Millipore®

Preparation, Separation,
Filtration & Monitoring Products

MERCK

Pharmaceutical Microbiology: Microorganisms for Growth Promotion

Introducing Vitroids™ and LENTICULE® Discs: Convenient Certified Reference Materials/ Strains for Accurate Results

Seeking to simplify your culture media performance testing? Our Vitroids™ and LENTICULE® Discs Certified Reference Materials are designed to streamline your growth promotion tests, providing ready-to-use discs with practical CFU levels (15-80 CFU). With virtually no preparation required, you can effortlessly place the disc onto your chosen media, rehydrate for 10 minutes, and streak. It's as straightforward as that! Created in compliance with ISO 17025 and 17034, these materials guarantee accuracy, traceability, and homogeneity.

For more information, visit **SigmaAldrich.com/mibi-crm** and download our Certified Reference Microorganism brochure.

Key Features:

- Defined CFU range and low standard deviation (ISO/ IEC 17025)
- Reliable (produced under ISO 17034), ID and typical characteristics certified
- Ready to use concentration, user-friendly, flexible
- Saves you 1 hour working time per test strain
- More sustainable than homemade strains

Ph.Eur. and USP general chapters typically refer to individual ATCC* strains or equivalent strains from other culture collections. While our CRMs are traceable to CECT (Vitroids) and NCTC/NCPF (Lenticule Discs), we can often provide equivalency through the World Data Center for Microorganisms (WDCM). This flyer offers equivalent strains for reference, with further details available at wdcm.org. Additionally, you can access the strain history for each strain on our **SigmaAldrich.com** website.

Cultures for use in compenidial test should be acquired from a national culture collection or a qualified secondary supplier and have documented equivalency to relevant strains recommended by Ph.Eur. and USP. The working cultures should be not more than 5 passages removed from the original master seed-lot. Vitroids™ and LENTICULE® Discs typically have no more than 2 passages, except for a few rare cases where we have a maximum of 3 passages.

*ATCC is a trade mark of American Type Culture Collection

The strains listed in this list are applicable to:

- USP <51> Antimicrobial Effectiveness Testing
- USP <60> Microbiological examination of non-sterile products
- USP <61> Microbiological Examination of Nonsterile Products – Microbial Enumeration Tests
- USP <62> Microbiological Examination of Nonsterile Products – Tests for Specified Microorganisms
- USP <71> Sterility Tests
- USP<81> Antibiotics—Microbial Assays
- 2.6.12. Microbiological examination of non-sterile products (total viable aerobic count)
- 2.6.13. Microbiological examination of non-sterile products: test for specified micro-organisms
- 2.6.31. Microbiological examination of herbal medicinal products for oral use
- 2.6.36. Microbiological examination of live biotherapeutic products – AMCC – analysis
- 2.7.2. Microbiological assay of antibiotics

