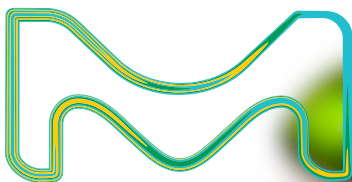
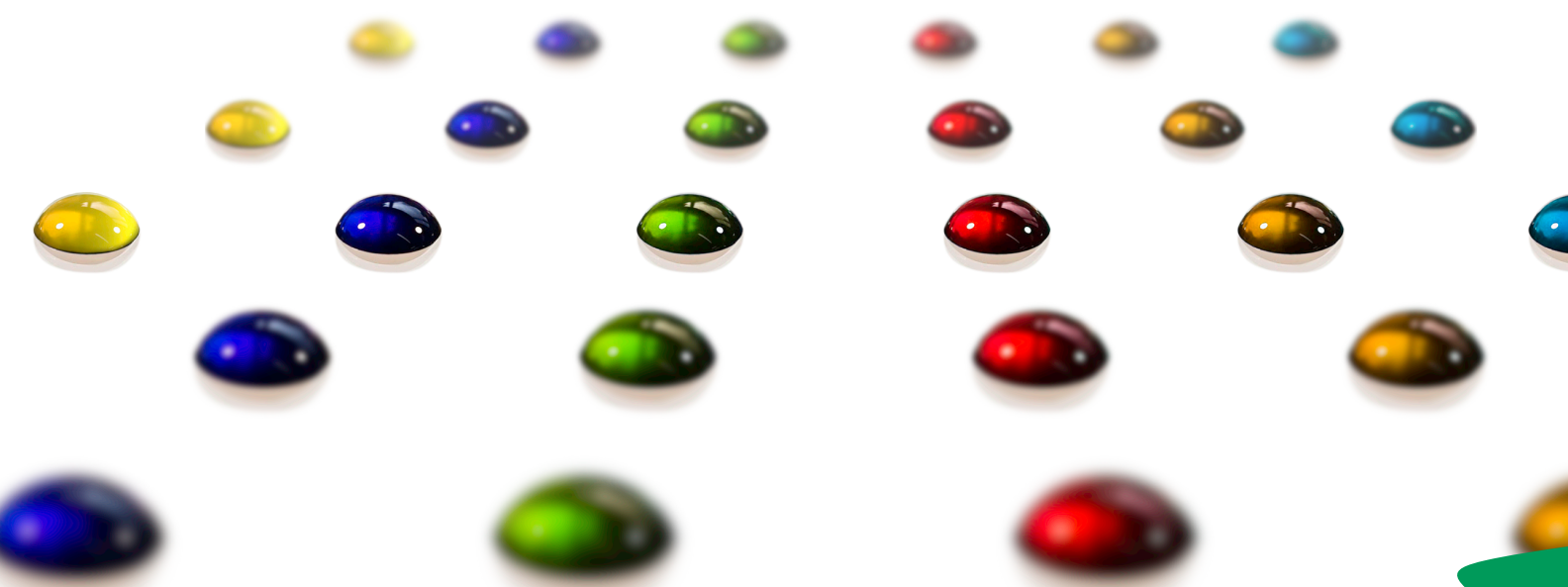
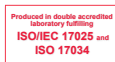


# Certified Reference Microorganisms

The Simple Way to Ensure Accurate Results, Every Time

## Vitroids™ and LENTICULE® Discs

- Defined CFU range and low standard deviation
- Fast, reliable and easy to use



# The Simple Way to Ensure Accurate Results, Every Time

## Certified Reference Microorganisms

### Why use CRMs in Microbiology?

In pharmaceutical, food, water and environmental microbiology, laboratory results are an important part of a wider process that helps to confirm that samples are of an acceptable microbiological quality, are safe and comply with relevant legislation or guidelines. Quality control is an essential element of a laboratory's quality assurance system and characterized authenticated reference materials are necessary for effective quality control.

The same is true of microbiological testing; the one factor that is repeatedly overlooked is careful sourcing of biological resources such as the quality control strains. Incorrect quality control materials may indicate that test results are acceptable when, in fact, there is a problem with the samples being tested. Alternatively, control results may indicate that a test is not performing correctly, instigating unnecessary investigations and repeat testing.

