ATCC®

THE ESSENTIALS OF
LIFE SCIENCE RESEARCH
GLOBALLY DELIVERED™

Pharmaceutical Microbiology

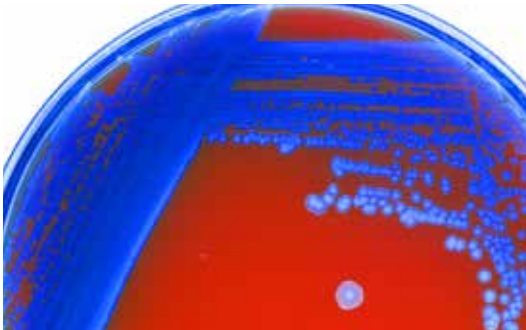


Table of Contents

Pharmaceutical Microbiology 1

Strains specified by official microbial assays 2

United States Pharmacopeia (USP) 2

European Pharmacopeia (EP) Edition 8.1 5

Japanese Pharmacopeia (JP) 7

Strains listed by genus and species 10

THE ESSENTIALS OF LIFE SCIENCE RESEARCH GLOBALLY DELIVERED™

ATCC provides research and development tools and reagents as well as related biological material management services, consistent with its mission: to acquire, authenticate, preserve, develop, and distribute standard reference microorganisms, cell lines, and related materials for research in the life sciences.

For over 85 years, ATCC has been a leading provider of high-quality biological materials and standards to the life science community. We are an independent, 501(c)(3) non-profit entity focused on scientific enablement at universities, research institutes, government agencies, and commercial research labs. Our diverse and comprehensive resources in cell biology and microbiology have been central to the growth of the biotechnology age. ATCC has as its core mission to source, authenticate and further develop products and services essential to the needs of basic and applied life science work.

ATCC distributes to more than 165 countries on 6 continents and has a growing international network of 12 distribution partners. Our infrastructure and experience in biological materials logistics enables us to work effectively with researchers no matter where they are located.

PHARMACEUTICAL MICROBIOLOGY

Pharmaceutical companies are well versed in the important role of microbiological testing in its basic functions – product research and development, process validation, manufacturing, and quality control.

The pharmaceutical industry looks to ATCC to provide top-quality, fully characterized strains necessary to maintain the highest levels of product integrity and reputation. With ATCC Genuine Cultures®, pharmaceutical customers can rely on:

- Polyphasic identification and strain characterization
- Proprietary systems for managing strain stocks
- Meticulous propagation, preservation, and storage protocols
- Robust quality systems
- Over 85 years of service

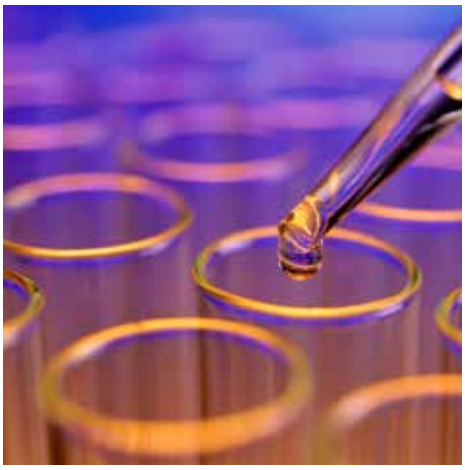
Whenever possible, ATCC balances traditional biochemical testing methods with automated phenotypic and genotypic analyses. This provides highly accurate identification across a wide array of microorganisms and can help avoid the pitfalls of misidentification, painful recalls, and regulatory repercussions. Each vial contains a minimal passage descendant of the original material and has been handled only by ATCC.

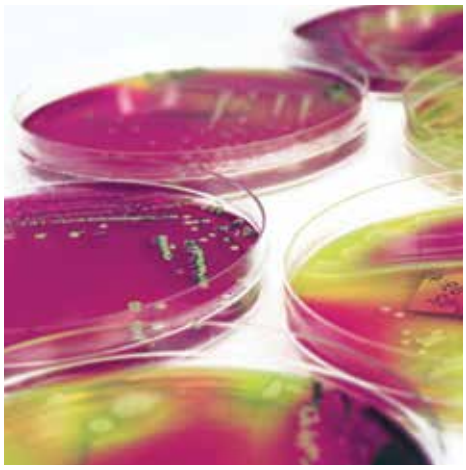
ATCC is a trusted scientific resource and an ISO 9001 certified, ISO 17025 and ISO Guide 34 accredited organization. Our customer and technical service teams, as well as our global network of authorized distributors, understand the complexities of distributing and supporting microbial cultures worldwide. Our laboratory procedures maintain strains carefully, safely, and effectively to ensure optimal viability, backed by our warranty.

Strains provided for key pharmaceutical applications are listed in two ways:

- Strains specified by United States Pharmacopeia (USP), European Pharmacopeia (EP), or Japanese Pharmacopeia (JP) official microbial assays
- Strains listed alphabetically by genus and species paired with relevant applications

To learn more visit our website at www.atcc.org/pharmaceutical





STRAINS SPECIFIED BY OFFICIAL MICROBIAL ASSAYS

Official Microbial Assays: United States Pharmacopeia (USP)

