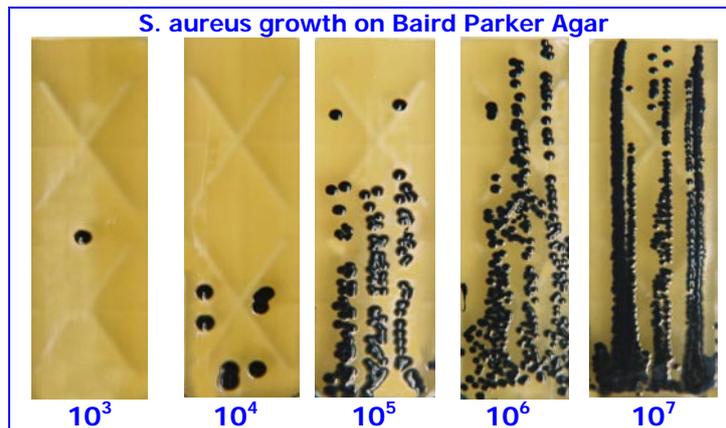


# NOVASTREAK

## Microbial Contamination Monitoring Device

### TYPICAL CULTURAL MORPHOLOGY

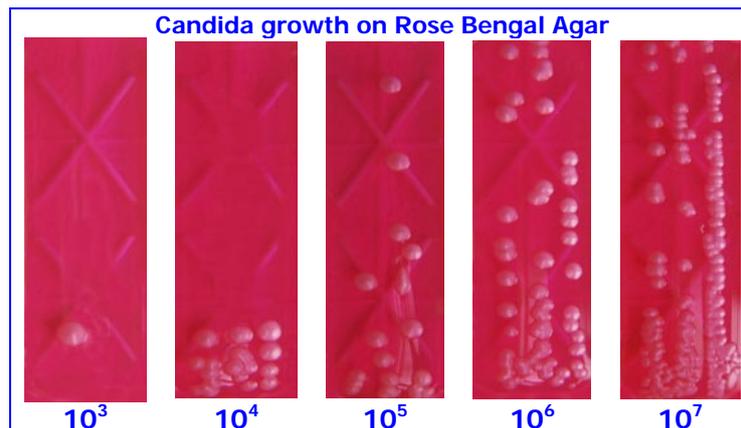
#### Baird Parker Agar



**Baird Parker Agar** is used for the selective isolation and enumeration of coagulase-positive staphylococci from food, skin, soil, air and other materials. It may also be used to identify staphylococci on the basis of their ability to clear egg yolk (lecithinase production). Sodium pyruvate is incorporated to impart *S. aureus* their black colony appearance. Glycine and lithium chloride have inhibitory action on organisms other than *S. aureus*.

Typical colonies of *S. aureus* are black, shiny, convex and surrounded by clear zones (egg yolk reaction) of approximately 2-5 mm. Coagulase-negative staphylococci generally do not grow well; if some growth occurs, the typical clear zones are absent. The majority of other organisms are inhibited but some may grow sparsely, producing white to brown colonies with no clearing of the egg yolk.

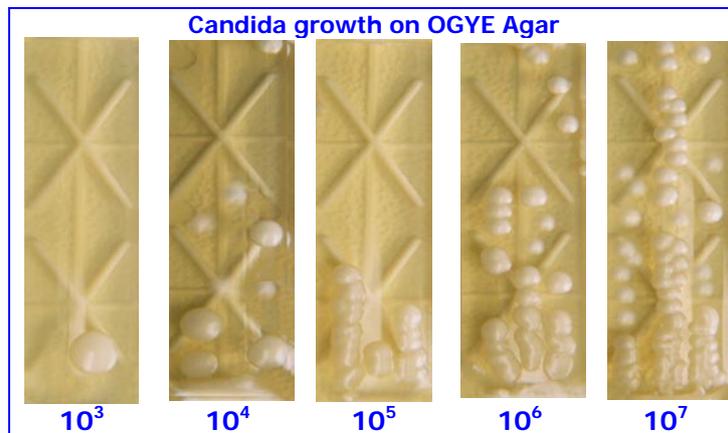
#### Rose Bengal Agar



**Rose Bengal Agar** is used in isolating and enumerating yeasts and molds. The use of media with an acid pH that selectively inhibits the growth of bacteria and thereby promotes the growth of fungi has been widely employed. Chloramphenicol is recommended because of its heat stability and broad antibacterial spectrum. Rose Bengal Agar is recommended in standard methods for the enumeration of yeasts and molds from foodstuffs and water. Incubate at 25-30°C for up to 7 days.