Ready-to-use microbiological controls minimize the need for maintaining control strains in the test laboratory and guarantee that an authenticated control culture is used for every quality control test. Such control materials must be fit-for-purpose, bearing in mind that for pharmaceutical, food, water and environmental samples, the ability to accurately and reliably enumerate microorganisms—often at relatively low numbers—is essential. It is also important that controls can be applied to the wide range of different matrices that are often tested in a single laboratory.

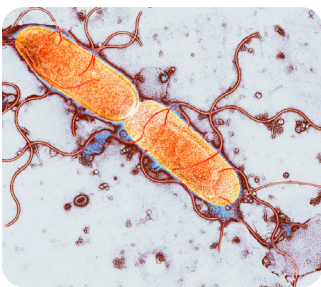
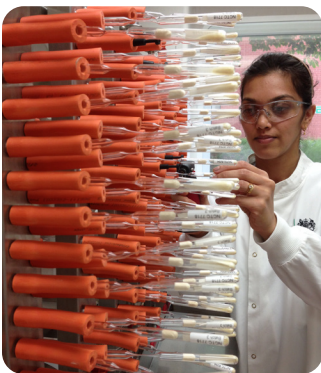
The application of a unique preservation technology involving controlled-drying of authenticated cultures of internationally accepted microbiology control strains has resulted in the production of single-use discs containing microorganisms, designed for use in pharmaceutical, food, water and environmental testing laboratories. These quality control materials, LENTICULE® discs (developed by UK Health Security

Agency, UKHSA) and Vitroids™ (developed by us), are now manufactured by our company under conditions compliant with ISO 17034:2016 (General requirements for the competence of reference material producers). The discs contain pure cultures of bacteria, yeasts or molds in a solid water-soluble matrix. Comprehensive certificates of analysis provide details about the mean number of colony forming units (CFU) per disc, the method used to determine the product data, and the number of subcultures from the original strains provided under licence by NCTC® and CECT®.

Single-use controls manufactured directly from cultures provided by recognised Biological Resource Centres (BRCs) such as NCTC® and CECT® mean that laboratories can be confident about the authenticity of their strains and the suitability of their quality control materials, factors that are of increasing importance as laboratories become more automated and new technologies emerge and are rapidly adopted in routine microbiology settings.

### What are Vitroids™ and LENTICULE® discs?

Vitroids™ and LENTICULE® discs contain viable microorganisms in a certified quantity (generally accredited according ISO/IEC 17025), produced under reproducible conditions compliant with ISO 17034:2016 using authenticated strains from NCTC®, NCPF® and CECT®. Consisting of pure cultures of bacteria, fungi or yeasts in a solid water soluble matrix, they are stable for at least 16 months and are in a viable state with a shelf life of 16-36 months. The within-batch variation for every product is very low. Each batch is provided with a comprehensive certificate of analysis that specifies the mean number of colony forming units (CFU), an expanded uncertainty about the mean, details about the method used to determine the product data and the number of passages (subcultures) from the original strain.



## Applications

- Daily quality control
- Performance testing of media acc. ISO 11133
- Validation of new methods
- Materials for proficiency testing or ring trials
- Method development
- Staff training
- Starter cultures

## Stability

Certified Reference Microorganisms in this unique format are very stable and in most cases will remain so for many years at -20 °C. The numbers of CFUs do not change, the organisms need no recovery time and have no lag phase. Even a short period at ambient temperature, such as during shipment, is not an issue for product stability.

## Save Time and Costs

Using Vitroids™ and LENTICULE® discs is time saving because it removes the need for preparing stock cultures. The organisms need no recovery time and no pre-enrichment step. In addition the product concentrations are designed in a range where no or only minimal dilutions are needed. The discs readily dissolve in liquid media and on agar plates resulting in easy handling and a very economical solution.

## What is New Compared to Existing Reference Strain Products?

Utilization of new technology has allowed us to make major improvements in the field of Microbiological Reference Materials. The main areas of development are stability, temperature resistance, adjusting the narrow defined CFU range,

rehydration time and better within batch reproducibility. In addition, each disc is certified according to ISO 17034 and ISO/IEC 17025.

## Preparation

Most solid and liquid media or rehydration buffers can be used. Discs can be rehydrated in as little as 100 µL buffer, or in larger volumes, e.g. 100 mL medium. It is also possible to add the disc to a cooled molten medium used for pour plate techniques. The rehydration process takes approximately 10 minutes. On solid media, the disc forms a droplet that can be spread with a sterile loop. In liquid media, the disc dissolves very quickly.

