84369 Salmonella Chromogen Agar

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

Composition:

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 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:
Dissolve 29 g Salmonella Chromogen Agar 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 make 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. parathyphi A* grow as colorless-yellow colonies.

Cultural characteristics after 24-28 hours at 35-37 ºC.

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

References:
1. A. Rambach, New Plate Medium for Facilitated Differentiation of Salmonella sp. from Proteus sp. and Other Enteric Bacteria, Environm. Microbiol., 56, 301 (1990)
2. R. Grünwald, R.W. Henderson and S. Yappan, Use of Rambach Propylene Glycol containing Agar for identification of Salmonella sp., J. Clin. Microbiol.: 2354 (1991)
3. R.M. Bartolome, et al., Nuevo media de cultivo para el aislamiento de salmonella sp. V Congreso de la Sociedad espanola de Immunologia clinica, Barcelona, November (1992)
4. P. Laudat, et al., Rambach Agar: New Plate Medium for Rapid and Faciliated Identification of Salmonella sp., 5th European Congress of Clinical Microbiology and Infectious Diseases, Oslo, Norway, September 9-11, 177 (1991)
5. A.R. Benett, et al., Evaluation of Rambach Agar and Salmosyst Enrichment for the isolation of Salmonella from foods., Congress-Poster, RAMI, London, September (1993)
6. P.M. Malaspina, et al., Impiego di un nuovo terreno solido selettivo per la ricerca di Salmonella sp. in prodotti lattiero-caseari., II latte, 7/93, 770
7. C. Cantoni, et at., Comparazione tra vari terreni selettivi per l'isolamento di salmonella sp da funghi biologici e da alimenti. - Ingegneria Alimentare, 3/93, 35
8. G. Caserio, et al., Performances del terreno di Rambach nell'isolamento di Salmonella da prodotti alimentari., Ingegneria Alimentare, 5/95, 42
9. V. Giaccone et al., Confronto de terreni selettivi per la ricerca di Salmonella sp. in prodotti carnei., Ingegneria Alimentare, 3/93, 31
10. T. Diehl, et al., Salmonella enterica: Aktuelles aus der bakteriologischen Diagnostik., Tierärztl. Umschau, 48, 703 (1993)

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.