Application	ATCC® No.
USP CHAPTER: <51> ANTIMICROBIAL EFFECTIVENESS TESTING, USP 37-NF32, 2014	
Candida albicans 3147	10231™
Aspergillus brasiliensis WLRI 034(120)	16404™
Escherichia coli Crooks	8739™
Pseudomonas aeruginosa R. Hugh 813	9027™
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
USP CHAPTER: <61> MICROBIOLOGICAL EXAMINATION OF NONSTERILE PRODUCTS: MICROBIAL ENUMERATION TESTS, USP 37-NF32, 2014	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Pseudomonas aeruginosa R. Hugh 813	9027™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Candida albicans 3147	10231™
Aspergillus brasiliensis WLRI 034(120)	16404™
USP CHAPTER: <62> MICROBIOLOGICAL EXAMINATION OF NONSTERILE PRODUCTS: TESTS FOR SPECIFIED MICROORGANISMS, USP 37-NF32, 2014	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Pseudomonas aeruginosa R. Hugh 813	9027™
Escherichia coli Crooks	8739™
Salmonella enterica subsp. *enterica* serovar Typhimurium CDC 6516-60	14028™
Candida albicans 3147	10231™
Clostridium sporogenes L.S. McClung 2006	11437™
Clostridium sporogenes	19404™
USP CHAPTER: <63> MYCOPLASMA TESTS, USP 37-NF32, 2014	
Acholeplasma laidlawii PG8	23206™
Mycoplasma gallisepticum PG 31	19610™
Mycoplasma fermentans PG 18	19989™
Mycoplasma hyorhinis BTS-7	17981™
Mycoplasma orale CH 19299	23714™
Mycoplasma pneumoniae FH strain of Eaton Agent	15531™
Mycoplasma synoviae WVU 1853	25204™
USP CHAPTER: <71> STERILITY TESTS, USP 37-NF32, 2014	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Pseudomonas aeruginosa R. Hugh 813	9027™
Clostridium sporogenes	19404™
Clostridium sporogenes L.S. McClung 2006	11437™
Candida albicans 3147	10231™
Aspergillus brasiliensis WLRI 034(120)	16404™
Kocuria rhizophila FDA strain PCI 1001	9341™
Bacteriodes vulgatus	8482™
USP CHAPTER: <81> ANTIBIOTICS-MICROBIAL ASSAYS, USP 37-NF32, 2014	
Saccharomyces cerevisiae	9763™
Micrococcus luteus 130.21	10240™
Mycobacterium smegmatis	607™
Pseudomonas aeruginosa	25619™
Staphylococcus aureus subsp. *aureus* FDA	29737™
Bordetella bronchiseptica NRRL B-140	4617™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Kocuria rhizophila FDA strain PCI 1001	9341™

Official Microbial Assays: United States Pharmacopeia (USP)

Application	ATCC® No.
Staphylococcus epidermidis FDA strain PCI 1200	12228™
Saccharomyces cerevisiae	2601™
Enterococcus hirae FDA M19	10541™
Staphylococcus aureus subsp. *aureus* 3R7089 strain Oxford	9144™
Klebsiella pneumoniae subsp. *pneumoniae*	10031™
Escherichia coli MacLeod	10536™
USP CHAPTER: <91> CALCIUM PANTOTHENATE ASSAY, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
USP CHAPTER: <115> DEXPANTHENOL ASSAY, USP 37-NF32, 2014	
Pediococcus acidilactici	8042™
USP CHAPTER: <171> VITAMIN B12 ACTIVITY ASSAY, USP 37-NF32, 2014	
Lactobacillus leichmannii 313	7830™
USP CHAPTER: <441> NIACIN OR NIACINAMIDE ASSAY, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
USP CHAPTER: <1035> BIOLOGICAL INDICATORS, USP 37-NF32, 2014	
Geobacillus stearothermophilus NCA 26	12980™
USP CHAPTER: <1046> CELLULAR AND TISSUE-BASED PRODUCTS, USP 37-NF32, 2014	
Hybrid Moloney/Amphotropic Murine leukemia virus (Mo/A-MuLv)	VR-1448™
Hybrid Moloney/Amphotropic Murine leukemia virus (Mo/A-MuLv)	VR-1450™
USP CHAPTER: <1072> DISINFECTANTS AND ANTISEPTICS, USP 37-NF32, 2014	
Escherichia coli AMC 198	11229™
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Pseudomonas aeruginosa PRD-10	15442™
Candida albicans 3147	10231™
Candida albicans 132	2091™
Penicillum chrysogenum Wis. 49-133	11709™
Aspergillus brasiliensis WLRI 034(120)	16404™
Bacillus subtilis PRD 66	19659™
USP CHAPTER: <1211> STERILIZATION AND STERILITY ASSURANCE OF COMPENDIAL ARTICLES, USP 37-NF32, 2014	
Geobacillus stearothermophilus	7953™
Bacillus atrophaeus NRS 1221A	9372™
USP CHAPTER: <1229.1> STEAM STERILIZATION BY DIRECT CONTACT, USP 37-NF32, 2014	
Geobacillus stearothermophilus NCA 26	12980™
Geobacillus stearothermophilus	7953™
USP DIETARY SUPPLEMENT CHAPTER: <2021> MICROBIAL ENUMERATION TESTS - NUTRITIONAL AND DIETARY SUPPLEMENTS, USP 37-NF32, 2014	
Candida albicans 3147	10231™
Salmonella enterica subsp. *enterica* serovar Typhimurium NCTC 74	13311™
Aspergillus brasiliensis WLRI 034(120)	16404™
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Escherichia coli Crooks	8739™
USP DIETARY SUPPLEMENTS: OIL- AND WATER-SOLUBLE VITAMINS CAPSULES, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
Pediococcus acidilactici	8042™
USP DIETARY SUPPLEMENTS: OIL- AND WATER-SOLUBLE VITAMINS ORAL SOLUTION, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
Pediococcus acidilactici	8042™

Official Microbial Assays: United States Pharmacopeia (USP)

