Center Part V: Renal diet items. NATICK/TR-79/014, (FEL-103), December 1979 (AD A083 141).
84. WALKER, G. C., J. M. TUOMY, O. J. STARK, and E. M. POWERS. Chemical and microbiological analysis of sliced, precooked, canned bacon. NATICK/TR-79/033, (FEL-96), September 1979 (AD A083 178).

Journal Articles

85. CARON, P. L. Field testing of compressed foods in the prototype emergency/assault packet. Act. Rep. R&D Assoc., 33(1): 35-41 (1981).
86. LAMPI, R. A. Introduction and criteria for tactical group feeding. Act. Rep. R&D Assoc., 33(1): 45-48, 54 (1981).

FOOD ENGINEERING LABORATORY

Journal Articles (continued)

87. LAMPI, R. A. Retort pouch: The development of a basic packaging concept in today's high technology era. J. Food Process Eng., 4(1): 1-18 (1981).
88. PRIFTI, J. K., JR. Current military food service equipment developments. Act. Rep. R&D Assoc., 33(1): 49-54 (1981).
89. RAHMAN, A. Development of compressed foods for military foodservice systems. Act. Rep. R&D Assoc., 33(1): 32-34 (1981).
90. ROBERTS, W., K. H. HU, and R. A. LAMPI. Performance evaluation of heat pipe griddle. Journal of Foodservice System, 1: 87-97 (1980).
91. TAUB, I. Radiation chemistry and the radiation preservation of food. J. Chem. Education, 58(2): 162-167 (1981).
92. THOMAS, M. H., B. M. ATWOOD, E. WIERBICKI, and I. TAUB. See entry no. 158.
93. WHITBURN, K. D., M. Z. HOFFMAN, and I. A. TAUB. Formation of a steady-state in the radiolysis of ferrimyoglobin in aqueous solution. Arch. Biochem. Biophys., 208(1): 319-322 (1981).

Technical Papers

94. AKREP, J. The retort pouch and other innovations in food packaging. Army Packaging Board Meeting No. 44, Ft. Worth, TX, 17 November 1980.
95. COSTANZA, F. Meal, Ready-to-Eat, Individual (MRE) defect criteria. US Department of Agriculture Workshop, Ft. Worth, TX, 17-23 November 1980.

FOOD ENGINEERING LABORATORY

Technical Papers (continued)

96. COSTANZA, F. Retort pouch update. National Meat Canners Association, Boca Raton, FL, 24 February 1981.
97. DECAREAU, R. Conveyor microwave ovens. Foodservice Systems, '81, Dallas, TX, 7-9 April 1981.
98. _____ Microwave research and development at the US Army Natick R&D Laboratories. Microwave Power Symposium, Toronto, Ontario, 8-12 June 1981.
99. DRIVER, M., and A. RAHMAN. A comparative quality evaluation of dehydrated celery. Annual Meeting, American Chemical Society, New York, NY, 23-28 August 1981.
100. KLICKA, M. New foods for the Armed Forces. United Methodist Women's Group, United Methodist Church, Milford, MA, 29 October 1980.
101. _____, and P. SHORT. Operational ration requirements to support Marine Corps amphibious operations. Research and Development Associates for Military Food and Packaging System, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 16-17 September 1981.
102. _____ Research & development on foods for the Armed Forces. Polish-American Women's Citizens Club, Dorchester, MA, 5 January 1981.
103. _____ Space foods - past, present and future. Cornell University, Ithaca, NY, 28 April 1981.
104. _____ Space foods - past, present and future. Wellesley Kiwanis Club, Wellesley, MA, 16 July 1981.
105. LAMPI, R. News on USA catering & food service. Danish Society of Food Technology & Hygiene, Denmark, November 1980.
106. _____ Update on retort pouch & tray pack. Technical University of Denmark, November 1980.