Colonies of yeast appear pink due to the uptake of rose bengal. Count plates containing 15-150 colonies and report the counts as colony-forming units (CFU) per gram or mL of sample.

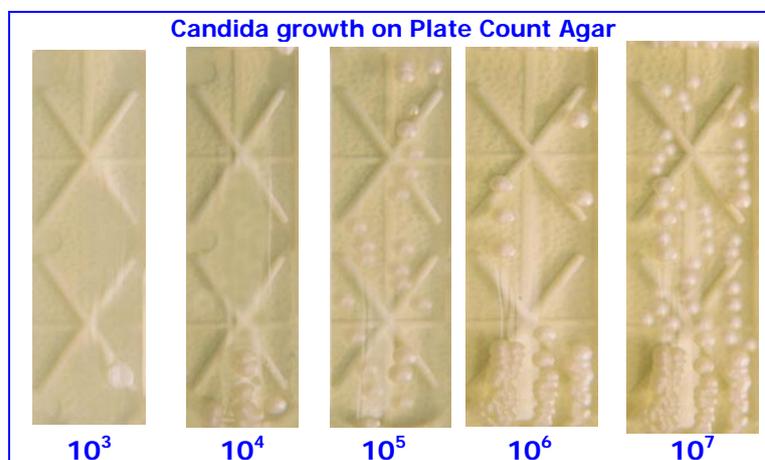
## Oxytetracycline-Glucose-Yeast-Extract Agar (OGYE)



**Oxytetracycline-Glucose-Yeast-Extract Agar (OGYE)** is recommended for the selection and enumeration of yeasts and molds from foodstuffs. OGYE Agar is specified as a standard methods medium for use with dairy products. The medium uses oxytetracycline as the selective agent at a neutral pH, that gives increased counts of yeasts and molds compared with media which rely on a low pH to suppress bacterial growth.

OGYE agar, after 5 days at  $22 \pm 3^\circ \text{C}$  produces good to excellent growth of *Aspergillus niger*, *Saccharomyces cerevisiae*, with total inhibition of *E. coli*.