Application	ATCC® No.
USP DIETARY SUPPLEMENTS: OIL- AND WATER-SOLUBLE VITAMINS TABLETS, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
USP DIETARY SUPPLEMENTS: OIL- AND WATER-SOLUBLE VITAMINS WITH MINERALS CAPSULES, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
Pediococcus acidilactici	8042™
USP DIETARY SUPPLEMENTS: OIL- AND WATER-SOLUBLE VITAMINS WITH MINERALS ORAL SOLUTION, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
Pediococcus acidilactici	8042™
USP DIETARY SUPPLEMENTS: OIL- AND WATER-SOLUBLE VITAMINS WITH MINERALS TABLETS, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
USP DIETARY SUPPLEMENTS: WATER-SOLUBLE VITAMINS CAPSULES, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Pediococcus acidilactici	8042™
USP DIETARY SUPPLEMENTS: WATER-SOLUBLE VITAMINS TABLETS, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
USP DIETARY SUPPLEMENTS: WATER-SOLUBLE VITAMINS WITH MINERALS CAPSULES, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
Pediococcus acidilactici	8042™
USP DIETARY SUPPLEMENTS: WATER-SOLUBLE VITAMINS WITH MINERALS ORAL SOLUTION, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
Pediococcus acidilactici	8042™
USP DIETARY SUPPLEMENTS: WATER-SOLUBLE VITAMINS WITH MINERALS TABLETS, USP 37-NF32, 2014	
Lactobacillus plantarum 17-5	8014™
Lactobacillus leichmannii 313	7830™
USP MONOGRAPHS: BIOLOGICAL INDICATOR FOR DRY-HEAT STERILIZATION, PAPER CARRIER, USP 37-NF32, 2014	
Bacillus atrophaeus NRS 1221A	9372™
USP MONOGRAPHS: BIOLOGICAL INDICATOR FOR ETHYLENE OXIDE STERILIZATION, PAPER CARRIER, USP 37-NF32, 2014	
Bacillus atrophaeus NRS 1221A	9372™
USP MONOGRAPHS: BIOLOGICAL INDICATOR FOR STEAM STERILIZATION, PAPER CARRIER, USP 37-NF32, 2014	
Geobacillus stearothermophilus NCA 26	12980™
Geobacillus stearothermophilus	7953™
USP MONOGRAPHS: PENICILLAMINE, USP 37-NF32, 2014	
Kocuria rhizophila FDA strain PCI 1001	9341™
USP MONOGRAPHS: PENICILLIN G PROCAINE AND NOVOBIOCIN SODIUM INTRAMAMMARY INFUSION, USP 37-NF32, 2014	
Staphylococcus aureus subsp. *aureus* PCI 1209/N	12692™
USP MONOGRAPHS: TETRACYCLINE HYDROCHLORIDE AND NOVOBIOCIN SODIUM TABLETS, USP 37-NF32, 2014	
Escherichia coli MacLeod	10536™

Official Microbial Assays: European Pharmacopeia (EP) Edition 8.1

Application	ATCC® No.
EP 2.6.1 STERILITY	
Aspergillus brasiliensis WLRI 034(120)	16404™
Clostridium sporogenes	19404™
Candida albicans 3147	10231™
Staphylococcus aureus subsp. *aureus* Rosenbach FDA 209	6538™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Pseudomonas aeruginosa R. Hugh 813	9027™
EP 2.6.7 MYCOPLASMAS	
Mycoplasma fermentans PG18	19989™
Mycoplasma pneumoniae FH strain of Eaton Agent	15531™
Mycoplasma hyorhinis BTS-7	17981™
Mycoplasma gallisepticum PG31	19610™
Mycoplasma orale CH 19299	23714™
Mycoplasma synoviae WVU 1853	25204™
Acholeplasma laidlawii PG8	23206™
EP 2.6.12 MICROBIAL EXAMINATION OF NON-STERILE PRODUCTS: MICROBIAL ENUMERATION TESTS	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Pseudomonas aeruginosa R. Hugh 813	9027™
Aspergillus brasiliensis WLRI 034(120)	16404™
Candida albicans 3147	10231™
EP 2.6.13 MICROBIAL EXAMINATION OF NON-STERILE PRODUCTS: TEST FOR SPECIFIED MICRO-ORGANISMS	
Salmonella enterica subsp. *enterica* serovar Typhimurium CDC 6516-60	14028™
Clostridium sporogenes L.S. McClung 2006	11437™
Clostridium sporogenes	19404™
Escherichia coli Crooks	8739™
Candida albicans 3147	10231™
EP 2.6.27 MICROBIOLOGICAL CONTROL OF CELLULAR PRODUCTS	
Candida albicans 3147	10231™
Clostridium sporogenes L.S. McClung 2006	11437™
Propionibacterium acnes Gerath	11827™
Aspergillus brasiliensis WLRI 034(120)	16404™
Clostridium sporogenes	19404™
Streptococcus pyogenes Bruno	19615™
Bacteroides fragilis VPI 2553	25285™
Staphylococcus aureus subsp. *aureus* Rosenbach FDA 209	6538™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Pseudomonas aeruginosa R. Hugh 813	9027™
Yersinia enterocolitica subsp. *enterocolitica* 33114	9610™
EP 2.6.31 MICROBIOLOGICAL EXAMINATION OF HERBAL MEDICINAL PRODUCTS FOR ORAL USE	
Staphylococcus aureus subsp. *aureus* Rosenbach FDA 209	6538™
Pseudomonas aeruginosa R. Hugh 813	9027™
Escherichia coli Crooks	8739™
Salmonella enterica subsp. *enterica* serovar Typhimurium CDC 6516-60	14028™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™

