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Product Information

53707 HiCrome™ Listeria Agar Base, modified (Listeria HiCrome™ Agar Base, modified)

HiCrome Listeria Agar, modified is a selective and differential agar medium recommended for rapid and direct identification of *Listeria* species specifically *Listeria monocytogenes*.

Composition:

Ingredients	Grams/Litre
Peptone, special	23.0
Sodium chloride	5.0
Yeast extract	1.0
Meat extract	5.0
Lithium chloride	5.0
Rhamnose	10.0
Phenol red	0.12
Chromogenic mixture	5.13
Agar	13.0

Final pH (at 25 °C) 7.3 +/- 0.2

Store prepared media below 4 °C, protected from direct light. Store dehydrated powder in a dry place in tightly sealed containers at 4 °C.

Directions:
Suspend 33.6 g in 500 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 1 bar pressure (121 °C) for 15 minutes. Cool to 50°C. Add rehydrated contents of 1 vial of HiCrome Listeria Selective Supplement (Cat. No. 59688) aseptically. Mix well to resuspend and pour into sterile petri plates.

Principle and Interpretation:
HiCrome Listeria Agar, Modified medium is a modification of a medium first developed by Notermans et al. (1) and Mengaud et al. (2) for the detection of *Listeria* species from food stuffs. HiCrome Listeria Agar Base, Modified allows growth of *Listeria* species and gives a presumptive identification of *L. monocytogenes* within 24-48 hours after pre-enrichment. This medium is based on both, the specific chromogenic detection of β-□glucosidase activity and also Rhamnose fermentation.*Listeria* species hydrolyse the purified chromogenic substrate in the medium giving blue coloured colonies. Since β-□□ glucosidase activity is specific for*Listeria* species, other organisms cannot utilize the chromogenic substrate and therefore give white colonies. Differentiation in *Listeria* species is based on the property of Rhamnose fermentation. The colonies of *L. monocytogenes* and *L. innocua* are blue with a yellow background (Rhamnose positive) while the colonies of *L. ivanovii* appear blue without a yellow background (Rhamnose negative).
Peptone, yeast extract and meat extract provide nitrogenous substances, vitamin B complex and other essential growth nutrients. Rhamnose is the fermentable carbohydrate with phenol red as an indicator. Sodium chloride maintains the osmotic equilibrium. The added Lithium chloride and HiCrome Listeria Selective Supplement (Cat. No. 59688) inhibit growth of most gram positive bacteria, gram negative bacteria, yeasts and moulds.

Cultural characteristics after 24-48 hours at 37 ºC.

Organisms (ATCC)	Growth	Rhamnose fermentation	Color of colony
Listeria monocytogenes (19118)	+++	+ (yellow background)	blue
Listeria ivanovii (19119)	+++	-	blue
Listeria innocua (33090)	+++	+ (yellow background)	blue

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References:

1. S.H. Notermans, J. Dufrenne, Applied and Environmental Microbiology, 57(09), 2666-70 (1991)
2. J. Mengaud, C. Braun-Breton, P. Cossart, Molecular Microbiology, 5(2), 367-372 (1991)