FOOD ENGINEERING LABORATORY

Technical Papers (continued)

107. LAMPI, R. Catering considerations in European countries. Research and Development Associates for Military Food and Packaging System, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 16-17 September 1981.
108. MASON, V. New foods for the Armed Forces, 1981. Ashland Federated Church, Ashland, MA, 2 March 1981.
109. RAHMAN, A. Compressed foods - technological advances. Workshop on Dehydration and Compression of Foods, National Research Council, US Army Natick Research and Development Laboratories, Natick, MA, 30 October 1980.
110. _____ Development of compressed foods for military food service systems. Research & Development Associates for Military Foods and Packaging Systems, Fall Meeting, US Army Natick Research and Development Laboratories, Natick, MA, 8 October 1980.
111. _____ New technologies in freeze drying and compression of foods. Tuskegee Institute, AL, 23 February 1981.
112. _____ Compressed food for military feeding. Tennessee State University, Nashville, TN, 24 February 1981.
113. _____ New advances in dehydration and compression of foods. Alabama A&M University, Normal, AL, 25 February 1981.
114. SALANT, A. Military needs. Workshop on Dehydration and Compression of Foods, National Research Council, US Army Natick Research and Development Laboratories, Natick, MA, 29-30 October 1980.
115. SCHULZ, G. Military needs in food packaging. Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 16-17 September 1981.

FOOD ENGINEERING LABORATORY

Technical Papers (continued)

116. SHULTS, G. Dairy products with improved quality utilization features for future development. Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 16-17 September 1981.
117. THOMAS, M., R. DECAREAU, and B. ATWOOD. See entry no. 193.
118. _____, B. ATWOOD, E. ROSS, JR., and I. TAUB. See entry no. 192.
119. TUOMY, J., and R. YOUNG. Retort pouches - application to muscle foods. Institute of Food Technologists. Atlanta, GA, 7-10 June 1981.
120. _____ Food technology - its long-term application. Annual Convention, Frozen Food Association of New England, Grossingers, NY, 17-20 September 1981.
121. WHITBURN, K., M. HOFFMAN, and I. TAUB. Free radical-induced redox transformations in aqueous solution, 1981. Annual Meeting, American Chemical Society, New York, NY, 23-28 August 1981.
122. WRIGHT, B. Research in foods for the military services. Pine Manor College, Chestnut Hill, MA, 8 December 1980.

Other Publications

123. KILLORAN, J. Preservation of food by ionizing radiation. In Packaging Irradiated Foods, 2, 1981, chapter 8.
124. WANG, C. P., and A. BRYNJOLFSSON. Computer - aided solution of the bacterial survival equations in microbiology II - Eigenvalues for heat diffusion equation for finite cylinders and plates by computer. Proceedings of the 1981 Army Numerical Analysis and Computer Conference, U.S. Army Missile Command, Redstone Arsenal, Alabama, 26-27 February 1981. US Army Research Office, Report 8103, pp. 247-260.