Official Microbial Assays: European Pharmacopeia (EP) Edition 8.1

Application	ATCC® No.
EP 2.7.2 MICROBIOLOGICAL ASSAYS OF ANTIBIOTICS	
Klebsiella pneumoniae subsp. *pneumoniae*	10031™
Micrococcus luteus 130.21	10240™
Escherichia coli MacLeod	10536™
Enterococcus hirae FDA M19	10541™
Staphylococcus epidermidis FDA strain PCI 1200	12228™
Bacillus pumilus	14884™
Bordetella bronchiseptica	4617™
Mycobacterium smegmatis	607™
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Staphylococcus aureus subsp. *aureus* 3R7089 strain Oxford	9144™
Kocuria rhizophila FDA strain PCI 1001	9341™
Escherichia coli 397E	9637™
Saccharomyces cerevisiae	9763™
EP 5.1.2 BIOLOGICAL INDICATORS OF STERILIZATION	
Bacillus pumilus E601	27142™
Geobacillus stearothermophilus	7953™
Bacillus atrophaeus NRS 1221A	9372™
EP 5.1.3 EFFICACY OF ANTIMICROBIAL PRESERVATION	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Aspergillus brasiliensis WLRI 034(120)	16404™
Escherichia coli Crooks	8739™
Pseudomonas aeruginosa R. Hugh 813	9027™
Candida albicans 3147	10231™
EP MONOGRAPHS: PENICILLAMINE	
Kocuria rhizophila FDA strain PCI 1001	9341™
EP MONOGRAPHS: WATER FOR INJECTIONS	
Pseudomonas aeruginosa R. Hugh 813	9027™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
EP MONOGRAPHS: WATER FOR PREPARATION OF EXTRACTS	
Pseudomonas aeruginosa R. Hugh 813	9027™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
EP MONOGRAPHS: WATER, HIGHLY PURIFIED	
Pseudomonas aeruginosa R. Hugh 813	9027™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
EP MONOGRAPHS: WATER, PURIFIED	
Pseudomonas aeruginosa R. Hugh 813	9027™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™

Official Microbial Assays: Japanese Pharmacopeia (JP)

Application	ATCC® No.
JP 16 4.05. I MICROBIOLOGICAL EXAMINATION OF NON-STERILE PRODUCTS: TOTAL VIABLE AEROBIC COUNT	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Pseudomonas aeruginosa R. Hugh 813	9027™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Candida albicans 3147	10231™
Aspergillus brasiliensis WLRI 034(120)	16404™
JP 16 4.05. II MICROBIOLOGICAL EXAMINATION OF NON-STERILE PRODUCTS: TESTS FOR SPECIFIED MICRO-ORGANISMS	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Pseudomonas aeruginosa R. Hugh 813	9027™
Escherichia coli Crooks	8739™
Salmonella enterica subsp. *enterica* serovar Typhimurium CDC 6516-60	14028™
Candida albicans 3147	10231™
Clostridium sporogenes L.S. McClung 2006	11437™ or 19404™
JP 16 4.06 STERILITY TEST	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Pseudomonas aeruginosa R. Hugh 813	9027™
Clostridium sporogenes L.S. McClung 2006	11437™ or 19404™
Candida albicans 3147	10231™
Aspergillus brasiliensis WLRI 034	16404™
JP 16 5.02 MICROBIAL LIMIT TEST FOR CRUDE DRUGS	
Escherichia coli Crooks	8739™
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Candida albicans 3147 or 132	10231™ or 2091™
JP 16 MONOGRAPHS: AMPHOTERICIN B	
Saccharomyces cerevisiae NRRL Y-567	9763™
JP 16 MONOGRAPHS: AMPICILLIN SODIUM	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: ARBEKACIN SULFATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: BACITRACIN	
Micrococcus luteus 130.21	10240™
JP 16 MONOGRAPHS: BEKANAMYCIN SULFATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: BENZYLPENICILLIN POTASSIUM	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
JP 16 MONOGRAPHS: BLEOMYCIN HYDROCHLORIDE	
Mycobacterium smegmatis	607™
JP 16 MONOGRAPHS: BLEOMYCIN SULFATE	
Mycobacterium smegmatis	607™
JP 16 MONOGRAPHS: CLOXACILLIN SODIUM HYDRATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: CYCLOSERINE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: DIBEKACIN SULFATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: DICLOXACILLIN SODIUM HYDRATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™

Official Microbial Assays: Japanese Pharmacopeia (JP)

Application	ATCC® No.
JP 16 MONOGRAPHS: ENVIOMYCIN SULFATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: ERYTHROMYCIN	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
JP 16 MONOGRAPHS: ERYTHROMYCIN ETHYLSUCCINATE	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
JP 16 MONOGRAPHS: ERYTHROMYCIN LACTOBIONATE	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
JP 16 MONOGRAPHS: ERYTHROMYCIN STEARATE	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
JP 16 MONOGRAPHS: FRADIOMYCIN SULFATE	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
JP 16 MONOGRAPHS: GENTAMICIN SULFATE	
Staphylococcus epidermidis FDA strain PCI 1200	12228™
JP 16 MONOGRAPHS: GRAMICIDIN	
Enterococcus hirae FDA M19	10541™
JP 16 MONOGRAPHS: JOSAMYCIN	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: JOSAMYCIN PROPIONATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: KANAMYCIN MONOSULFATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: KANAMYCIN SULFATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: KITASAMYCIN	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: KITASAMYCIN ACETATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: KITASAMYCIN TARTRATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: MICRONOMICIN SULFATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: MIDECAMYCIN	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: MIDECAMYCIN ACETATE	
Kocuria rhizophila FDA strain PCI 1001	9341™
JP 16 MONOGRAPHS: NYSTATIN	
Saccharomyces cerevisiae NRRL Y-567	9763™
JP 16 MONOGRAPHS: PEPLOMYCIN SULFATE	
Mycobacterium smegmatis	607™
JP 16 MONOGRAPHS: RIBOSTAMYCIN SULFATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: ROKITAMYCIN	
Kocuria rhizophila FDA strain PCI 1001	9341™
JP 16 MONOGRAPHS: SODIUM FUSIDATE	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
JP 16 MONOGRAPHS: SPECTINOMYCIN HYDROCHLORIDE HYDRATE	
Klebsiella pneumoniae subsp. *pneumoniae* PCI 602	10031™

