

PRODUCT CODE: 413805

Salmonella Shigella Agar (Dehydrated Culture Media) for microbiology

Preparation

Suspend 60 grams of the medium in one litre of distilled water. Mix well until a homogeneous suspension is obtained. Heat with frequent agitation and boil for one minute until complete dissolution. **DO NOT AUTOCLAVE.** Cool to 45 – 50°C and distribute in Petri dishes. The prepared medium should be stored at 8-15°C.

The colour is red-orange. The dehydrated medium should be homogeneous, free-flowing and beige-pink in colour. If there are any physical changes, discard the medium.

Uses

SALMONELLA SHIGELLA AGAR (SS AGAR) is a selective and differential medium widely used in sanitary bacteriology to isolate *Salmonella* and *Shigella* from feces, urine, and fresh and canned foods.

Due to its strong inhibitory power, SS Agar can be streaked with a heavy inoculum, but other less inhibitory media, such as Desoxycholate Agar, MacConkey Agar, Eosin Methylene Blue (EMB) Agar, XLD Agar and Hektoen Enteric Agar, should be streaked in parallel. Inoculate and incubate at 35 ± 2°C for 18 – 24 hours.

Beef extract and Peptone mixture provide nitrogen, vitamins, minerals and amino acids essential for growth. Lactose is the fermentable carbohydrate providing carbon and energy. Bile Salts Mixture, Sodium citrate and Brilliant green inhibit Gram-positive bacteria, most coliform bacteria and swarming *Proteus* spp., while allowing *Salmonella* spp to grow. Neutral red is the pH indicator. Sodium thiosulfate and Ferric citrate allow the detection of the H₂S producing bacteria, such as *Proteus* and some strains of *Salmonella*, since they produce colonies with black centers and a clear halo.

Non-lactose fermenting bacteria (supposed pathogens) produce clear colonies, transparent or colourless, while coliforms are sufficiently inhibited, and form small colonies that vary from pink to red in colour. The plates of the medium can be kept for at least a week in refrigeration.

This formulation, highly selective, is not recommended for the primary isolation of *Shigella*. Some *Shigella* spp. may be inhibited.

Composition

See in Data Sheet (TDS).

Microbiological Test

The following results were obtained in the performance of the medium from type cultures after anaerobic incubation at a temperature of $35 \pm 2^\circ\text{C}$ and observed after 18 - 24 hours.

Microorganism	Growth	Colony Colour
<i>Escherichia coli</i> ATCC 25922	Inhibited	-
<i>Enterobacter aerogenes</i> ATCC 13048	Partially inhibited	Cream-pink
<i>Salmonella enteritidis</i> ATCC 13076	Good	Colourless with black centre
<i>Salmonella typhi</i> ATCC 6539	Good	Colourless with black centre
<i>Salmonella typhimurium</i> ATCC 14028	Good	Colourless with black centre
<i>Shigella flexneri</i> ATCC 12022	Good	Colourless
<i>Enterococcus faecalis</i> ATCC 19433	Inhibited	-

Storage

Once opened keep powdered medium closed to avoid hydration.

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