SCIENCE AND ADVANCED TECHNOLOGY LABORATORY

Technical Reports

125. COMSTOCK, E. M., L. E. SYMINGTON, H. E. CHMIELINSKI, and J. S. MCGUIRE. Plate waste in school feeding programs: individual and aggregate measures. NATICK/TR-81/011, December 1979 (AD A097 819).
126. CORNELL, J. H., T. M. WENDT, N. G. MCCORMICK, D. L. KAPLAN, and A. M. KAPLAN. Biodegradation of nitrite esters used as military propellants. NATICK/TR-81/029, September 1981.
127. KAPLAN, D. L., and A. M. KAPLAN. Analytical method for concentration of trace organics from water. NATICK/TR-81/014, April 1981.
128. _____, J. T. WALSH, and A. M. KAPLAN. Decomposition of glycols from nitrate ester propellants. NATICK/TR-81/017, May 1981.
129. _____, J. H. CORNELL, and A. M. KAPLAN. Decomposition of the epoxides glycidol and glycidyl nitrate. NATICK/TR-81/018, May 1981.
130. _____, J. H. CORNELL, and A. M. KAPLAN. Microbiological and chemical transformations of nitroguanidine. NATICK/TR-81/019, May 1981.
131. MALLER, O., ed. Stimulating nutritional awareness & action in military personnel. NATICK/TR-81/015, April 1981 (AD A099 146).
132. MAXCY, R. B., and D. B. ROWLEY. Injury and destruction of Moraxella-Acinetobacter in the radappertization process. University of Nebraska, Contract No. DAAK60-78-C-0039. NATICK/TR-81/005, February 1981 (AD A097 286).
133. MCCORMICK, N. G., J. H. CORNELL, and A. M. KAPLAN. The biodegradation of hexahydro-1, 3, 5-trinitro-1, 3, 5-triazine (RDX). NATICK/TR-81/020, May 1981.
134. SYMINGTON, L. E., and B. L. BELL. Food service worker interviews and surveys. In DAVIS, M. et al. An evaluation of the new "multi-restaurant" food service system for the Marine Corps. NATICK/TR-81/023, July 1980.

SCIENCE AND ADVANCED TECHNOLOGY LABORATORY

Technical Reports (continued)

135. WILEY, B. J., ed. Twenty-ninth conference on microbiological deterioration of military materiel, 18-20 November 1980. NATICK/TR-81/028, August 1981.*
136. WYANT, K. W., W. C. WILKINSON, H. L. MEISELMAN, L. E. SYMINGTON, and J. G. HUNN. Performance, physiological, and acceptance tests of a 1500-KCAL emergency assault food packet diet in a cold weather environment. NATICK/TR-81/022, November 1980.
137. WYANT, K. W., and H. L. MEISELMAN. USAF food habits study: Part IV, Selections, quantities selected, and perceived portion sizes. NATICK/TR-81/025, July 1980.

Journal Articles

138. ALLEN, A., and D. STERNBERG. β -glucosidase production by Aspergillus phoenicis in stirred-tank fermentors. Bio-technology and Bioengineering Symp. No. 10: 189-197 (1980).
139. AREND, L. E., R. V. LANGE, and B. SANDICK. Nonlocal determination of brightness in spatially periodic patterns. Perception & Psychophysics, 29: 310-316 (1981).
140. CARDELLO, A. V. Comparison of taste qualities elicited by tactile, electrical and chemical stimulation of single human taste papillae. Perception and Psychophysics, 29: 163-169 (1981).
141. COHEN, S. H., and L. R. TRUSAL. The effect of catheptic enzymes on chilled bovine muscle. Scanning Electron Microscopy, 1980, Pt. III: 595-600 (1980).
142. DUBOSE, C. N., A. V. CARDELLO, and O. MALLER. Factors affecting the acceptability of low-nitrite smoked, cured ham. J. Food Sci., 46(2): 461-463 (1981).
143. FIRSTENBERG-EDEN, R., D. B. ROWLEY, and G. E. SHATTUCK. Factors affecting inactivation of Moraxella-Acinetobacter cells in an irradiation process. Appl. Environ. Microbiol., 40(3): 480-485 (1980).

SCIENCE AND ADVANCED TECHNOLOGY LABORATORY

Journal Articles (continued)