Official Microbial Assays: Japanese Pharmacopeia (JP)

Application	ATCC® No.
JP 16 MONOGRAPHS: SPIRAMYCIN ACETATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: STREPTOMYCIN SULFATE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: SULBENICILLIN SODIUM	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: TEICOPLANIN	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: TOBRAMYCIN	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: VANCOMYCIN HYDROCHLORIDE	
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™
JP 16 MONOGRAPHS: ZINOSTATIN STIMALAMER	
Kocuria rhizophila FDA strain PCI 1001	9341™
JP 16 G3 BIOTECHNOLOGICAL/BIOLOGICAL PRODUCTS: MYCOPLASMA TESTING FOR CELL SUBSTRATES USED FOR THE PRODUCTION OF BIOTECHNOLOGICAL/BIOLOGICAL PRODUCTS	
Mycoplasma pneumoniae FH strain of Eaton Agent	15531™
Mycoplasma orale CH 19299	23714™
Mycoplasma hyorhinis DBS 1050 or BTS-7	29052™ or 17981™
JP 16 G4 MICROORGANISMS: PRESERVATIVES-EFFECTIVENESS TESTS	
Escherichia coli Crooks	8739™
Pseudomonas aeruginosa R. Hugh 813	9027™
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Candida albicans 3147	10231™
Aspergillus brasiliensis WLRI 034(120)	16404™
JP 16 G4 MICROORGANISMS: TERMINAL STERILIZATION AND STERILIZATION INDICATORS	
Brevundimonas diminuta FDA strain PCI 818	19146™
Geobacillus stearothermophilus	7953™
Bacillus atrophaeus NRS 1221A	9372™
JP 16 G8 QUALITY CONTROL OF WATER FOR PHARMACEUTICAL USE	
Staphylococcus aureus subsp. *aureus* FDA 209	6538™
Escherichia coli Crooks	8739™
Pseudomonas aeruginosa R. Hugh 813	9027™
Pseudomonas protegens 1	17386™
Methylobacterium extorquens NBRC 15911	BAA-2500™

STRAINS LISTED BY GENUS AND SPECIES

Strains for Pharmaceutical Microbiology

Strain	ATCC® No.	Application
Acholeplasma laidlawii PG8	23206™	EP 2.6.7 Mycoplasmas, USP Chapter <63>, Mycoplasma test
Aspergillus brasiliensis WLRI 034(120)	16404™	EP 5.1.3 Efficacy of antimicrobial preservation; EP 2.6.1 Sterility; EP 2.6.27 Microbiological Control of Cellular Products; EP 2.6.12 Microbial examination of non-sterile products: Microbial Enumeration Tests; USP 37 Disinfectants and Antiseptics <1072> ; USP 37 Microbial limit tests – Dietary supplements - Preparatory testing, Growth Promotion Testing <2021>; <51> Antimicrobial Effectiveness Testing, USP 37-NF32, 2014.; USP 37, Microbiological Examination of Nonsterile Products: Microbial Enumeration Tests <61>; Sterility Tests <71> USP 37-NF32, 2014; JP 16 4.05 I Microbiological Examination of Non-sterile Products: Total Viable Aerobic Count; JP 16 4.06 Sterility test; JP 16 G4 Microorganisms: Preservatives-Effectiveness Test
Bacillus atrophaeus NRS 1221A	9372™	EP 5.1.2 Biological indicators of sterilization; USP Chapter <1211> Sterilization and sterility assurance of compendial articles, USP 37-NF32, 2014; USP Chapter <1035> Biological Indicators, USP 37-NF32, 2014; USP Monographs: Biological Indicator for Dry-Heat Sterilization, Paper Carrier, USP 37-NF32, 2014; USP Monographs: Biological Indicator for Ethylene Oxide Sterilization, Paper Carrier, USP 37-NF32, 2014; JP 16 G4 Microorganisms: Terminal Sterilization and Sterilization Indicators
Bacillus pumilus E601	27142™	EP 5.1.2 Biological indicators of sterilization; USP Chapter<1211>, Sterilization and sterility assurance of compendial articles
Bacillus pumilus	14884™	EP 2.7.2 Microbiological assays of antibiotics