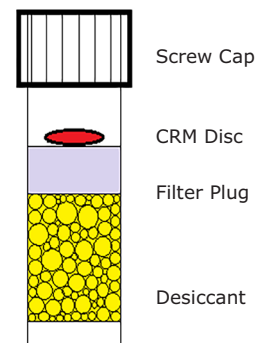
## Packaging

The discs are packed individually in vials. The vials have a special screw-cap with seal and contain a desiccant at the bottom or in the cap. The vials are packed in a mylar bag with a zip.

## Strains

LENTICULE® discs are prepared from a traceable culture obtained freeze-dried from the National Collection of Type Cultures (NCTC®) or National Collection of Pathogenic Fungi (NCPF®) and are manufactured under license and control from UKHSA.

Vitroids™ are derived from a traceable culture obtained freeze-dried from CECT and produced according to our patented technology. Both NCTC and CECT strains are conveniently matched to WDCM numbers and have CFU ranges that closely align with ISO 11133.



**Vitroids™ and Lenticules® disc packaging**



# A Strong Partnership

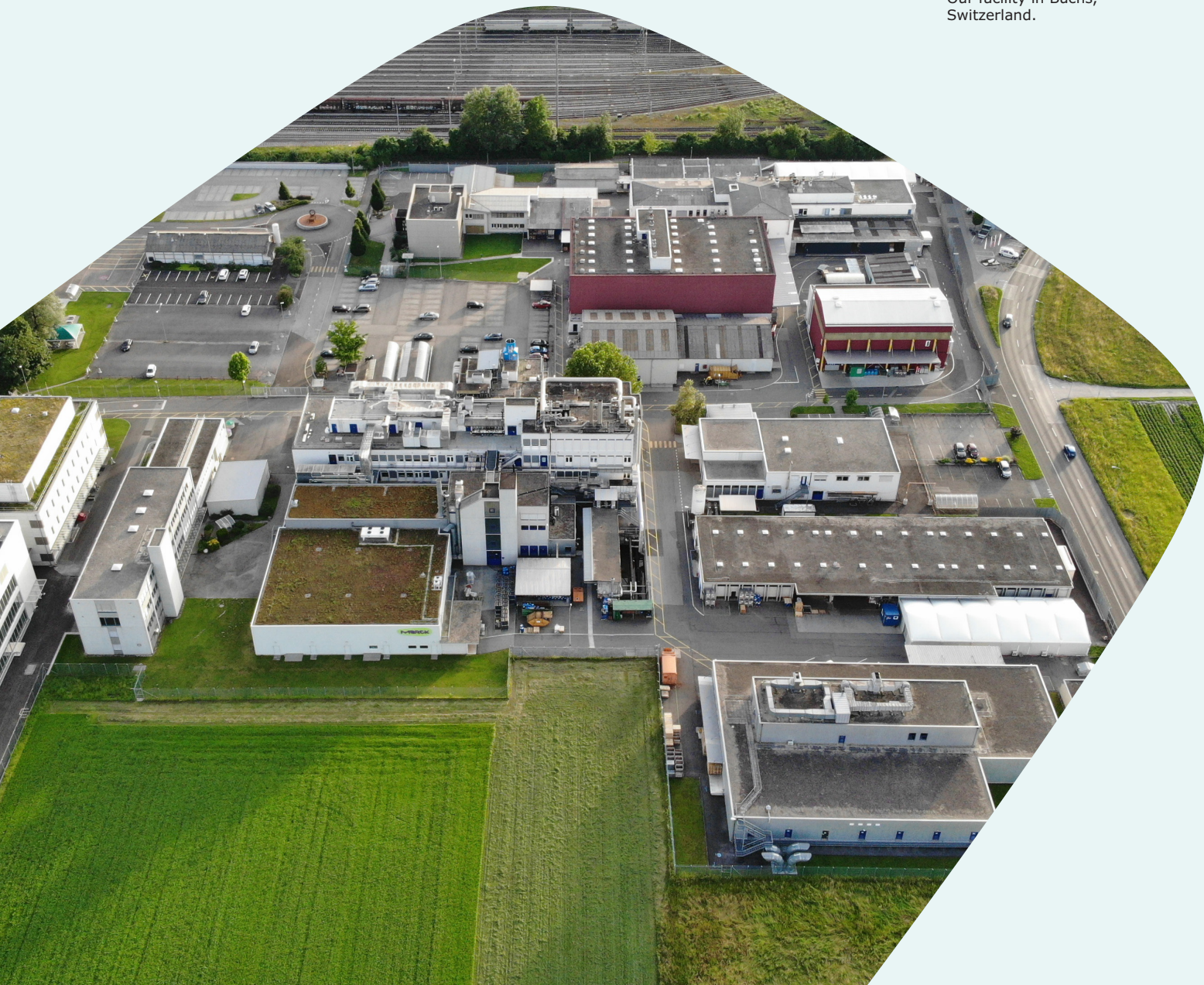
UKHSA's NCTC® is a national BRC that preserves, maintains and regularly updates a specific collection of bacterial strains, ensuring there are no changes to physical characteristics, such as morphology and nutritional requirements, the genome and the proteome. It is one of several BRCs that provide authenticated biological reference and control strains. In addition, the UKHSA also developed the LENTICULE® disc that enables a laboratory to have an on demand source of a control for quantitative microbiology.