144. FIRSTENBERG-EDEN, R., D. B. ROWLEY, and G. E. SHATTUCK. Inhibition of Moraxella-Acinetobacter cells by sodium phosphates and sodium chloride. *J. Food Sci.*, 46(2): 579-582 (1981).
145. GIFFEE, J. W. Introduction: The problem in maintaining quality in reserve stocks. *Act. Rep. R&D Assoc.*, 33(1): 85-86, 108 (1981).
146. HOLMES, L. G. Note on fluorometric method for determination of uric acid in flour. *Cereal Chem.*, 57(5): 371-372 (1980).
147. KOENIG, S. L., and K. A. NARAYAN. A simple, inexpensive restraining shield for laboratory rodents. *Lab. Animal Sci.*, 31(1): 83-84 (1981).
148. MANDELS, M., J. E. MEDEIROS, R. E. ANDREOTTI, and F. H. BISSETT. Enzymatic hydrolysis of cellulose: Evaluation of cellulase culture filtrates under use conditions. *Biotechnol. & Bioeng.*, 23(9): 2009-2026 (1981).
149. MEISELMAN, H. L. Variables affecting the psychophysical function for taste. *Olfaction and Taste, VII*: 359-362 (1980).
150. MERRITT, C., JR. The analysis of radiolysis of products in meats and meat substances. *Food Irradiation Information*, 10: 20-33 (1980).
151. MCCORMICK, N. G., J. H. CORNELL, and A. M. KAPLAN. The biodegradation of hexahydro-1,3,5-Trinitro-1,3,4-Triazine (RDX). *Appl. Environ. Microbiol.*, 42(5): (1981).
152. PORTER, W. L. Aids & handicaps to the prediction of military ration shelf life. *Act. Rep. R&D Assoc.*, 33(1): 87-108 (1981).
153. POWERS, E. M., and D. T. MUNSEY. Bacteriological and temperature survey of ginger pot roast production at a central food preparation facility. *J. Food Prot.*, 43(4): 292-449 (1981).

SCIENCE AND ADVANCED TECHNOLOGY LABORATORY

Journal Articles (continued)

154. POWERS, E. M., D. BERKOWITZ, and G. C. WALKER. Bacteriology, water activity and moisture/salt ratio of six brands of precooked canned bacon. *J. Food Prot.*, 44(6): 447-449 (1981).
155. RICHMOND, R. C., and D. B. ROWLEY. DNA base release: A tool for assay of physiochemical insult. *Spore Newsletter*, 7(5): 54-55 (1981).
156. ROWLEY, D. B., and A. BRYNJOLFSSON. Potential uses of irradiation in the processing of food. *Food Technol.*, 34(10): 75-77 (1980).
157. STERNBERG, D., and G. R. MANDELS. Regulation of the cellulolytic system in *Trichoderma reesei* by sophorose: Induction of cellulase and repression of β -glucosidase. *J. Bacteriol.*, 144(3): 1197-1199 (1980).
158. THOMAS, M. H., B. M. ATWOOD, E. WIERBICKI, and I. A. TAUB. Effect of radiation and conventional processing on the thiamin content of pork. *J. Food Sci.*, 46(3): 824-828 (1981).
159. VAJDI, M., W. W. NAWAR, and C. MERRITT, JR. GC/MS analysis of some long chain esters, ketones and propanediol diesters. *J. Am. Oil Chemists Soc.*, 58(2): 106-110 (1981).

Technical Papers

160. ALLEN, A. β -glucosidase production by *Aspergillus phoenicis* in fed batch and continuous fermentations. *International Symposium on Wood and Pulping Chemistry*, Stockholm, Sweden, June 1981.
161. _____ Production of applications *Trichoderma reesei* cellulase. Worcester Polytechnic Institute, Worcester, MA, November 1981.
162. BRYNJOLFSSON, A. Progress in food irradiation research. *American Association of Physicists in Medicine*, Massachusetts Institute of Technology, Cambridge, MA, 11 February 1981.

SCIENCE AND ADVANCED TECHNOLOGY LABORATORY

Technical Papers (continued)