Bacillus subtilis subsp. *spizizenii* NRS 231	6633™	EP 2.6.1 Sterility; EP 2.6.27 Microbiological Control of Cellular Products; EP 2.6.31 Microbiological Examination of Herbal Medicinal Products for Oral Use; EP 2.7.2 Microbiological assays of antibiotics; EP 2.6.12 Microbial examination of non-sterile products: Microbial Enumeration Tests; EP 2.6.13 Microbial examination; EP Monographs: Water for Injections; EP Monographs: Water for Preparation of Extracts; EP Monographs: Water, Highly Purified; EP Monographs: Water, Purified; USP 37 Microbial limit tests – Dietary supplements - Preparatory testing, Growth Promotion Testing <2021>; <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; USP 37, Microbiological Examination of Nonsterile Products: Microbial Enumeration Tests <61>; <71> Sterility Tests USP 37-NF32, 2014; JP 16 4.05 I. Microbiological examiniation of non-sterile products: total viable aerobic count; JP 16 4.06 Sterility test; JP 16 5.02 Microbial limit test for crude drugs; JP 16: Ampicillin sodium, Arbekacin sulfate, Bekanamycin sulfate, Cloxacillin sodium hydrate, Cycloserine, Dibekacin sulfate, Dicloxacillin sodium hydrate, Enviomycin sulfate, Josamycin, Josamycin propionate, Kanamycin monosulfate, Kanamycin sulfate, Kitasamycin, Kitasamycin acetate, Kitasamycin tartrate, Micronomicin sulfate, Midecamycin, Ribostamycin sulfate, Spiramycin acetate, Streptomycin sulfate, Sulbenicillin sodium, Teicoplanin, Tobramycin, Vancomycin hydrochloride
Bacillus subtilis PRD 66	19659™	USP Chapter <1072> Disinfectants and Antiseptics
Bacteroides fragilis VPI 2553	25285™	EP 2.6.27 Microbiological Control of Cellular Products
Bacteroides vulgatus	8482™	USP Chapter <71> Sterility Tests USP 37-NF32, 2014
Bordetella bronchiseptica NRRL B-140	4617™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014
Brevundimonas diminuta FDA strain PCI 818	19146™	USP Chapter <1211> Sterilization and sterility assurance of compendial articles. USP 37-NF32, 2014; JP 16 G4 Microorganisms: Terminal Sterilization and Sterilization Indicators
Candida albicans 132	2091™	EP 2.6.1 Sterility; USP Chapter <1072> Disinfectants and Antiseptics; JP 16 5.02 Microbial Limit Test for Crude Drugs
Candida albicans 3147	10231™	EP 5.1.3 Efficacy of antimicrobial preservation; EP 2.6.1 Sterility; EP 2.6.27 Microbiological Control of Cellular Products; EP 2.6.12 Microbial examination of non-sterile products: Microbial Enumeration Tests; EP 2.6.13 Microbial examination of non-sterile products: Test for Specified Micro-organisms; USP Chapter <1072> Disinfectants and Antiseptics ; USP 37 Microbial limit tests – Dietary supplements - Preparatory testing, Growth Promotion Testing <2021>; <51> Antimicrobial Effectiveness Testing, USP 37-NF32, 2014. ; USP 37, Microbiological Examination of Nonsterile Products: Microbial Enumeration Tests <61>; USP 37, Microbiological Examination of Nonsterile Products: Tests for Specified Microorganisms <62>; Sterility Tests <71> USP 37-NF32, 2014; JP 16 4.05 I. Microbiological Examination of Non-Sterile Products: Total Viable Aerobic Count; JP 16 4.05 II. Microbiological Examination of Non-Sterile Products: Tests for Specified Micro-organisms; JP 16 4.06 Sterility Test; JP 16 5.02 Microbial Limit Test for Crude Drugs; JP 16 G4 Microorganisms: Preservatives-Effectiveness Tests
Clostridium sporogenes L.S. McClung 2006	11437™	EP 2.6.27 Microbiological Control of Cellular Products; EP 2.6.13 Microbial examination of non-sterile products: Test for Specified Micro-organisms; USP 37, Chondroitin Sulfate Sodium; USP 37, Microbiological Examination of Nonsterile Products: Tests for Specified Microorganisms <62>; Sterility Tests <71> USP 37-NF32, 2014; Dietary Supplements: Chondroitin Sulfate Sodium, USP 37-NF32, 2014; JP 16 4.05 II. Microbiological Examination of Non-Sterile Products: Tests for Specified Micro-Organisms; JP 16 4.06 Sterility Test

