# HiCrome™ Staph Agar Base, Modified

**M1837**

## Intended Use

A selective medium recommended for the isolation and enumeration of *Staphylococcus aureus*.

## Composition**

| Ingredients | g / L |
|---|---|
| Peptone special | 23.000 |
| Sodium pyruvate | 4.000 |
| Sodium chloride | 40.000 |
| Lithium chloride | 5.000 |
| Chromogenic mixture | 5.300 |
| Agar | 15.000 |
| Final pH ( at 25°C) | 7.2±0.2 |

**Formula adjusted, standardized to suit performance parameters

## Directions

Suspend 46.15 grams in 500 ml purified / distilled water. Heat to boiling to dissolve the medium completely. **DO NOT AUTOCLAVE.** Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of PolyB Selective Supplement (FD003). Mix well and pour into sterile Petri plates.

## Principle And Interpretation

*Staphylococci* are widespread in nature, though they are mainly found living on the skin, skin glands and mucous membranes of mammals and birds. Humans and animals are the primary source of this organism. Because of its widespread nature it is easily transferred to food and a cause of food poisoning if not handled properly (1).

The coagulase positive species *S. aureus* is well documented as a human opportunistic pathogen. *Staphylococcus* species are a major cause of food poisoning and produces a wide variety of enterotoxins, thus causing various types of disease symptoms. The ability to clot plasma continues to be the most widely used and accepted criterion for the identification of pathogenic staphylococci associated with acute infections (2).

This medium is a selective chromogenic medium recommended for the isolation and enumeration of coagulase positive staphylococci in foods within 24 hours. This medium has an advantage over the traditional media which requires 48 hours Peptones in the medium supplies the essential nitrogneous compounds required for the growth. The chromogenic mixture incorporated in the medium is specifically cleaved by *Staphylococcus aureus* to give bluish green coloured colonies which are clearly visible against the opaque background. Sodium pyruvate enhances the growth of *Staphylococcus* species. Sodium chloride in the medium helps to maintain the osmotic equilibrium of the medium. High concentration of sodium chloride also helps in inhibiting the accompanying microflora. Lithium chloride inhibits most of the contaminating microflora. Addition of Polymyxin B Sulphate (FD003) helps to restrict growth of gram-negative bacteria such as *Escherichia coli* and *Pseudomonas aeruginosa*.

## Type of specimen

Clinical samples - pus

## Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4).

After use, contaminated materials must be sterilized by autoclaving before discarding.

## Warning and Precautions

In Vitro diagnostic Use only. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

## Limitations

1. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.
3. Slight colour variation may be observed depending upon the utilization of the substrate by the organism.

## Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

**Appearance**

Cream to yellow homogeneous free flowing powder

**Gelling**

Firm, comparable with 1.5% Agar gel

**Colour and Clarity of prepared medium**

Off white coloured opaque gel forms in Petri plates

**Reaction**

Reaction of 9.23 % w/v aqueous solution 25°C. pH : 7.2±0.2

**Cultural Response**

Cultural characteristics observed with added PolyB Selective Supplement (FD003) after an incubation at 35-37°C for 24-48 hours.

| Organism | Inoculum (CFU) | Growth | Observed Lot value (CFU) | Recovery | Colour of colony |
|---|---|---|---|---|---|
| *Staphylococcus aureus subsp. aureus* ATCC 25923 (00034*) | 50 -100 | luxuriant | 25 -100 | >=50 % | greenish blue to blue |
| *Staphylococcus aureus subsp. aureus* ATCC 6538 (00032*) | 50 -100 | luxuriant | 25 -100 | >=50 % | greenish blue to blue |
| *Staphylococcus saprophyticus* ATCC 15305 (00159*) | 50 -100 | luxuriant | 25 -100 | >=50 % | greenish blue to blue |
| *Bacillus cereus* ATCC 10876 | 50 -100 | none- poor | 0 -10 | <=10 % | |
| *Staphylococcus epidermidis* ATCC 12228 (00036*) | 50 -100 | none- poor | 0 -10 | <=10 % | |
| *Enterococcus faecalis* ATCC 29212 (00087*) | 50 -100 | none- poor | 0 -10 | <=10 % | |
| *Escherichia coli* ATCC 25922 (00013*) | >=$10^4$ | inhibited | 0 | 0 % | |

Key : (*) Corresponding WDCM numbers.

## Storage and Shelf Life

Store between 15-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

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## Reference

1. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. Victor , Lachica F, Weiss KF , Deibel RH (1969) Appl Microbiol 18 126-27
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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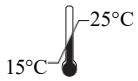
IVD *In vitro* diagnostic medical device




Storage temperature

EC REP CEpartner4U, Esdoornlaan 13,
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www.cepartner4u.eu

CE Marking

Do not use if package is damaged

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