163. BRYNJOLFSSON, A. The cosmological redshift. New England Chapter, American Physical Society, 18 April 1981.
164. _____ The gravitational redshift. New England Chapter, American Physical Society, 18 April 1981.
165. CARDELLO, A. V., F. M. SAWYER, O. MALLER, P. PRELL, Y. TSAL, L. DICMAN, and J. KAPSALIS. Development of sensory methodology for use in a nationwide, consumer-oriented retail identification plan. Eastern Psychological Association, New York, NY, April 1981.
166. EDELMAN, B. A multiple predictor model of body weight regulation. Eastern Psychological Association, New York, NY, April 1981.
167. FIRSTENBERG-EDEN, R., D. B. ROWLEY, and G. E. SHATTUCK. Factors affecting growth and toxin production by Clostridium botulinum type E on irradiated (0.3 Mrad) chicken skins. 81st Annual Meeting, American Society for Microbiology, Dallas, TX, 1-6 March 1981.
168. GALLO, B. Overview of the conversion of ligno-cellulosic substrates into ethanol. Brooklyn College Seminar Series, Brooklyn College, Department of Biology, December 1980.
169. _____ Protoplast formation in Trichoderma reesei and Neurospora crassa. New England Branch, American Society of Microbiology, Hvannis, MA, February 1981.
170. KAPLAN, D. L., J. H. CORNELL, and A. M. KAPLAN. Biodegradation of nitroguanidine. 81st Annual Meeting, American Society for Microbiology, Dallas, TX, 1-6 March 1981.
171. LEVINSON, H. S. Symposium: Resistance, dormancy, and release from dormancy. 8th International Spore Conference, Woods Hole, MA, 9-12 October 1980.
172. _____ Role of water in activation of bacterial spores. Seminar, Laboratory for Water Research, University of Miami, Coral Gables, FL, 19 February 1981.

SCIENCE AND ADVANCED TECHNOLOGY LABORATORY

Technical Papers (continued)

173. MALLER, O. Psychophysical correlates of human salt and sugar consumption during a meal. Eastern European Chemoreception Organization, Jerusalem, Israel, 12 November 1980.
174. _____ Flavor and texture characteristics of underutilized species of North Atlantic fish. Canadian Institute of Food Technology, Guelph, Ontario, March 1981.
175. MANDELS, M. Organized and chaired symposium on microorganisms in energy production. New England Branch, American Society for Microbiology, Hyannis, MA, February 1981.
176. _____ Recent advances in production of alcohol from cellulosic materials. Gordon Research Conference on Chemistry of Carbohydrates. Tilton, NH, July 1981.
177. MCCORMICK, N. G., J. H. CORNELL, and A. M. KAPLAN. The biodegradation of 1, 3, 5-trinitrohexahydro-1, 3, 5-triazine. 81st Annual Meeting, American Society for Microbiology, Dallas, TX, 1-6 March 1981.
178. MEDEIROS, J. Saccharification of cellulose with Trichoderma reesei cellulase. New England Branch, American Society for Microbiology, Hyannis, MA, February 1981.
179. NARAYAN, K. A., and J. J. MCMULLEN. Essential fatty acid deficiency as influenced by the type of dietary carbohydrate. 72nd annual meeting, American Oil Chemists Society, New Orleans, LA, 17-21 May 1981.
180. PORTER, W. L. Aids and handicaps to the prediction of military ration shelf life. Fall Meeting, Research and Development Associates for Military Food and Packaging Systems, Inc., US Army Natick Research and Development Laboratories, Natick, MA, 8-9 October 1980.
181. _____ Storage life prediction under noncontrolled environmental temperatures: Produce-sensitive environmental call-out. The Food Processors Institute, San Francisco, CA, 18 February 1981.

SCIENCE AND ADVANCED TECHNOLOGY LABORATORY

Technical Papers (continued)