With increased worldwide demand for the accreditation of testing labs, as well as the development of fast, automated methods in microbiology, the use of Microbial Certified Reference Materials has increased substantially. With this in mind, it is an appropriate time to entrust the manufacture and distribution of

these products to an ISO accredited manufacturing company such as ours, enabling the UKHSA organization to focus on research and development for new products to add to this portfolio. This R&D is further enhanced by an exciting project by UKHSA, in collaboration with the Wellcome Trust Sanger Institute, to provide whole genome sequences using long-read technology for 3000 bacteria of clinical importance.

An integral part of this partnership is our creation of a new, dedicated manufacturing facility in Buchs, Switzerland to provide the growth and development of Certified Reference Microorganisms, both for now and for the future. It will enable more scientists worldwide to easily access the NCTC®/NCPF® CRMs through our global supply chain.

Our facility in Buchs,  
Switzerland.



## Certified Reference Microorganisms Portfolio

Cat. No.	Species	L/V*	Origin	Strain No.	CFU Range	CRM	WDCM	Equivalent ATCC strain
VT000617-10EA	<i>Aerococcus viridans</i>	V	CEPT®	978	50,000-150,000	x	00061	11563
VT070942-10EA	<i>Alicyclobacillus acidoterrestris</i>	V	CEPT®	7094	30-80	x	-	49025
VT070943-10EA	<i>Alicyclobacillus acidoterrestris</i>	V	CEPT®	7094	80-130	x	-	49025
VT070946-10EA	<i>Alicyclobacillus acidoterrestris</i>	V	CEPT®	7094	1,000-10,000	x	-	49025
VT000532-10EA	<i>Aspergillus brasiliensis</i> (formerly <i>Aspergillus niger</i> )	V	CEPT®	2574	15-80	x	00053	16404
VT000533-10EA	<i>Aspergillus brasiliensis</i> (formerly <i>Aspergillus niger</i> )	V	CEPT®	2574	80-130	x	00053	16404
RMF02275L-10EA	<i>Aspergillus brasiliensis</i> (formerly <i>Aspergillus niger</i> )	L	NCPF®	2275	30-120		00053	16404
CRM07464L-10EA	<i>Bacillus cereus</i>	L	NCTC®	7464	30-120	x	-	10876
CRM07464M-10EA	<i>Bacillus cereus</i>	L	NCTC®	7464	500-50,000	x	-	10876
VT000012-10EA	<i>Bacillus cereus</i>	V	CEPT	193	15-80	x	00001	11778
VT000013-10EA	<i>Bacillus cereus</i>	V	CEPT®	193	80-130	x	00001	11778
VT000016-10EA	<i>Bacillus cereus</i>	V	CEPT	193	1,000-10,000	x	00001	11778
VT000017-10EA	<i>Bacillus cereus</i>	V	CEPT	193	50,000-150,000	x	00001	11778
VT000032-10EA	<i>Bacillus spizizenii</i> (formerly <i>Bacillus subtilis</i> subsp. <i>Spizizenii</i> )	V	CEPT®	356	15-80	x	00003	6633
VT000033-10EA	<i>Bacillus spizizenii</i> (formerly <i>Bacillus subtilis</i> subsp. <i>Spizizenii</i> )	V	CEPT	356	80-130	x	00003	6633
