

## 85640 SS-Agar (Salmonella Shigella Agar)

A differential, selective medium recommended for the isolation of *Salmonella* and *Shigella* from stool, foods and clinical material.

### Composition:

Ingredients	Grams/Litre
Meat extract	5.0
Peptone	5.0
Lactose	10.0
Ox bile, dehydrated	8.5
Sodium citrate	10.0
Sodium thiosulfate	8.5
Ferric citrate	1.0
Brilliant green	0.0003
Neutral red	0.025
Agar	15.0
Final pH 7.0 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

### Directions:

Suspend 63 g in 1 litre of distilled water. Bring to boiling with frequent agitation and allow to simmer gently to dissolve the agar. Do not autoclave. Cool to about 50°C, mix and pour into petri dishes.

### Principle and Interpretation:

Meat extract and peptone provide essential growth nutrients. Lactose is the fermentable carbohydrate. Brilliant green, ox bile and high concentrations of thiosulfate and citrate largely inhibit the gram-positive accompanying microbial flora. Thiosulfate in combination with iron acts as an indicator for hydrogen sulfide production which is indicated by blackening in the centres of the colonies. The presence of coliform bacteria is established by detecting degradation of lactose to acid with the pH indicator neutral red. Lactose-negative colonies are colourless. Lactose-positive colonies are pink to red. It is recommended to inoculate parallel plates with less inhibitory media like Hektoen Enteric Agar (51490) and DCLS Agar (70135) for easier isolation of *Shigella* species.

Cultural characteristics after 18-24 hours at 35-37°C.

Organisms (ATCC)	Growth	Color of Colony	H <sub>2</sub> S production
<i>Salmonella enteritidis</i> (13076)	++	colorless with black centre	+
<i>Salmonella typhi</i> (6539)	++	colorless with black centre	+
<i>Salmonella typhimurium</i> (14028)	++	colorless with black centre	+
<i>Shigella flexneri</i> (29903)	++	colorless	-
<i>Escherichia coli</i> (25922)	+	pink, bile precipitate	-
<i>Enterobacter aerogenes</i> (13048)	+	cream pink	-



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#### References:

1. E. Leifson, J. Path. Bact., 40, 581 (1935)
2. Leanette and others (Eds.), Manual of Clinical Microbiology 4<sup>th</sup> ed., ASM, Washington, D.C. (1985)
3. W.I. Taylor B. Harris, Am. J. Clin. Path., 44, 476 (1965)
4. American Public Health Association: Compendium of methods for the microbiological examination of foods, 3<sup>rd</sup> ed. (1992)

#### **Precautions and Disclaimer**

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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