Strains for Pharmaceutical Microbiology

Strain	ATCC® No.	Application
Clostridium sporogenes	19404™	EP 2.6.1 Sterility; EP 2.6.27 Microbiological Control of Cellular Products; EP 2.6.13 Microbial examination of non-sterile products: Test for Specified Micro-organisms; USP 37, Chondroitin Sulfate Sodium; USP 37, Microbiological Examination of Nonsterile Products: Test; USP 37, Microbiological Examination of Nonsterile Products: Tests for Specified Microorganisms <62>; <71> Sterility Tests USP 37-NF32, 2014; JP 16 4.05 II. Microbiological Examination of Non-Sterile Products: Tests for Specified Micro-Organisms; JP 16 4.06 Sterility Test
Enterococcus hirae FDA M19	10541™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; JP 16: Gramicidin
Escherichia coli MacLeod	10536™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; Tetracycline Hydrochloride and Novobiocin Sodium Tablets. USP 37-NF32, 2014
Escherichia coli AMC 198	11229™	USP Chapter <1072> Disinfectants and Antiseptics USP 37- NF32, 2014
Escherichia coli Crooks	8739™	EP 2.6.13 Microbial examination of non-sterile products: Test for Specified Micro-organisms; EP 2.6.31 Microbiological Examination of Herbal Medicinal Products for Oral Use; EP 5.1.3 Efficacy of antimicrobial preservation; USP 37, Microbiological Examination of Nonsterile Products: Tests for Specified Microorganisms <62>; USP 37 Microbial limit tests – Dietary supplements - Preparatory testing, Growth Promotion Testing <2021>; <51> Antimicrobial Effectiveness Testing, USP 37-NF32, 2014; USP 37, Microbiological Examination of Nonsterile Products: Tests for Specified Microorganisms <62>; JP 16 4.05 II. Microbiological Examination of Non-Sterile Products: Tests for Specified Micro-Organisms; JP 16 5.02 Microbial Limit Test for Crude Drugs; JP 16 G4 Microorganisms: Preservatives-Effectiveness Tests; JP 16 G8 Quality Control of Water for Pharmaceutical Use
Escherichia coli 397E	9637™	EP 2.7.2 Microbiological assays of antibiotics
Geobacillus stearothermophilus	7953™	EP 5.1.2 Biological indicators of sterilization; USP Chapter <1211> Sterilization and sterility assurance of compendial articles, USP 37-NF32, 2014; USP Monographs: Biological Indicators for Steam Sterilization, Paper Carrier, USP 37-NF32, 2014; USP Chapter <1229.1> Steam Sterilization by Direct Contact, USP 37-NF32, 2014; JP 16 G4 Microorganisms: Terminal Sterilization and Sterilization Indicators
Geobacillus stearothermophilus NCA 26	12980™	USP Chapter <1229.1> Steam Sterilization by Direct Contact, USP 37-NF32, 2014; USP Chapter <1035> Biological Indicators, USP 37-NF32, 2014; USP Monographs Biological Indicator for Steam Sterilization, Paper carrier, USP37-NF32, 2014
Hybrid Moloney/Amphotropic murine leukemia virus (Mo/A-MuLv) 4070A envelope strain	VR-1448™	USP Chapter:<1046> Cell and Gene Therapy Products - Analytical Methodologies, USP 37-NF32, 2014
Hybrid Moloney/Amphotropic murine leukemia virus (Mo/A-MuLv) 4070A envelope strain	VR-1450™	USP Chapter:<1046> Cell and Gene Therapy Products - Analytical Methodologies, USP 37-NF32, 2014
Klebsiella pneumoniae subsp. *pneumoniae* PCI 602	10031™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; JP 16: Spectinomycin Hydrochloride Hydrate
Kocuria rhizophila FDA strain PCI 1001	9341™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; Penicillamine USP 37-NF32, 2014; <71> Sterility Tests USP 37-NF32, 2014
Lactobacillus leichmannii 313	7830™	USP Chapter <171> Vitamin B12 Activity Assay, USP 37-NF32, 2014; USP Dietary Supplements: Oil-and Water-Soluble Vitamins with Minerals Tablets, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins Capsules, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins Oral Solution, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins Tablets, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins with Minerals Capsules, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins with Minerals Oral Solution, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins Tablets, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins with Minerals Capsules, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins with Minerals Oral Solution, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins with Minerals Tablets, USP 37-NF32, 2014
Lactobacillus plantarum 17-5	8014™	USP Chapter <91> Calcium Pantothenate Assay, USP 37-NF32, 2014; USP Chapter <441> Niacin or Niacinamide Assay. USP 37-NF32, 2014; Dietary Supplements: Oil-and Water-Soluble Vitamins with Minerals Tablets, USP 37-NF32, 2014.; USP Dietary Supplements: Oil- and Water-Soluble Vitamins Capsules, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins Oral Solution, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins Tablets, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins with Minerals Capsules, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins with Minerals Oral Solution, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins Tablets, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins with Minerals Capsules, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins with Minerals Oral Solution, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins with Minerals Tablets, USP 37-NF32, 2014
Methylobacterium extorquens NBRC 15911	BAA-2500™	JP 16 G8 Quality Control of Water for Pharmaceutical Use
Micrococcus luteus 130.21	10240™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; JP 16: Bacitracin
Kocuria rhizophila FDA strain PCI 1001	9341™	JP 16: Midecamycin Acetate, Rokitamycin, Zinostatin Stimalamer

