



Hektoen Enteric Agar

LAB 110

Description

A medium developed at the Hektoen Institute in Chicago for the enhanced recovery of shigellae from clinical specimens. This medium has high levels of peptones and sugar which counteract some of the toxic effects of bile salts used to make the medium selective. This allows the shigellae to grow as well as the salmonellae. Salicin is fermented by many coliforms including those that do not ferment lactose and sucrose. The medium employs a double indicator system similar to that used in LAB 6 C.L.E.D., (Bevis) and an H₂S indicator system similar to that used in LAB 32 XLD. Although intended primarily for clinical use this medium is quoted in B.S. 4285 as suitable for the examination of dairy products for salmonellae.

Typical Formula	g/litre
Meat Peptone	12.0
Yeast Extract	3.0
Lactose	12.0
Sucrose	12.0
Salicin	2.0
Bile Salts No. 3	7.0
Sodium desoxycholate	2.4
Sodium chloride	5.0
Sodiumthiosulphate	5.0
Ammonium ferric citrate	1.5
Acid fuchsin	0.1
Bromothymol blue	0.065
Agar No. 1	14.0

Method for reconstitution

Weigh 76 grams of powder, disperse in 1 litre of deionised water. Allow to soak for 10 minutes, swirl to mix then heat gently and bring to the boil. Cool to 47°C and pour plates. DO NOT AUTOCLAVE OR OVERHEAT THIS MEDIUM.

Appearance: Green, clear.

pH: 7.5 ± 0.2

Minimum Q.C. organisms: *Salmonella typhimurium* WDCM 00031
Shigella sp.
E. coli (some inhibition) WDCM 00013

Storage of Prepared Medium: Plates – up to 7 days at 2-8°C in the dark.

Inoculation: Surface plating, streak out to single colonies.

Incubation: 37°C aerobically for 18-24 hours.

Growth Characteristics				
organism	colony size (mm)	shape & surface	colour	other
H ₂ S +ve <i>Salmonella</i>	2-3	CV.E.G.	Green+ Black	
H ₂ S -ve <i>Salmonella</i>	2-3	CV.E.G.	Green	
<i>S. sonnei</i>	2-2.5	CV.E.G.	Green	(Rough)
<i>E. coli</i>	0.5-2	CV.E.G.	Salmon ppt. around colonies	(Rough) (No growth)
<i>Citrobacter</i> spp.	1.0-2.0	CV.E.G.	Salmon	(Rough)
<i>Proteus</i> spp.	1.0-2.0	CV.E.G.	Green/ Black centre	(No growth brownish centre)

References

King, S. and Metzger, W.I. (1967). A new medium for the isolation of *Salmonella* and *Shigella* species. Bact. Proc. Am. Soc. Microbiol. 77.

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Speck, M.L. (ed.). (1976). Compendium of Methods for the Microbiological Examination of Food. Washington, D.C.: American Public Health Association.