182. PORTER, W. L. People, principles and practices in the use of antioxidants. Department of Nutritional Science, University of Connecticut, Storrs, CT, 11 March 1981.
183. _____, E. D. BLACK, and A. M. DROLET. Use of polyimide oxidative fluorescence test on emulsions to evaluate antioxidants in wet versus dry systems. 182nd National Meeting, American Chemical Society, Agricultural and Food Chemistry Division, New York City, NY, 24 August 1981.
184. REESE, E. T. Cellulose resources utilization and biodegradation. Centro de Graduados, Instituto Tecnológico de Vera Cruz (Regional Technical Institute of Vera Cruz), Vera Cruz, Mexico, September 1981.
185. ROGERS, M. R., and A. M. KAPLAN. Role of microbial and nonmicrobial contaminants in diesel-fuel vehicle malfunctions. Hydrocarbon Microbiology Symposium, Society for Industrial Microbiology, Virginia Commonwealth University, Richmond, VA, 8-14 August 1981.
186. ROWLEY, D. B., R. FIRSTENBERG-EDEN, E. M. POWERS, and G. E. SHATTUCK. Irradiation: An alternative to high levels of nitrite in bacon. Interagency Botulism Research Coordinating Committee, Philadelphia, PA, 5-6 October 1980.
187. _____, and D. JOHNSON. Radiometric screening for rapid assessment of the coliform acceptability of cooked, frozen foods. 3rd International Symposium on Rapid Methods and Automation in Microbiology, Washington, DC, 26-30 May 1981.
188. SANDICK, B., and A. V. CARDELLO. Fungiform vs circumvallate papillae: Psychophysical functions and identification of tastants. Association for the Chemoreception Sciences, Sarasota, FL, April 1981.
189. SAWYER, F. M., P. PRELL, A. V. CARDELLO, O. MALLER, and J. KAPSALIS. A comparison of flavor and texture characteristics of selected underutilized species of North Atlantic fish and certain commercially important species. International Institute of Refrigeration, Boston, MA, August 1981.

SCIENCE AND ADVANCED TECHNOLOGY LABORATORY

Technical Papers (continued)

190. SILVERMAN, G. J., and R. Y. LEE. Extracellular protein A and its influence of the assay of Staphylococcus aureus Enterotoxin A. 81st Annual Meeting, American Society for Microbiology, Dallas, TX, 1-6 March 1981.
191. _____ Alteration of the effectiveness of sterilants. 81st Annual Meeting, American Society for Microbiology, Dallas, TX, 1-6 March 1981.
192. THOMAS, M. H., B. M. ATWOOD, E. W. ROSS, JR., and I. A. TAUB. Effects of low and high dose-rate irradiation on thiamin retention. 41st Annual Meeting, Institute of Food Technologists, Atlanta, GA, 7-10 June 1981.
193. _____, R. V. DECAREAU, and B. M. ATWOOD. Effect of microwave roasting on the thiamin and riboflavin content of pork. 16th Annual Symposium, International Microwave Power Institute, Toronto, Canada, 9-12 June 1981.

Other Publications

194. ALLEN, A. L., and R. E. ANDREOTTI. β -glucosidase production by Aspergillus phoenicis in fed batch and continuous fermentations. In Chemistry and Biochemistry of Alternative Usage of Wood Components (Biomass). Volume 4. The Ekman Days, Stockholm, Sweden, 1981, pp. 14-17.
195. CORNELL, J. H., D. L. KAPLAN, N. G. MCCORMICK, and A. M. KAPLAN. Letter. Chemical and Engineering News, 59(14): 2 (1981).
196. LEVINSON, H. S., and F. E. FEEHERRY. Contaminated K_2HPO_4 . Letter. ASM News, 47(9): 391 (1981).
197. _____, and F. E. FEEHERRY. Rate and lag of KNO_3 -induced germination of spores of the food-poisoning anaerobe, Clostridium perfringens type A, NCTC 8238. In Sporulation and Germination. H. S. Levinson, A. L. Sonenshein, and D. J. Tipper (eds). American Society for Microbiology, Washington, DC, 1981, pp. 230-236.