Strains for Pharmaceutical Microbiology

Strain	ATCC® No.	Application
Mycobacterium smegmatis	607™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; JP 16: Bleomycin Hydrochloride, Bleomycin Sulfate, Peplomycin Sulfate
Mycoplasma fermentans PG 18	19989™	USP Chapter <63> Mycoplasma test, EP 2.6.7 Mycoplasmas
Mycoplasma gallisepticum PG31	19610™	EP 2.6.7 Mycoplasmas; USP Chapter <63> Mycoplasma test
Mycoplasma hyorhinis BTS-7	17981™	EP 2.6.7 Mycoplasmas; USP Chapter <63> Mycoplasma test; JP 16 G3 Biotechnological/Biological Products: Mycoplasma Testing for Cell Substrates used for the Production of Biotechnological/ Biological Products
Mycoplasma hyorhinis DBS 1050	29052™	JP 16 G3 Biotechnological/Biological Products: Mycoplasma Testing for Cell Substrates used for the Production of Biotechnological/Biological Products
Mycoplasma orale CH 19299	23714™	EP 2.6.7 Mycoplasmas; USP Chapter <63> Mycoplasma test; JP 16 G3 Biotechnological/Biological Products: Mycoplasma Testing for Cell Substrates used for the Production of Biotechnological/ Biological Products
Mycoplasma pneumoniae FH strain of Eaton Agent	15531™	EP 2.6.7 Mycoplasmas; USP Chapter <63> Mycoplasma test; JP 16 G3 Biotechnological/Biological Products: Mycoplasma Testing for Cell Substrates used for the Production of Biotechnological/ Biological Products
Mycoplasma synoviae WVU 1853	25204™	EP 2.6.7 Mycoplasmas; USP Chapter <63> Mycoplasma test
Pediococcus acidilactici	8042™	USP Chapter <115> Dexpanthenol Assay, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins Capsules, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins Oral Solution, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins with Minerals Capsules, USP 37-NF32, 2014; USP Dietary Supplements: Oil- and Water-Soluble Vitamins with Minerals Oral Solution, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins with Minerals Capsules, USP 37-NF32, 2014; USP Dietary Supplements: Water-Soluble Vitamins with Minerals Oral Solution, USP 37-NF32, 2014; Dietary Supplements: Water-soluble Vitamins Capsules, USP 37-NF32, 2014
Penicillium chrysogenum Wis. 49-133	11709™	USP Chapter <1072> Disinfectants and Antiseptics
Propionibacterium acnes Gerath	11827™	EP 2.6.27 Microbiological Control of Cellular Products
Pseudomonas aeruginosa PRD-10	15442™	USP Chapter <1072> Disinfectants and Antiseptics
Pseudomonas aeruginosa	25619™	USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014
Pseudomonas aeruginosa R. Hugh 813	9027™	EP 5.1.3 Efficacy of antimicrobial preservation; EP 2.6.1 Sterility; EP 2.6.27 Microbiological Control of Cellular Products; EP 2.6.13 Microbial examination of non-sterile products: Test for Specified Micro-organisms; EP 2.6.31 Microbiological Examination of Herbal Medicinal Products for Oral Use; EP Monographs: Water for Injections; EP Monographs: Water for Preparation of Extracts; EP Monographs: Water, Highly Purified; EP Monographs: Water, Purified; USP 37, Chondroitin Sulfate Sodium; USP, Microbiological Examination of Nonsterile Products: Test; EP 2.6.12 Microbial examination of non-sterile products: Microbial Enumeration Tests; EP 2.6.13 Microbial examination of non-sterile products: Test for Specified Micro-organisms; USP, Microbiological Examination of Nonsterile Products: Tests for Specified Microorganisms <62>; USP 37 Microbial limit tests – Dietary supplements - Preparatory testing, Growth Promotion Testing <2021>; <51> Antimicrobial Effectiveness Testing, USP 37-NF32, 2014; USP 37, Microbiological Examination of Nonsterile Products: Microbial Enumeration Tests <61>; USP 37, Microbiological Examination of Nonsterile Products: Tests for Specified Microorganisms <62>; <71> Sterility Tests USP 37-NF32, 2014; JP 16 4.05 I. Microbiological Examination of Non-Sterile Products: Total Viable Aerobic Count; JP 16 4.05 II. Microbiological Examination of Non-Sterile Products: Tests for Specified Micro-Organisms; JP 16 4.06 Sterility Test; JP 16 G4 Microorganisms: Preservatives-Effectiveness Tests; JP 16 G8 Quality Control of Water for Pharmaceutical Use
Pseudomonas protegens 1	17386™	JP 16 G8 Quality Control of Water for Pharmaceutical Use
Saccharomyces cerevisiae	2601™	USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014
Saccharomyces cerevisiae NRRL Y-567	9763™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; JP 16: Amphotericin B, Nystatin
Salmonella enterica subsp. *enterica*	13311™	USP Microbial limit tests – Dietary supplements - Preparatory testing, Growth Promotion Testing <2021>
Salmonella enterica subsp. *enterica* serovar Typhimurium CDC 6516-60	14028™	EP 2.6.13 Microbial examination of non-sterile products: Test for Specified Micro-organisms; EP 2.6.31 Microbiological Examination of Herbal Medicinal Products; USP Chapter <62>, Microbiological Examination of Nonsterile Products; JP16 4.05 II. Microbiological Examination of Nonsterile Products.
Salmonella enterica subsp. *enterica* serovar Abony	BAA-2162™	USP Chapter <62> Microbiological examination of non-sterile products: tests for specified microorganisms
Serratia marcescens PCI 1107	14756™	USP Chapter <1211> Sterilization and sterility assurance of compendial articles. USP 37-NF32, 2014
Staphylococcus aureus subsp. *aureus* PCI 1209/N	12692™	Penicillin G Procaine and Novobiocin Sodium Intramammary Infusion. USP 37-NF32, 2014
Staphylococcus aureus subsp. *aureus* FDA	29737™	USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; USP 37, Tetracycline Hydrochloride and Novobiocin Sodium Tablets
Staphylococcus aureus subsp. *aureus* 3R7089 strain Oxford	9144™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014

Strains for Pharmaceutical Microbiology

Strain	ATCC® No.	Application
Staphylococcus aureus subsp. *aureus* FDA 209	6538™	EP 2.6.1 Sterility testing; EP 2.6.27 Microbiological Control of Cellular Products; EP 2.7.2 Microbiological assays of antibiotics; EP 2.6.12 Microbial examination of non-sterile products: Microbial Enumeration Tests; EP 2.6.13 Microbial examination of non-sterile products: Test for Specified Micro-organisms; EP 2.6.31 Microbiological Examination of Herbal Medicinal Products for Oral Use; USP 37 Disinfectants and Antiseptics <1072> ; USP 37 Microbial limit tests – Dietary supplements - Preparatory testing, Growth Promotion Testing <2021>; <51> Antimicrobial Effectiveness Testing, USP 37-NF32, 2014.; USP 37, Microbiological Examination of Nonsterile Products: Microbial Enumeration Tests <61>; USP 37, Microbiological Examination of Nonsterile Products: Tests for Specified Microorganisms <62>; <71> Sterility Tests USP 37-NF32, 2014; JP 16 4.05 I. Microbiological Examination of Non-Sterile Products: Total Viable Aerobic Count; JP 16 4.05 II. Microbiological Examination of Non-Sterile Products: Tests for Specified Micro-Organisms; JP 16 4.06 Sterility Test; JP 16 5.02 Microbial Limit Test for Crude Drugs, JP 16: Benzylpenicillin Potassium, Erythromycin, Erythromycin Ethylsuccinate, Erythromycin Lactobionate, Erythromycin Stearate, Fradiomycin Sulfate, Sodium fusidate; JP 16 G4 Microorganisms: Preservatives-Effectiveness Tests; JP 16 G8 Quality Control of Water for Pharmaceutical Use
Staphylococcus epidermidis FDA strain PCI 1200	12228™	EP 2.7.2 Microbiological assays of antibiotics; USP Chapter <81> Antibiotics – Microbial Assays, USP 37-NF32, 2014; JP 16: Gentamycin Sulfate
Streptococcus pyogenes Bruno	19615™	EP 2.6.27 Microbiological Control of Cellular Products
Yersinia enterocolitica subsp. *enterocolitica* 33114	9610™	EP 2.6.27 Microbiological Control of Cellular Products

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- Commercial identification systems from companies including bioMérieux, Biolog, Siemens, DuPont Nutrition and Health, and others

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