

RTA.KK.027 Revision Date/Revision No:- /- Issue Date:17.02.2014

# HYGISLIDE CHROMAGAR STAPH AUREUS/PCA

## PRINCIPLE AND INTERPRETATION:

**Side1: Chromagar Staph aureus:** Chromogenic medium for isolation and direct differentiation of Staphylococcus aureus in clinical and industrial samples.

Food Industry: Human beings are the main reservoir of S.aureus. A carrier contaminates the surrounding environment when coughing, sneezing and by touching food with a hand having a staphylococcus-infected lesion. It is often found in the environment and on food preparation surfaces and also in certain uncooked foods (dairy products, salads, sandwiches...). It is important to check the presence of S.aureus before and after the foodstuff sterilisation process.

Clinical relevance: S.aureus is the leading cause of skin and soft tissue infections and can also cause serious infections such as bloodstream infections, pneumonia, or bone and joint infections.

**Side2: PCA:** A non-selective medium for the plate count of microorganisms in milk, other dairy products, foods, water and waste water. Plate Count Agar is equivalent to the medium recommended by APHA for the isolation of microorganisms in milk and other dairy products. Tryptone provides amino acids and other complex nitrogenous substances and yeast extract supplies Vitamin B complexes.

## **COMPOSITION:**

## Chromagar S.aureus

| Ingredients               | Gr/Liter |
|---------------------------|----------|
| Peptone and yeast extract | 40 gr    |
| Chromogenic mix           | 2,5 gr   |
| Salts                     | 25 gr    |
| Agar                      | 15 gr    |

PCA

| Ingredients   | Gr/Liter |  |
|---------------|----------|--|
| Tryptone      | 5 gr     |  |
| Yeast extract | 2,5 gr   |  |
| Glucose       | 1 gr     |  |
| Agar          | 9 gr     |  |

**pH**: 6,9 ± 0,2

**pH**: 7,1  $\pm$  0,2

\*\*\*Formula adjusted, standardized to suit performance parameters

# **INSTRUCTIONS FOR USE:**

# **Testing Fluids:**

- 1. Mix liquid test sample.
- 2. Remove the paddle from the vial. Do not touch the agar surfaces.
- 3. Immerse the slide in the fluid to be tested for about 5- 10 seconds. Alternatively expose the slide to a spray or running fluid so that the slide surfaces are covered.
- 4. Both agar surfaces must be completely contacted.
- 5. Allow excess fluid to drain off both paddle agar surfaces.
- 6. Replace the Slide into the tube and twist to tighten the cap. Label the tube with the identification label supplied. Incubate the slide as directed later.

## **Testing Surfaces:**

- 1. Remove the paddle from the vial. Do not touch the agar surfaces.
- 2. To assure an accurate area recovery, contact the paddle to 20<sup>2</sup>cm of the surface by contacting the surface twice in separate 10<sup>2</sup>cm areas.
- 3. Replace the Slide into the tube and twist to tighten the cap. Label the tube with the identification label supplied. Incubate the slide as directed later.

# QUALITY CONTROL:

## **1.Sterility Control:**

Incubation 2 d at 30-35°C and 3 d at 20-25°C: NO GROWTH

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# 2.Phsical/Chemical Control

|                     | рН            | Apperance:  |
|---------------------|---------------|-------------|
| Chromagar S. aureus | 6,9±0,2       | Light Amber |
| Chromagar PCA:      | $7,1 \pm 0,2$ | Amber       |

3.Microbiological Control: Incubation at a temperature of 35±2°C and observed after 24-48 hours.

## Side1: Chromagar S.aureus

| Microorganism                    | Inoculum | Results    |               |
|----------------------------------|----------|------------|---------------|
|                                  | (CFU)    | Growth     | Reaction      |
| Staphylococcus aureus ATCC 25923 | 10-100   | Growth     | Pink to mauve |
| Escherichia coli ATCC 25922      | 100-1000 | Inhibition | -             |
| Candida albicans ATCC 10231      | 100-1000 | Inhibition | -             |
| Enterococcus faecalis ATCC 29212 | 100-1000 | Inhibition | -             |

## Side2: PCA

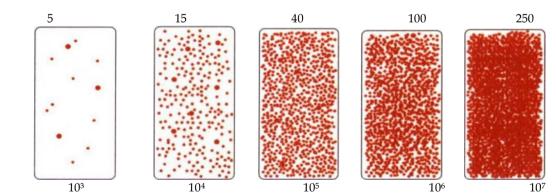
| Microorganism                   | Inoculum (CFU) | Results |                |
|---------------------------------|----------------|---------|----------------|
|                                 |                | Growth  | Reaction       |
| Escherichia coli ATCC 25922     | 10-100         | Good    | Cream colonies |
| Staphylococcus aureus ATCC 6538 | 10-100         | Good    | Cream colonies |
| B.subtilis ATCC 6633            | 10-100         | Good    | Cream colonies |

## INTERPRETATION OF RESULTS

Compare the slide surfaces against the comparison chart printed below. Read the result corresponding to fluids or surfaces as appropriate. Note that very high levels of organisms could lead to a confluent growth and could be recorded as a nil result. Compare against an unused slide when reading results.

# **Bacteria Comparison Chart**

Surfaces CFU/cm2

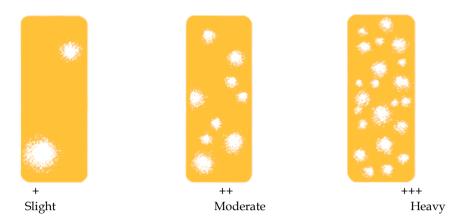


Fluids CFU/mL



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## Fungi Comparison Chart



## DISPOSAL:

Incubated Slides may contain active bacteria and micro-organisms. Do not open infected slides except as part of disposal procedure. Infected slides should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

# STORAGE CONDITIONS AND SHELF LIFE:

Slides should be stored in 2-20 °C. Temperature fluctuations may result in condensation settling at the bottom of the vial, although this does not affect culture properties, it could reduce the shelf-life or cause the agar to separate from the plastic paddle support.

Avoid sudden temperature changes. Shield from direct sunlight. Do not allow paddles to freeze. Do not use any slides which have been inadvertently contaminated during storage and which are already showing growth of micro-organisms

Use before expiry date on the label.Do not use beyond stated expiry date.

PACKAGING: Katalog Number: 06020 Content/Packaging: 20 Slides/Box

#### **REFERENCES:**

1-2001 2001, National Institute of Industrial Technology

2-1999 Alonso J. L. et al. 1999. Applied and Environmental Microbiology, 65: 3746-3749.

3-A comparative study of selective media used to detect and confirm coliforms and Escherichia coli in water samples using membrane filtration 1995 1995. Abstract by Collyer J.

4. American Public Health Association, Standard Methods for the Examination of Dairy Products, 14th ed., APHA Inc., Washington, D.C. (1978)

5. E.W. Frampton, et al., Comparison of  $\beta$ -glucuronidase and indole-based direct plating methods for enumeration of unstressed E. coli, J. Food Protect. 53, 933 (1990)

