

01993 Salmonella Chromogen Agar Set

A differential diagnostic agar for the detection of Salmonella in food and clinical material. A modification of the formulation described by Rambach (1990).

Set Components and Compositions:

Salmonella Chromogen Agar Base:

(4x29g; 84369)

Ingredients	Grams/Litre
Peptone	5.0
Yeast extract	2.0
Meat extract	1.0
Sodium chloride	5.0
Sodium deoxycholate	1.0
Agar	15.0

Final pH 7.3 +/- 0.2 at 25 °C

Store dehydrated powder in a dry place in tightly-sealed containers at 2-25 °C.

Salmonella Chromogen Agar Supplement:

(4 vials; 38589; one vial is sufficient for 1000 ml medium)

Ingredients	Grams/Vial
chromogenic mix	0.13
Propylenglycol	10.0

Store supplement at 4 °C, protected from direct light.

Store prepared media below 8 °C, protected from direct light.

Directions:

Dissolve 29 g Salmonella Chromogen Agar (84369) and 1 vial Salmonella Chromogen Agar Supplement (38589) in 1 litre distilled water. Boil and shake for 35-40 minutes (in 5 minutes sequences) to dissolve the medium completely. Do not autoclave or overheat. Cool the medium as fast as possible to 45-50 °C and shake gently for a further 30 minutes or less. Pour into cool petri dishes.

Principle and Interpretation:

Peptone, yeast extract and meat extract provide nitrogenous compounds, vitamins, carbon, sulphur and amino acids. Sodium chloride is for the osmotic equilibrium of the medium. The nutritive substrates of this medium prevent the reproduction of Enterobacteriaceae. Sodium deoxycholate inhibits the Gram-positive bacteria. The chromogenic mixture and the propylene glycol in the supplement makes it possible to differentiate Salmonella species. Salmonella form acid due to the fermentation of propylene glycol. The addition of a pH indicator (chromogenic mixture) give the colonies a red color. Coliforms possess the enzyme β -galactosidase that splits the bond between the chromophore and the galactoside (chromogenic mixture). The released chromophore gives the blue-green or blue-violet coloration of the colonies. Other Enterobacteriaceae and Gram-negative bacteria, such as Proteus, Pseudomonas, Shigella, *S. typhi* and *S. paratyphi A* grow as colorless-yellow colonies.

Cultural characteristics after 24-28 hours at 35-37 °C.

Organisms (ATCC)	Growth	Color of colony
<i>Salmonella enteritidis</i> (13076)	+++	red
<i>Salmonella typhimurium</i> (14028)	+++	red
<i>Escherichia coli</i> (25922)	++	blue-green
<i>Klebsiella pneumoniae</i> (13883)	++	blue-green
<i>Shigella flexneri</i> (29903)	+++	yellowish
<i>Proteus mirabilis</i> (14153)	+++	yellowish
<i>Staphylococcus aureus</i> (25923)	-	-
<i>Bacillus cereus</i> (11778)	-	-



References:

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