Material Number	Organism	WDCM Number	Brand	CFU Range of mean value	Culture Collection	Strain Number	ATCC*	CECT	DSM	NCTC	NCPF	CMCC	USP <51>	USP <60>	USP <61>	USP <62>	USP <71>	USP <81>	EP 2.6.12	EP 2.6.13	EP 2.6.31	EP 2.6.36	EP 2.7.2
RMF02275L-10EA	Aspergillus brasiliensis (formerly Aspergillus niger)	00053	LENTICULE®	30-120	NCPF®	2275	16404	2574	1988	-	2275	-	x		x		x		x			x	
VT000532-10EA	Aspergillus brasiliensis (formerly Aspergillus niger)	00053	Vitroids™	15-80	CECT®	2574	16404	2574	1988	-	2275	-	x		x		x		x			x	
VT000533-10EA	Aspergillus brasiliensis (formerly Aspergillus niger)	00053	Vitroids™	80-130	CECT®	2574	16404	2574	1988	-	2275	-	x		x		x		x			x	
VT000032-10EA	Bacillus spizizenii (formerly Bacillus subtilis subsp. Spizizenii)	00003	Vitroids™	15-80	CECT®	356	6633	356	347	10400	-	63501			x		x	x	x		x	x	x
VT000033-10EA	Bacillus spizizenii (formerly Bacillus subtilis subsp. Spizizenii)	00003	Vitroids™	80-130	CECT®	356	6633	356	347	10400	-	63501			x		x	x	x		x	x	x
VT000036-10EA	Bacillus spizizenii (formerly Bacillus subtilis subsp. Spizizenii)	00003	Vitroids™	1,000-10,000	CECT®	356	6633	356	347	10400	-	63501			x		x	x	x		x	x	x
VT000037-10EA	Bacillus spizizenii (formerly Bacillus subtilis subsp. Spizizenii)	00003	Vitroids™	50,000-150,000	CECT®	356	6633	356	347	10400	-	63501			x		x	x	x		x	x	x
VT041372-10EA	Burkholderia cepacia	-	Vitroids™	15-80	CECT®	4137	25416	4137	7288	10743	-	-		x									
VT041376-10EA	Burkholderia cepacia	-	Vitroids™	1,000-10,000	CECT®	4137	25416	4137	7288	10743	-	-		x									
VT000542-10EA	Candida albicans	00054	Vitroids™	15-80	CECT®	1394	10231	1394	1386	-	3179	-	x		x	x	x		x	x		x	
VT000543-10EA	Candida albicans	00054	Vitroids™	80-130	CECT®	1394	10231	1394	1386	-	3179	-	x		x	x	x		x	x		x	
VT000546-10EA	Candida albicans	00054	Vitroids™	1,000-10,000	CECT®	1394	10231	1394	1386	-	3179	-	x		x	x	x		x	x		x	
VT000082-10EA	Clostridium sporogenes	00008	Vitroids™	15-80	CECT®	485	19404	485	1664	532	-	-				x	x			x			
VT000122-10EA	Escherichia coli	00012	Vitroids™	15-80	CECT®	516	8739	519	1576	12923	-	-	x			x				x	x		
VT000123-10EA	Escherichia coli	00012	Vitroids™	80-130	CECT®	516	8739	516	1576	12923	-	-	x			x				x	x		
VT000126-10EA	Escherichia coli	00012	Vitroids™	1,000-10,000	CECT®	516	8739	516	1576	12923	-	-	x			x				x	x		
VT000127-10EA	Escherichia coli	00012	Vitroids™	50,000-150,000	CECT®	516	8739	519	1576	12923	-	-	x			x				x	x		
VT000132-10EA	Escherichia coli	00013	Vitroids™	15-80	CECT®	434	25922	434	1103	12241	-	-	x			x				x	x		
VT000262-10EA	Pseudomonas paraaeruginosa (formerly Pseudomonas aeruginosa)	00026	Vitroids™	15-80	CECT®	111	9027	111	1128	12924	-	-	x		x	x	x		x	x	x	x	
VT000263-10EA	Pseudomonas paraaeruginosa (formerly Pseudomonas aeruginosa)	00026	Vitroids™	80-130	CECT®	111	9027	111	1128	12924	-	-	x		x	x	x		x	x	x	x	
VT000264-10EA	Pseudomonas paraaeruginosa (formerly Pseudomonas aeruginosa)	00026	Vitroids™	130-300	CECT®	111	9027	111	1128	12924	-	-	x		x	x	x		x	x	x	x	
VT000266-10EA	Pseudomonas paraaeruginosa (formerly Pseudomonas aeruginosa)	00026	Vitroids™	1,000-10,000	CECT®	111	9027	111	1128	12924	-	-	x		x	x	x		x	x	x	x	
VT000267-10EA	Pseudomonas paraaeruginosa (formerly Pseudomonas aeruginosa)	00026	Vitroids™	50,000-150,000	CECT®	111	9027	111	1128	12924	-	-	x		x	x	x		x	x	x	x	
RMF03191L-10EA	Saccharomyces cerevisiae	-	LENTICULE®	30-120	NCPF®	3191	9763	1383	1333	-	3191	-						x					x
RMF03191M-10EA	Saccharomyces cerevisiae	-	LENTICULE®	500-50,000	NCPF®	3191	9763	1383	1333	-	3191	-						x					x
VT000292-10EA	Salmonella enterica subsp. enterica serovar Abony	00029	Vitroids™	15-80	CECT®	545	BAA-2162	545	4224	6017	-	-				x							
CRM12023L-10EA	Salmonella enterica subsp. enterica serovar Typhimurium	00031	LENTICULE®	30-120	NCTC®	12023	14028	4594	19587	12023	-	-				x				x	x		
VT000312-10EA	Salmonella enterica subsp. enterica serovar Typhimurium	00031	Vitroids™	15-80	CECT®	4594	14028	4594	19587	12023	-	-				x				x	x		
VT000313-10EA	Salmonella enterica subsp. enterica serovar Typhimurium	00031	Vitroids™	80-130	CECT®	4594	14028	4594	19587	12023	-	-				x				x	x		
VT000316-10EA	Salmonella enterica subsp. enterica serovar Typhimurium	00031	Vitroids™	1,000-10,000	CECT®	4594	14028	4594	-	-	-	-				x				x	x		
VT000317-10EA	Salmonella enterica subsp. enterica serovar Typhimurium	00031	Vitroids™	50,000-150,000	CECT®	4594	14028	4594	19587	12023	-	-				x				x	x		
CRM06571L-10EA	Staphylococcus aureus	00035	LENTICULE®	30-120	NCTC®	6571	9144	59	683	6571	-	-						x					x
CRM06571M-10EA	Staphylococcus aureus	00035	LENTICULE®	500-50,000	NCTC®	6571	9144	59	683	6571	-	-						x					x
VT000357-10EA	Staphylococcus aureus	00035	Vitroids™	50,000-150,000	CECT®	59	9144	59	683	6571	-	-						x					x
VT000322-10EA	Staphylococcus aureus subsp. aureus	00032	Vitroids™	15-80	CECT®	239	6538	239	799	10788	-	26003	x		x	x	x	x	x	x	x	x	x
VT000323-10EA	Staphylococcus aureus subsp. aureus	00032	Vitroids™	80-130	CECT®	239	6538	239	799	10788	-	26003	x		x	x	x	x	x	x	x	x	x
VT000324-10EA	Staphylococcus aureus subsp. aureus	00032	Vitroids™	130-300	CECT®	239	6538	239	799	10788	-	26003	x		x	x	x	x	x	x	x	x	x
VT000326-10EA	Staphylococcus aureus subsp. aureus	00032	Vitroids™	1,000-10,000	CECT®	239	6538	239	799	10788	-	26003	x		x	x	x	x	x	x	x	x	x
VT000327-10EA	Staphylococcus aureus subsp. Aureus	00032	Vitroids™	50,000-150,000	CECT®	239	6538	239	799	10788	-	26003	x		x	x	x	x	x	x	x	x	x
CRM11047L-10EA	Staphylococcus epidermidis	00132	LENTICULE®	30-120	NCTC®	11047	14990	232	20044	11047	-	-	x		x	x	x						
VT000366-10EA	Staphylococcus epidermidis	00036	Vitroids™	1,000-10,000	CECT®	231	12228	231	1798	13360	-	-						x					x

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