



## Contact Slide VRBGA/TSA

Flex Dip-slide with a selective medium for detection of Enterobacteriaceae and a nonselective medium for total microbial count.

### DESCRIPTION

Contact Slide VRBGA/TSA is a ready-to-use device with two different media coated onto a plastic support used for the microbial monitoring of surfaces and liquids.

VRBGA (Violet Red Bile Glucose Agar) is a selective medium which allows the isolation and enumeration of Enterobacteriaceae. TSA (Tryptic Soy Agar) is a nonselective medium which supports growth of most nonfastidious organisms.

### TYPICAL FORMULA

<u>TSA Side 1</u>	<u>(g/l)</u>	<u>VRBGA Side 2</u>	<u>(g/l)</u>
Pancreatic Digest of Casein	15.0	Enzymatic Digest of Animal Tissues	7.0
Papaic Digest of Soya Bean	5.0	Yeast Extract	3.0
Sodium Chloride	5.0	Glucose	10.0
Agar	15.0	Bile Salts No. 3	1.5
Final pH 7.3 ± 0.2		Sodium Chloride	5.0
		Neutral Red	0.03
		Crystal Violet	0.002
		Agar	15.0
		Final pH 7.4 ± 0.2	

### METHOD PRINCIPLE

Tryptic Soy Agar contains several peptones, providing amino acids and other nutrients to ensure growth of a variety of microorganisms.

Violet Red Bile Glucose Agar includes Bile Salts and Crystal Violet as selective agents to inhibit Gram-positive cocci and allowing Gram-negative organisms to grow. Neutral red is the pH indicator incorporated to show acid production.

### TEST PROCEDURE

1. Unscrew and extract the slide from its cylindrical container. Avoid any contact with the agar surface.
2. For surfaces monitoring, flex the cap forming a 90° angle and press each side of the slide firmly against the surface to be examined for 10 seconds. Alternatively, use a swab for sampling the area, afterwards roll the swab gently over the agar surface.  
For examination of liquids, hold the slide by the cap and immerse it completely into the test fluid.
3. Reinsert the slide into its tube, screw it tight and incubate at 37 ± 1°C for 24-48 hours. Some organisms, such as mesophilic bacteria, may require a longer incubation (3 to 5 days) at 30-35°C to show visible growth on TSA.

### RESULTS INTERPRETATION

Count the total number of colonies on TSA (**Side 1**) to obtain the total aerobic microbial count.

Enterobacteriaceae ferment glucose forming pink to red colonies (with or without precipitation haloes) on VRBGA (**Side 2**).

For surface testing, the colony count on each agar side can be calculated into CFU per cm<sup>2</sup> as follows:

$$\text{CFU (actual count)} / 12.5 \text{ cm}^2 = \text{CFU/cm}^2$$

### APPEARANCE

**Side 1.** Slightly opalescent, light amber.

**Side 2.** Very slightly to slightly opalescent, reddish-purple.

### STORAGE CONDITIONS

10-25°C away from light, until the expiry date on the label. Eliminate if signs of deterioration or contamination are evident.

**SHELF LIFE**

9 months

**QUALITY CONTROL**

The slides are inoculated with the microbial strains indicated in the table below.

Inoculum for productivity: 50-100 CFU.

Inoculum for selectivity: 10<sup>4</sup>-10<sup>6</sup> CFU.

Incubation conditions: 37 ± 1°C for 24-48 h .

Control strain		Growth on TSA Side 1	Growth on VRBGA Side 2
<i>Escherichia coli</i>	ATCC® 8739	Good	Good, pink to red colonies
<i>Salmonella Typhimurium</i>	ATCC® 14028	Good	Good, pink to red colonies
<i>Staphylococcus aureus</i>	ATCC® 6538	Good	Partially to completely inhibited
<i>Enterococcus faecalis</i>	ATCC® 19433	Good	Inhibited
<i>Pseudomonas aeruginosa</i>	ATCC® 9027	Good	Good

**WARNING AND PRECAUTIONS**

**For professional use only.** Operators must be trained and have certain experience in the laboratory methods. Please read the instructions carefully before using this product. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this document.

Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

**DISPOSAL OF WASTE**

Disposal of waste must be carried out according to national and local regulation in force.

**REFERENCES**

1. ISO 11133:2014+Amd1:2018+Amd2:2020. Microbiology of food, animal feed and water - Preparation, production, storage and performance testing of culture media.
2. ISO 18593:2018. Microbiology of the food chain -- Horizontal method for surface sampling.
3. ISO 21528-1:2017. Microbiology of the food chain -- Horizontal method for the detection and enumeration of Enterobacteriaceae -- Part 1: Detection of Enterobacteriaceae.
4. ISO 21528-2:2017. Microbiology of the food chain -- Horizontal method for the detection and enumeration of Enterobacteriaceae -- Part 2: Colony-count technique.
5. ISO 21149:2017. Cosmetics -- Microbiology -- Enumeration and detection of aerobic mesophilic bacteria.
6. Marshall R.T. ed. (1993). Standard methods for the examination of dairy products, 16th ed. American Public Health Association, Washington, D.C.

Product	Packaging	Ref
Contact Slide VRBGA/TSA	20 slides	525382

**TABLE OF SYMBOLS**

<b>LOT</b> Batch code	 Keep away from sunlight	 Manufacturer	 Use by	 Fragile, handle with care
<b>REF</b> Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Consult instructions for use	 Do not reuse

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