VT000036-10EA	<i>Bacillus spizizenii</i> (formerly <i>Bacillus subtilis</i> subsp. <i>Spizizenii</i> )	V	CEPT®	356	1,000-10,000	x	00003	6633
VT000037-10EA	<i>Bacillus spizizenii</i> (formerly <i>Bacillus subtilis</i> subsp. <i>Spizizenii</i> )	V	CEPT	356	50,000-150,000	x	00003	6633
VT099522-10EA	<i>Burkholderia cenocepacia</i>	V	CEPT®	9952	15-80	x	-	BAA-245
VT041372-10EA	<i>Burkholderia cepacia</i>	V	CEPT®	4137	15-80	x	-	25416
VT041376-10EA	<i>Burkholderia cepacia</i>	V	CEPT®	4137	1,000-10,000	x	-	25416
VT099542-10EA	<i>Burkholderia multivorans</i>	V	CEPT®	9954	15-80	x		BAA-247
RMF03255L-10EA	<i>Candida albicans</i>	L	NCPF®	3255	30-120		00055	2091
RMF03255H-10EA	<i>Candida albicans</i>	L	NCPF®	3255	>100,000		00055	2091
VT000542-10EA	<i>Candida albicans</i>	V	CEPT®	1394	15-80	x	00054	10231
VT000543-10EA	<i>Candida albicans</i>	V	CEPT®	1394	80-130	x	00054	10231
VT000546-10EA	<i>Candida albicans</i>	V	CEPT®	1394	1,000-10,000	x	00054	10231
RM09750L-10EA	<i>Citrobacter freundii</i>	L	NCTC®	9750	30-120		-	8090
VT004014-10EA	<i>Citrobacter freundii</i>	V	CEPT®	401	130-300	x	-	8090
VT004016-10EA	<i>Citrobacter freundii</i>	V	CEPT®	401	1,000-10,000	x	-	8090
VT000062-10EA	<i>Citrobacter freundii</i>	V	CEPT®	7467	15-80	x	00006	43864
VT000063-10EA	<i>Citrobacter freundii</i>	V	CEPT®	7467	80-130	x	00006	43864
VT000066-10EA	<i>Citrobacter freundii</i>	V	CEPT®	7467	1,000-10,000	x	00006	43864
VT000067-10EA	<i>Citrobacter freundii</i>	V	CEPT®	7464	50,000-150,000	x	00006	43864
CRM00506L-10EA	<i>Clostridium bifermentans</i>	L	NCTC®	506	30-120	x	00079	-
CRM13170L-10EA	<i>Clostridium perfringens</i>	L	NCTC®	13170	30-120	x	00201	-
CRM13170M-10EA	<i>Clostridium perfringens</i>	L	NCTC®	13170	500-50,000	x	00201	-
VT000082-10EA	<i>Clostridium sporogenes</i>	V	CEPT®	485	15-80	x	00008	19404
CRM11467L-10EA	<i>Cronobacter sakazakii</i>	L	NCTC®	11467	30-120	x	00214	29544
CRM10006L-10EA	<i>Enterobacter aerogenes</i>	L	NCTC®	10006	30-120	x	00175	13048
CRM10006M-10EA	<i>Enterobacter aerogenes</i>	L	NCTC®	10006	500-50,000	x	00175	13048
VT001752-10EA	<i>Enterobacter aerogenes</i>	V	CEPT®	684	15-80	x	00175	13048
VT001753-10EA	<i>Enterobacter aerogenes</i>	V	CEPT®	684	80-130	x	00175	13048
VT001754-10EA	<i>Enterobacter aerogenes</i>	V	CEPT®	684	130-300	x	00175	13048
VT001756-10EA	<i>Enterobacter aerogenes</i>	V	CEPT®	684	1,000-10,000	x	00175	13048
VT000834-10EA	<i>Enterobacter cloacae</i>	V	CEPT®	194	130-300	x	00083	13047
VT000836-10EA	<i>Enterobacter cloacae</i>	V	CEPT	194	1,000-10,000	x	00083	13047
CRM00775L-10EA	<i>Enterococcus faecalis</i>	L	NCTC®	775	30-120	x	00009	19433