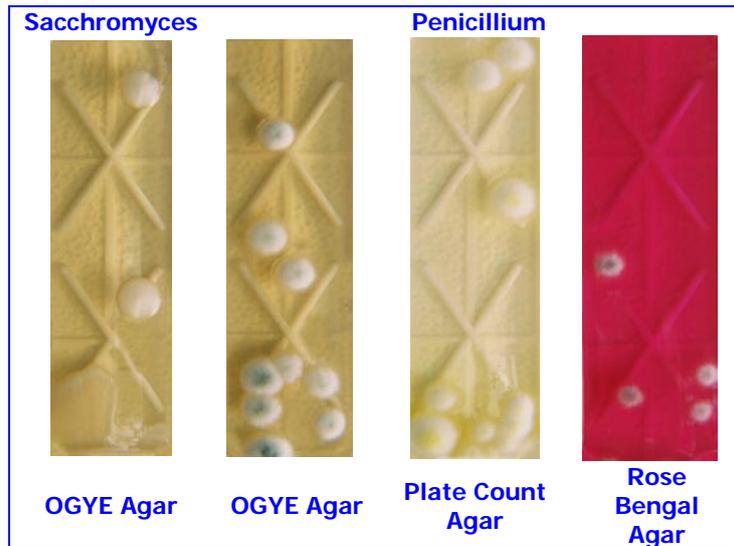
## Plate Count Agar



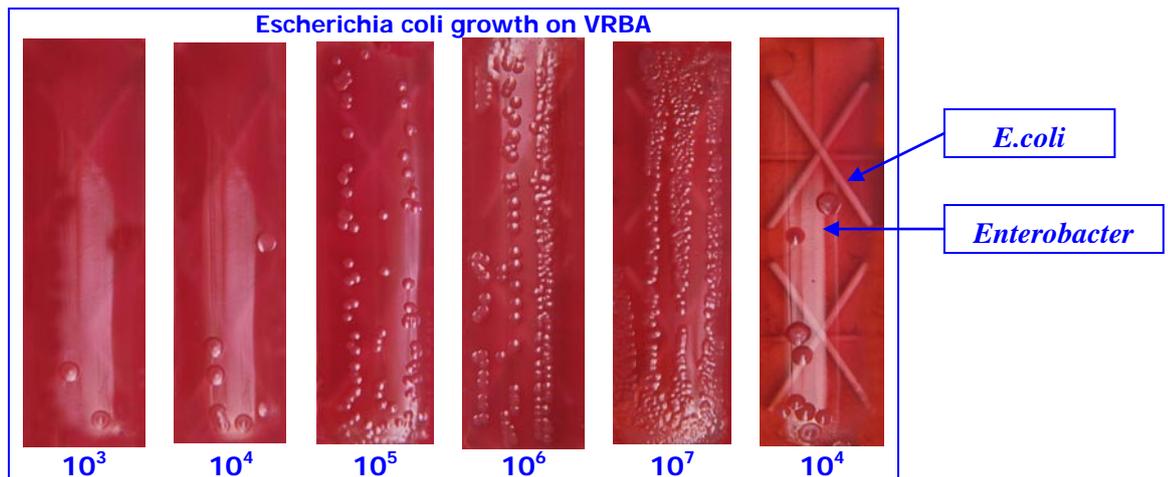
**Plate Count Agar (PCA)** is also known as Standard Methods Agar. This medium contains casein hydrolyzate, dextrose and yeast extract. It is recommended for the isolation and enumeration of bacterial and fungal microorganisms of milk and other dairy products, and may be used to determine the sanitary quality of foods, water and other materials. Plate Count Agar and Standard Methods Agar are made according to the American Public Health Association (APHA) formulation..

A variety of bacterial and fungal species appearing as contaminants in dairy and other food products will show good growth, including lactobacilli and staphylococci.

## Fungi on OGYE, Plate Count Agar and Rose Bengal Agar

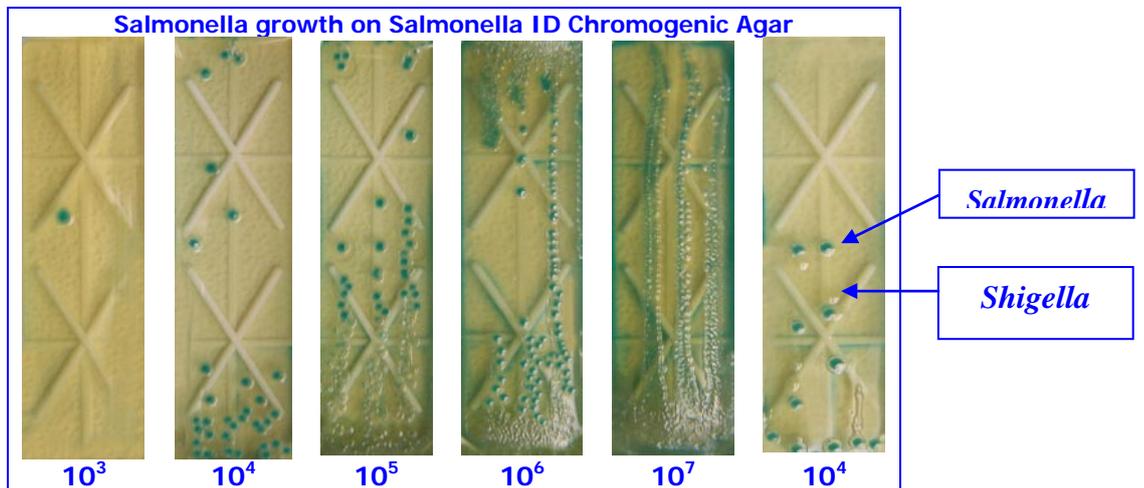
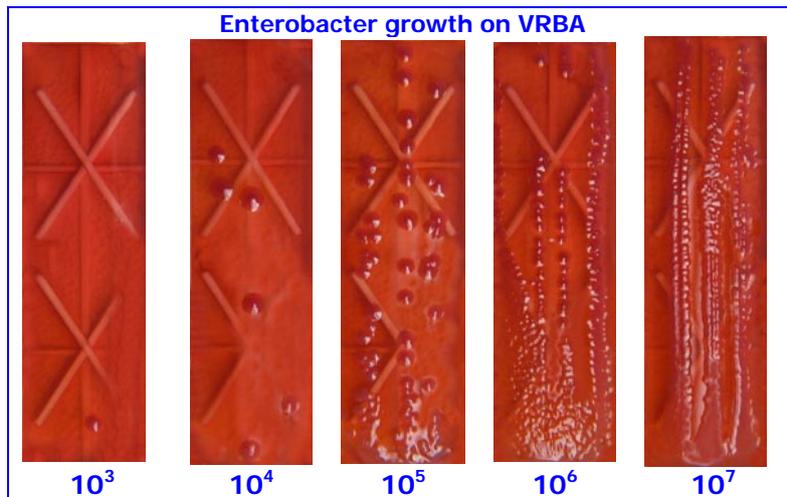