SCIENCE AND ADVANCED TECHNOLOGY LABORATORY

Other Publications

198. LEVINSON, H. S., and F. E. FEEHERRY. Reversion of phase-dark germinated spores of Clostridium perfringens type A to refractility. In Sporulation and Germination. H.S. Levinson, A. L. Sonenshein, and D. J. Tipper (eds). American Society for Microbiology, Washington, DC, 1981. pp. 228-231.
199. _____, A. L. SONENSHEIN, and D. J. TIPPER, eds. Sporulation and Germination. American Society for Microbiology, Washington, DC, 1981.
200. MANDELS, M. Enzymatic hydrolysis of cellulosic biomass. A viable alternative to ethanol from grain. Letter. Environmental Note. ASM News, 47: 174-178 (1981).
201. _____ Microbial enzymes attaching plant polymeric materials. In Trends in the Biology of Fermentations for Fuels and Chemicals. A. Hollaender (ed). Plenum Press, 1981, pp. 85-88.
202. NARAYAN, K. A. Factors influencing the concentration of high-density lipoproteins. In High-Density Lipoproteins. C. E. Day (ed). Marcel Dekker, Inc., 1981, pp. 559-619.

Patents

203. GALLO, B. J. Cellulase-producing microorganism. US Patent No. 4,275,163, 23 June 1981.
204. PORTER, W. L. Method for detecting oxidative status of unsaturated lipids and method for evaluating antioxidant effectiveness in lipid-polypeptide layers. US Patent No. 4,253,848, 3 March 1981.
205. _____, and R. E. KRAMER. Method visually detecting antioxidant in an organic mixture. US Patent No. 4,257,776, 24 March 1981.

INDEX TO AUTHORS
(Entry Numbers)

Akrep, J.	94	Darsch, G.	33
Albertini, L.	83	Davis, M.	26, 27, 32, 33
Aliberte, E.	51	Decareau, R. V.	25, 97, 98, 193
Allen, A.	138, 160, 161, 194	Delasanta, A. C.	77
Allen, E.	46	Dias, G. M.	77
Andreotti, R. E.	148, 194	Digman, L.	165
Arend, L. E.	139	Doyle, W. J.	19, 20
Atwood, B. M.	158, 192, 193	Driver, M.	99
		Drolet, A. M.	183
Baritz, S.	25	Dubose, C. N.	142
Barron E.	75		
Baush, E. R.	78, 79	Edelman, B.	166
Bell, B. L.	134		
Bendrick, J.	31	Feeherry, F. F.	196, 197, 198
Bensel, C. K.	47, 66, 67, 68	Figucia, F.	70
Berendt, S. E.	13	Fink, D. S.	47
Berkowitz, D.	154	Firstenberg-Eden, R.	143, 144, 167, 186
Bianco, T. A., Jr.	14		
Birnbaum, L. R.	23, 26	Flood, J. H.	49, 50
Bissett, F. H.	148	Fratantuono, J.	51
Bissonnette, B.	26		
Black, E. D.	183	Gallo, B. J.	168, 169, 203
Branagan, M.	79, 83	Giffey, J. W.	145
Brandler, P.	24, 26, 31	Grojean, R. E.	61, 62
Brynjolfsson, A.	156, 162, 163, 164		
Buffone, R. J.	40	Hansen, J. V. E.	63, 64
Bushnell, W. B.	56, 69	Hayes, J. S.	10
Byrne, R. J.	24, 25, 28	Heiligman, F.	81
		Henry, M. C.	61, 62, 65, 71
Cardello, A. V.	140, 142, 165, 188, 189	Hertweck, G.	11, 12, 15, 16, 17, 25
Caron, P. L.	78, 85		
Chmielinski, H. E.	125	Herz, M.	31
Churchill, T.	48, 59	Hibbard, K.	31
Cohen, S. H.	141	Hoffman, M. Z.	93, 121
Comstock, E. M.	125	Holmes, L. G.	146
Cornell, J. H.	126, 129, 130, 133, 151, 170, 177, 194	Howker, J.	81
		Hu, K. H.	82, 90
Costanza, F.	80, 95, 96	Hunn, J. G.	136
Cuthbertson, R. J.	1, 2, 3, 4, 5, 6, 7, 8, 9	Iacono, V.	51
		Johnson, A. R.	38, 41, 45