Cat. No.	Species	L/V*	Origin	Strain No.	CFU Range	CRM	WDCM	Equivalent ATCC strain
CRM00775M-10EA	<i>Enterococcus faecalis</i>	L	NCTC®	775	500-50,000	x	00009	19433
CRM00775H-10EA	<i>Enterococcus faecalis</i>	L	NCTC®	775	>100,000	x	00009	19433
VT000092-10EA	<i>Enterococcus faecalis</i>	V	CECT®	481	15-80	x	00009	19433
VT000093-10EA	<i>Enterococcus faecalis</i>	V	CECT®	481	80-130	x	00009	19433
VT000094-10EA	<i>Enterococcus faecalis</i>	V	CECT®	481	130-300	x	00009	19433
VT000096-10EA	<i>Enterococcus faecalis</i>	V	CECT®	481	1,000-10,000	x	00009	19433
VT000097-10EA	<i>Enterococcus faecalis</i>	V	CECT®	775	50,000-150,000	x	00009	19433
VT000877-10EA	<i>Enterococcus faecalis</i>	V	CECT®	795	50,000-150,000	x	00087	29212
VT000872-10EA	<i>Enterococcus faecalis</i>	V	CECT®	12697	15-80	x	00087	29212
VT000873-10EA	<i>Enterococcus faecalis</i>	V	CECT®	12697	80-130	x	00087	29212
VT000876-10EA	<i>Enterococcus faecalis</i>	V	CECT®	12697	1,000-10,000	x	00087	29212
VT000105-10EA	<i>Enterococcus faecium</i>	V	CECT®	410	1,000-10,000	x	00010	19434
CRM09001L-10EA	<i>Escherichia coli</i>	L	NCTC®	9001	30-120	x	00090	11775
CRM09001M-10EA	<i>Escherichia coli</i>	L	NCTC®	9001	500-50,000	x	00090	11775
CRM09001H-10EA	<i>Escherichia coli</i>	L	NCTC®	9001	>100,000	x	00090	11775
VT000902-10EA	<i>Escherichia coli</i>	V	CECT®	515	15-80	x	00090	11775
VT000903-10EA	<i>Escherichia coli</i> (new; longer delivery time)	V	CECT®	515	80-130	x	00090	11775
VT000904-10EA	<i>Escherichia coli</i>	V	CECT®	515	130-300	x	00090	11775
VT000905-10EA	<i>Escherichia coli</i>	V	CECT®	515	600-1400	x	00090	11775
VT000906-10EA	<i>Escherichia coli</i>	V	CECT®	515	1,000-10,000	x	00090	11775
CRM13216L-10EA	<i>Escherichia coli</i>	L	NCTC®	13216	30-120	x	00202	-
VT000122-10EA	<i>Escherichia coli</i>	V	CECT®	516	15-80	x	00012	8739
VT000123-10EA	<i>Escherichia coli</i>	V	CECT®	516	80-130	x	00012	8739
VT000126-10EA	<i>Escherichia coli</i>	V	CECT®	516	1,000-10,000	x	00012	8739
VT000127-10EA	<i>Escherichia coli</i>	V	CECT®	516	50,000-150,000	x	00012	8739
VT000132-10EA	<i>Escherichia coli</i>	V	CECT®	434	15-80	x	00013	25922
VT000133-10EA	<i>Escherichia coli</i>	V	CECT®	434	80-130	x	00013	25922
VT000136-10EA	<i>Escherichia coli</i>	V	CECT®	434	1,000-10,000	x	00013	25922
VT000137-10EA	<i>Escherichia coli</i>	V	CECT®	434	50000-150000	x	00013	25922
VT001793-10EA	<i>Escherichia coli</i>	V	CECT®	8296	80-130	x	00179	-
VT001796-10EA	<i>Escherichia coli</i>	V	CECT®	8296	1,000-10,000	x	00179	-
VT002023-10EA	<i>Escherichia coli</i>	V	CECT®	9153	80-130	x	00202	-
VT002026-10EA	<i>Escherichia coli</i>	V	CECT®	9153	1,000-10,000	x	00202	-
VT000143-10EA	<i>Escherichia coli</i> O157:H7 (non-toxigenic; new; longer delivery time)	V	CECT®	4972	80-130	x	00014	700728
VT000146-10EA	<i>Escherichia coli</i> O157:H7 (non-toxigenic)	V	CECT®	4972	1,000-10,000	x	00014	700728
CRM12900L-10EA	<i>Escherichia coli</i> O157:H7 (non-toxigenic)	L	NCTC®	12900	30-120	x	00014	700728
VT072767-10EA	<i>Fluoribacter bozemaniae</i> (formerly <i>Legionella bozemanii</i> )	V	CECT®	7276	>100,000	x	-	33217
CRM11368M-10EA	<i>Fluoribacter bozemaniae</i> (formerly <i>Legionella bozemanii</i> )	L	NCTC®	11386	500-50,000	x	-	33217
VT025046-10EA	Heterotrophic Organisms	V			1,000-10,000	x	-	-
CRM08167L-10EA	<i>Klebsiella oxytoca</i>	L	NCTC®	8167	30-120	x	-	-
VT000971-10EA	<i>Klebsiella pneumoniae</i>	V	CECT®	143	15-80	x	00097	13883
VT000975-10EA	<i>Klebsiella pneumoniae</i>	V	CECT®	143	1,000-10,000	x	00097	13883
VT000163-10EA	<i>Lactococcus lactis</i> subsp. <i>Lactis</i>	V	CECT®	185	80-130	x	00016	9936/19435
VT000167-10EA	<i>Lactococcus lactis</i> subsp. <i>lactis</i>	V	CECT®	185	50,000-150,000	x	00016	9936/19435
CRM12821L-10EA	<i>Legionella pneumophila</i> (serogroup 1)	L	NCTC®	12821	30-120	x	00205	-
CRM12821M-10EA	<i>Legionella pneumophila</i> (serogroup 1)	L	NCTC®	12821	500-50,000	x	00205	-
VT002057-10EA	<i>Legionella pneumophila</i> (serogroup 1)	V	CECT®	8734	>50,000	x	00205	-
VT000176-10EA	<i>Listeria innocua</i> serotype 6a	V	CECT®	910	1,000-10,000	x	00017	33090