## Violet Red Bile Agar (VRBA)



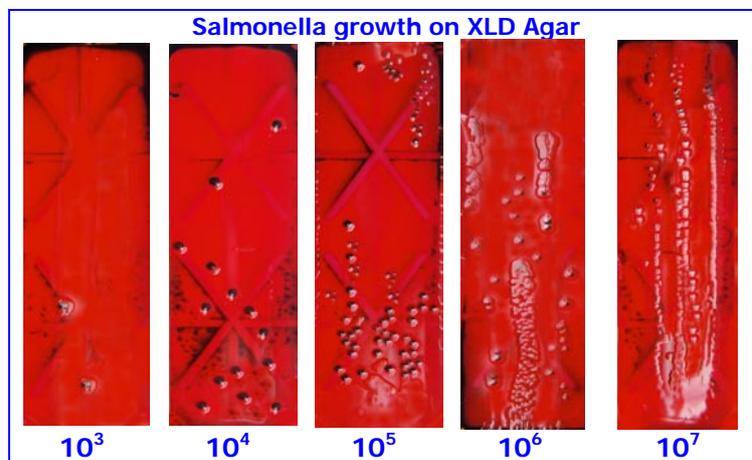
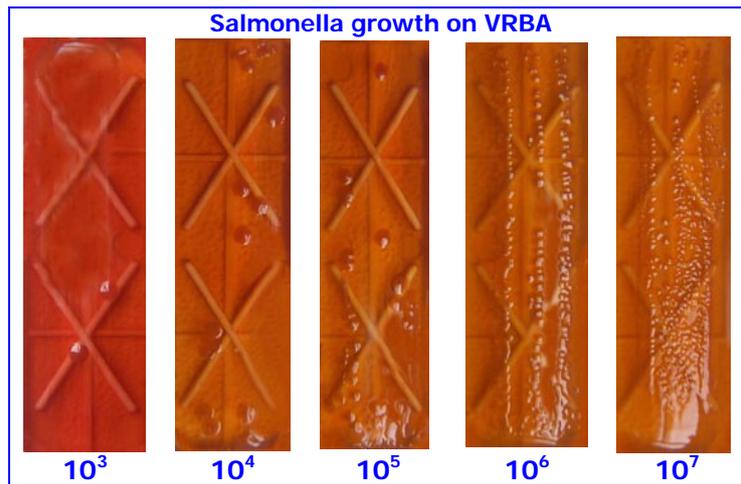
**Violet Red Bile Agar (VRBA)** is a selective medium for the detection of coliform organisms in water, milk, and other materials of sanitary importance. The medium is selective due to the presence of inhibitors, bile salts and crystal violet. Differentiation of enteric microorganisms is achieved by the combination of lactose and the neutral red indicator. Colorless or pink-to-red colonies are produced depending on the ability to ferment lactose.

Lactose fermenters are rose-red in color and generally surrounded by a halo of precipitated bile. *E. coli* colonies are entire edged, 1mm or more in diameter. *E. aerogenes* are larger, often muroid and pinkish. Lactose non-fermenters produce colorless colonies. Enterococci occasionally grow to produce rose colonies pinpoint in size.



**Salmonella ID Agar.** Developed for the improved isolation of *Salmonella* spp. from food, Salmonella ID Agar utilizes a dual chromogenic technique to give a simple but effective color change to differentiate *Salmonella* from all other *Enterobacteriaceae*.

Based on DCA Hynes, *Salmonellae* turn green as they can only metabolise the X- $\alpha$ -gal chromogen, whereas all other *Enterobacteriaceae* turn black due to their ability to metabolize both chromogens.



**Xylose Lysine Decarboxylase (XLD) Agar** is recommended for the isolation and differentiation of enteric pathogens, especially *Shigella*. Differentiation of *Shigella* and *Salmonella* from non-pathogenic bacteria is accomplished by three reactions: xylose fermentation, lysine decarboxylation, and hydrogen sulfide production.

*E. coli* and non-pathogenic coliforms may be partly inhibited or show large, flat, yellow colonies. *Shigella* produces red colonies, as do hydrogen sulfide-negative salmonellae. Hydrogen sulfide producing salmonella grow as red colonies with black centers.