Johnson, D.	187	McPhee, J.	83
Johnson, R. F.	52	Medeiros, J. E.	148, 178
Judge, T. H.	53	Meiselman, H. L.	26, 136, 137, 149
Kaplan, A. M.	126, 127, 128, 129, 130, 133, 151, 170, 177, 185, 194	Mellian, S. A.	47
Kaplan, D. L.	126, 127, 128, 129, 130, 170, 194	Merritt, C., Jr.	150, 159
Kaprielian, A.	54	Meyers, M.	82
Kapsalis, J.	165, 189	Mikelson, D. A.	55
Kastner, W. W., III	18	Monego, C. J.	39
Killoran, J.	81, 123	Munsey, D. T.	153
Kirejczyk, H.	25	Murphy, A. L., Jr.	40
Kirkwood, B.	70	Narayan, K. A.	147, 179, 202
Klicka, M.	83, 100, 101, 102, 103, 104	Nawar, W. W.	159
Koenig, S. L.	147	Nii, I.	25
Koza, W.	70	Pentheny, C.	54
Kramer, R. E.	205	Pilsworth, M. N., Jr.	39
Laible, R. C.	72, 73, 74, 75, 76	Porter, W. L.	152, 180, 181, 182, 183, 204, 205
Lampi, R. A.	82, 86, 87, 90, 105, 106, 107	Potter, G.	48
Lange, R. V.	139	Powers, E. M.	84, 153, 154, 186
Lee, R. Y.	190	Prell, P.	165, 189
Leitch, D. P.	23, 29, 34	Prifti, J. K.	80, 88
Levell, E. F.	21, 22	Rahman, A.	89, 99, 109, 110, 111, 112, 113
Levinson, H. S.	171, 172, 196, 197, 198, 199	Ramsley, A. O.	56, 57, 69
Maller, O.	131, 142, 165, 173, 174, 189	Rannenberg, G. C.	58
Mandels, G. R.	157	Reese, E. T.	184
Mandels, M.	148, 175, 176, 200, 201	Richardson, R. P.	30, 35, 36
Mansur, R.	54, 79	Richmond, R. C.	155
Martone, R.	51	Roberts, N. D.	40
Mason, V.	108	Roberts, W.	90
Mattus, T. T.	24	Robinette, K. M.	48, 59
Maxcy, R. B.	132	Rogers, M. R.	185
McClaine, L. A.	42	Ross, E. W., Jr.	192
McConville, J. T.	59	Rowley, D. B.	132, 143, 144, 155, 156, 167, 186, 187
McCormick, N. G.	126, 133, 151, 177, 194	Salant, A.	114
McGuire, J. S.	125	Sandick, B.	139, 188
McMullen, J. J.	179	Sawyer, F. M.	165, 189
McNutt, J.	83	Schulz, G.	115
		Secrist, J.	79
		Shattuck, G. E.	143, 144, 167, 186

Shults, G. 116
 Silverman, G. J. 190, 191
 Sonenshein, A. L. 199
 Sousa, J. A. 61, 62
 Stark, O. J. 84
 Stephan, R. L. 78
 Sternberg, D. 138, 157
 Sundell, J. 31
 Symington, L. E. 26, 125, 134, 136

 Taub, I. 91, 93, 121, 158, 192
 Thomas, M. H. 158, 192, 193
 Tipper, D. J. 199
 Trusal, L. R. 141
 Tsal, Y. 165
 Tuomy, J. M. 78, 80, 84, 119, 120

 Vajdi, M. 159

 Walker, G. C. 84, 154
 Walsh, J. T. 128
 Wang, C. P. 124
 Weitzler, I. M. 43, 44
 Wendt, T. M. 126
 Whitburn, K. D. 93, 121
 White, R. 60
 Wierbicki, E. 158
 Wiley, B. J. 135
 Wilkinson, W. C. 26, 136
 Williams, C. R. 70
 Wright, B. 122
 Wyant, K. W. 136, 137

 Young, R. 119
 Yuhas, B. 46