Cat. No.	Species	L/V*	Origin	Strain No.	CFU Range	CRM	WDCM	Equivalent ATCC strain
CRM11994L-10EA	<i>Listeria monocytogenes</i>	L	NCTC®	11994	30-120	x	00019	-
CRM11994M-10EA	<i>Listeria monocytogenes</i>	L	NCTC®	11994	500-50,000	x	00019	-
VT001092-10EA	<i>Listeria monocytogenes</i> serovar I/2a	V	CECT®	5873	15-80	x	00109	35152
VT001093-10EA	<i>Listeria monocytogenes</i> serovar I/2a	V	CECT®	5873	80-130	x	00109	35152
VT001096-10EA	<i>Listeria monocytogenes</i> serovar I/2a	V	CECT®	5873	1,000-10,000	x	00109	35152
VT000212-10EA	<i>Listeria monocytogenes</i> serovar 4b	V	CECT®	935	15-80	x	00021	13932
VT000213-10EA	<i>Listeria monocytogenes</i> serovar 4b	V	CECT®	935	80-130	x	00021	13932
VT000216-10EA	<i>Listeria monocytogenes</i> serovar 4b	V	CECT®	935	1,000-10,000	x	00021	13932
VT000217-10EA	<i>Listeria monocytogenes</i> serovar 4b	V	CECT®	935	50,000-150,000	x	00021	13932
VT000232-10EA	<i>Proteus mirabilis</i>	V	CECT®	4168	15-80	x	00023	29906
VT000233-10EA	<i>Proteus mirabilis</i>	V	CECT®	4168	80-130	x	00023	29906
VT000237-10EA	<i>Proteus mirabilis</i>	V	CECT®	4168	50,000-150,000	x	00023	29906
CRM10662L-10EA	<i>Pseudomonas aeruginosa</i>	L	NCTC®	10662	30-120	x	00114	25668
CRM10662M-10EA	<i>Pseudomonas aeruginosa</i>	L	NCTC®	10662	500-50,000	x	00114	25668
VT001142-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	118	15-80	x	00114	25668
VT001143-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	118	80-130	x	00114	25668
VT001145-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	118	1,000-10,000	x	00114	25668
VT000256-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	108	1,000-10,000	x	00025	27853
VT000257-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	108	50,000-150,000	x	00025	27853
VT000262-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	111	15-80	x	00026	9027
VT000263-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	111	80-130	x	00026	9027
VT000264-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	111	130-300	x	00026	9027
VT000266-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	111	1,000-10,000	x	00026	9027
VT000267-10EA	<i>Pseudomonas aeruginosa</i>	V	CECT®	111	50,000-150,000	x	00026	9027
VT001153-10EA	<i>Pseudomonas fluorescens</i>	V	CECT®	378	80-130	x	00115	13525
VT001156-10EA	<i>Pseudomonas fluorescens</i>	V	CECT®	378	1,000-10,000	x	00115	13525
CRM09528L-10EA	<i>Raoultella planticola</i> (formerly <i>Klebsiella aerogenes</i> )	L	NCTC®	9528	30-120	x	-	-
CRM09528M-10EA	<i>Raoultella planticola</i> (formerly <i>Klebsiella aerogenes</i> )	L	NCTC®	9528	500-50,000	x	-	-
RMF03191L-10EA	<i>Saccharomyces cerevisiae</i>	L	NCPF®	3191	30-120		-	9763
RMF03191M-10EA	<i>Saccharomyces cerevisiae</i>	L	NCPF®	3191	500-50,000		-	9763
CRM12023L-10EA	<i>Salmonella enterica</i> serovar Typhimurium	L	NCTC®	12023	30-120	x	00031	14028
VT000312-10EA	<i>Salmonella enterica</i> subsp. Enterica serovar Typhimurium	V	CECT®	4594	15-80	x	00031	14028
VT000313-10EA	<i>Salmonella enterica</i> subsp. Enterica serovar Typhimurium	V	CECT®	4594	80-130	x	00031	14028
VT000316-10EA	<i>Salmonella enterica</i> subsp. Enterica serovar Typhimurium	V	CECT®	4594	1,000-10,000	x	00031	14028
VT000317-10EA	<i>Salmonella enterica</i> subsp. Enterica serovar Typhimurium	V	CECT®	4594	50,000-150,000	x	00031	14028
VT000292-10EA	<i>Salmonella enterica</i> subsp. Enterica serovar Abony	V	CECT®	545	15-80	x	00029	BAA-2162
VT000302-10EA	<i>Salmonella enterica</i> subsp. Enterica serovar Enteritidis	V	CECT®	4300	15-80	x	00030	13076
VT000306-10EA	<i>Salmonella enterica</i> subsp. Enterica serovar Enteritidis	V	CECT®	4300	1,000-10,000	x	00030	13076
VT000307-10EA	<i>Salmonella enterica</i> subsp. Enterica serovar Enteritidis	V	CECT®	4300	50,000-150,000	x	00030	13076
VT000303-10EA	<i>Salmonella enterica</i> subsp. Enterica serovar Enteritidis	V	CECT®	4300	80-130	x	00030	13076
CRM06676L-10EA	<i>Salmonella enteritidis</i>	L	NCTC®	6676	30-120	x	-	-
CRM07832L-10EA	<i>Salmonella nottingham</i>	L	NCTC®	7832	30-120	x	-	-
CRM06571L-10EA	<i>Staphylococcus aureus</i> subsp. aureus	L	NCTC®	6571	30-120	x	00035	9144

