OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION

HEKTOEN ENTERIC AGAR CM0419

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Typical Formula*

Proteose peptone	grams per litre	12.0
Yeast extract		3.0
Lactose		12.0
Sucrose		12.0
Salicin		2.0
Bile salts No.3		9.0
Sodium chloride		5.0
Sodium thiosulphate		5.0
Ammonium ferric citrate		1.5
Acid fuchsin		0.1
Bromothymol blue		0.065
Agar		14.0

* adjusted as required to meet performance standards

Directions

Suspend 76g in 1 litre of distilled water. With frequent agitation, bring to the boil to dissolve completely. Cool to 50°C. Mix well and pour into sterile Petri dishes. DO NOT AUTOCLAVE.

Physical Characteristics

Light straw or light green, free-flowing powder
Colour on reconstitution - green to dark green
Moisture level - less than or equal to 7%
pH 7.5 ± 0.2 at 25°C
Clarity - opaque
Gel strength - firm, comparable to 14.0g/litre of agar

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Microbiological Tests Using Optimum Inoculum Dilution

Control Medium: Tryptone Soya Agar

Reactions after incubation at 37°C for 18-24 hours

Inoculation with mixed cultures using diminishing sweep technique

Medium is challenged with 1E+03 to 1E+05 colony-forming units (cfu) of *Salmonella* and *Shigella* spp. and 1E+03 to 1E+05 cfu for *Escherichia coli* ATCC®8739.

Salmonella enteritidis	ATCC®13076	1-2mm blue/green colonies with black centre
Salmonella typhimurium	ATCC®14028	1-2mm blue/green colonies with black centre
Salmonella virchow	NCTC5742	1-2mm blue/green colonies with black centre
Salmonella poona	NCTC4840	1-2mm blue/green colonies with black centre
Shigella sonnei	ATCC®29930	1-3mm irregular, green colonies
Shigella flexneri	ATCC®12022	1-2mm green colonies
Shigella boydii	NCTC11462	1-3mm irregular, green colonies

In mixed culture, using the diminishing sweep technique, a satisfactory result is represented by diagnostic reactions of Salmonellae and Shigellae strains and *Escherichia coli*. Clear differentiation must be seen and is based on the colour and morphology of the colonies.

Inoculation with pure cultures

Medium is challenged with 10-100 colony-forming units

Pseudomonas aeruginosa	ATCC®27853	No growth or 1-2mm blue/green colonies
Proteus mirabilis	ATCC®12453	No growth or pinpoint to 1mm green colonies with or without black centre and no swarming
Proteus mirabilis	ATCC®29906	No growth or pinpoint to 1mm green colonies with or without black centre and no swarming
Escherichia coli	ATCC®11775	No growth or 0.5-2mm bright orange colonies and precipitate

For pure cultures, a satisfactory result is represented by recovery equal to or less than 100% of the control medium.

Medium is challenged with 1E+02 to 1E+03 colony-forming units

Shigella dysenteriae	NCTC9721	1-3mm irregular, green colonies

For *Shigella dysenteriae* NCTC 9721, a satisfactory result is represented by recovery equal to or greater than 10% of the control medium.

Testing performed in accordance with current CLSI M22 A

Reactions after incubation at 35°C for 18-24 hours

Medium is challenged with 10-100 colony-forming units

Salmonella typhimurium	ATCC®14028	1-2mm blue/green colonies with black centre
Shigella flexneri	ATCC®12022	1-2mm green colonies

A satisfactory result is represented by recovery of equal to or greater than 70% of the control medium.

Medium is challenged with 10-100 colony-forming units

Escherichia coli	ATCC®25922	No growth or 0.5-2mm bright orange colonies and precipitate

For pure cultures, a satisfactory result is represented by recovery equal to or less than 100% of the control medium.

Medium is challenged with greater than 1E+04 to 1E+06 colony-forming units

Enterococcus faecalis	ATCC®29212	No growth

Negative strains are inhibited.

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Revision History

Section / Step	Description of Change	Reason for Change	Reference
Microbiological Tests – mixed culture	To update the number cfu of *E. coli* medium is challenged with in mixed culture.	Change control	MOC-2023-0676