

MICROORGANISM ANALYSIS ID	Total Viable Count CBT-A01	Total Viable Count A01	Coliforms CO-A02	Escherichia coli CO-A02	Enterobacteriaceae EB-A03	Staphylococcus aureus SP-A04	Pseudomonas aeruginosa PAO-A05	Salmonella spp. SL-A06	Listeria spp. LY-A07	Enterococcus faecalis EF-A09	Yeasts (Saccharomyces spp.) SC-A11
shelf life at 20 °C (months)	6	6	6	6	4	6	6	6	6	3	3
shelf life at 5 °C (months)	12	12	12	12	8	12	12	12	12	6	6
Incubation temperature	30	37	37	44	37	37	37	37	37	37	30
APPROXIMATED STARTING COLOR	BLUE	BLUE	RED	RED	RED	RED	BLUE	RED	BLUE	YELLOW	RED
APPROXIMATED POSITIVE COLOR	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	BLACK	YELLOW
BACTERIAL CONCENTRATION INTO THE SAMPLE	Time for colour change (hours.minutes)										
1 x 10 ⁷	< 4.00	< 3.00	< 4.00	< 2.30	< 4.30	< 7.30	< 4.30	< 4.00	< 7.30	< 4.30	< 6.00
1 x 10 ⁶	4.00	3.00	4.00	2.30	4.30	7.30	4.30	< 4.00	7.30	4.30	6.00
1 x 10 ⁵	6.30	5.30	6.30	5.30	7.30	11.00	7.30	4.30	12.00	7.30	13.00
1 x 10 ⁴	10.00	8.00	9.30	9.30	10.00	20.00	10.00	8.30	16.30	10.00	20.30
1 x 10 ³	13.00	11.00	12.30	13.00	13.00	29.30	13.00	13.30	20.30	10.00	27.30
100	16.00	14.00	16.00	18.00	16.00	36.00	16.00	18.00	25.00	16.00	35.00
10	19.00	16.00	19.00	22.00	19.00	43.30	19.00	23.00	29.00	19.00	42.00
1	22.00	18.00	22.00	26.00	22.00	46.00	22.00	28.00	33.30	22.00	50.00
0	>28.00	>26.00	>28.00	> 34.00	> 28.00	> 52.00	> 28.00	> 36.00	> 40.00	> 28.00	> 60.00

ONLY 3 EASY STEPS to get 100% quantitative results:

Step 1: Place the sample into the vial and lock the cap

- Open and add provided water into the vial
- Put the (solid, or liquid, so surface) sample 0.1~1.0ml (or 0.1-1.0g)
- Lock the cap of the vial tightly



Step 2: Shake the vial until all the reagents dissolved

- The solubility of the reagent requires 20 seconds with vortex mixer
- 1-2 min manually



Step 3: Place the vial into RVLM directly

- Get the result at the time chosen



NO EXTRA COST FOR USED VIAL PROCESS

- Press cap after analysis for sterilization
- Dispose

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Royal
Biotech GmbH

www.royalbiotech.com
info@royalbiotech.com

Microbiological Analytical Tool

Vial Lab[®] Micro Biological Survey (MBS)

Innovative---Lab in Vial

Applications

- Hygienic Control
- Food (for HACCP)
- Kitchen, Tools and Surface
- Water
- Centers for Disease Control and Prevention (CDC, CIQ, FDA)
- OTC Drugs, Cosmetics

- e.g.
- Cafe, Restaurants
 - Water manufactories
 - Analytical laboratories and HACCP Consultants
 - Agri-food companies
 - Pharmacies and drugstores
 - Environmental authorities
 - Water distribution companies
 - Civil protection agencies
 - Indoor air-conditioning companies

Fast

- 2 to 5 fold faster than traditional analysis
- Can get the results in 1 min if the CFU is very high

Sensitive

- Down to theoretical limit of detecting just 1 viable microbial cell present in the sample

Selective

- Up to the experimental limit of 99.999% with respect to other bacterial species

No extra cost for used vial process

- One step sterilization
- Simply press the cap of the used vial



Qualitative and Quantitative Analysis

- 100% quantitative analysis with RVLM
- Semi-quantitative analysis by eye

Analytical Range

- Total Viable Cells
- Coliforms, E.coli, E.coli O 157
- Enterobacteriaceae
- Staphylococcus aureus
- Pseudomonas aeruginosa
- Salmonella spp.
- Listeria spp.
- Enterococcus (Streptococcus) faecalis
- Fungi (e.g. Aspergillums spp.)
- Yeast (e.g. Saccharomyces spp.)

Sample without Pre-Treatment

- Allow semi-solid(solid,or liquid, or surface) samples without any pre-treatment
- Put the samples into the ready to use vial directly

Easy

- Three easy steps to obtain the test results
- Can be used by anyone
- Can be carried inside and outside of laboratories

Safely Dispose of used vial

- Treat the vials like expired drugs and disposes accordingly



Several Advantages of Integrated Approach

- Improved :
- Plate counting methods
 - Enzymatic methods (β -Glucuronidase assay)
 - Immunological methods (Antigen search)
 - Genetic methods (Gene search)

Microbiological Analytical Tool

RVLM ---Vial Lab Multi-reader[™]

Easy & fast,100% quantitative analysis

RVLM-controls incubation time and temperature automatically



- detects and indicates the number of viable bacteria (CFU) of the vials separately and continuously by every station