Cat. No.	Species	L/V*	Origin	Strain No.	CFU Range	CRM	WDCM	Equivalent ATCC strain
CRM06571M-10EA	<i>Staphylococcus aureus</i> subsp. aureus	L	NCTC®	6571	500-50,000	x	00035	9144
VT000357-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	59	50,000-150,000	x	00035	9144
VT000342-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	435	15-80	x	00034	25923
VT000343-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	435	80-130	x	00034	25923
VT000346-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	435	1,000-10,000	x	00034	25923
VT000347-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	435	50,000-150,000	x	00034	25923
VT000322-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	239	15-80	x	00032	6538
VT000323-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	239	80-130	x	00032	6538
VT000324-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	239	130-300	x	00032	6538
VT000326-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	239	1,000-10,000	x	00032	6538
VT000327-10EA	<i>Staphylococcus aureus</i> subsp. aureus	V	CECT®	239	50,000-150,000	x	00032	6538
CRM11047L-10EA	<i>Staphylococcus epidermidis</i>	L	NCTC®	11047	30-120	x	00132	14990
VT000366-10EA	<i>Staphylococcus epidermidis</i>	V	CECT®	231	1,000-10,000	x	00036	12228
VT001596-10EA	<i>Staphylococcus saprophyticus</i>	V	CECT®	235	1,000-10,000	x	00159	15305
VT001597-10EA	<i>Staphylococcus saprophyticus</i>	V	CECT®	235	50,000-150,000	x	00159	15305
CRM11371M-10EA	<i>Tatlockia micdadei</i> (formerly <i>Legionella micdadei</i> )	L	NCTC®	11371	500-50,000	x	-	33218
RM10903Q-10EA	<i>Vibrio parahaemolyticus</i>	L	NCTC®	10703	>100		-	-

## Negative Controls

Cat. No.	Description
RMBLANK0-10EA	Negative Control for LENTICULE® discs, no growth
RQC0001-10EA	Negative Control for Vitroids™ discs, no growth

\* L/V = Vitroids™/Lenticule® discs

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