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OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION		
S.S. AGAR MODIFIED CM0533		

S.S. AGAR MODIFIED (SALMONELLA SHIGELLA AGAR)

CM0533

Typical Formula*

'Lab-Lemco' powder	grams per litre	5.0
Peptone		5.0
Lactose		10.0
Bile salts		5.5
Tri-sodium citrate		10.0
Sodium thiosulphate		8.5
Iron (III) citrate		1.0
Brilliant green		0.00033
Neutral red		0.025
Agar		12.0

* adjusted as required to meet performance standards

Directions

Suspend 57g in 1 litre of distilled water. With frequent agitation, bring to the boil dissolve completely. Cool to 50°C. Mix well and pour into sterile Petri dishes. DO NOT AUTOCLAVE.

Physical Characteristics

Pink/red, free-flowing powder
 Colour on reconstitution - pink/red
 Moisture level - less than or equal to 7%
 pH 7.3 ± 0.2 at 25°C
 Clarity - clear
 Gel strength - firm, comparable to 12.0g/litre of agar

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.

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<i>Salmonella enteritidis</i>	ATCC®13076	1-2mm straw colonies with grey or black centre
<i>Salmonella typhimurium</i>	ATCC®14028	1-2mm straw colonies with black centre
<i>Salmonella virchow</i>	NCTC5742	1-2mm straw colonies with black centre
<i>Shigella sonnei</i>	ATCC®25931	1-3mm irregular, translucent pink colonies
<i>Shigella flexneri</i>	ATCC®12022	1-3mm translucent pink colonies
<i>Shigella boydii</i>	NCTC11462	1-3mm irregular, translucent pink 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

<i>Salmonella typhimurium</i>	ATCC®14028	1-2mm straw colonies with black centre
<i>Shigella sonnei</i>	ATCC®25931	1-3mm irregular, translucent pink colonies
<i>Pseudomonas aeruginosa</i>	ATCC®27853	1mm straw colonies
<i>Proteus mirabilis</i>	ATCC®12453	0.5-2mm straw colonies with grey centre, no swarming
<i>Proteus mirabilis</i>	ATCC®29906	0.5-2mm straw colonies with grey centre, no swarming
<i>Escherichia coli</i>	ATCC®11775	1-2mm pink colonies
<i>Escherichia coli</i>	ATCC®25922	No growth or pinpoint-2mm pink colonies

For pure cultures, a satisfactory result is represented by recovery of *Salmonellae* and *Shigellae* strains equal to or greater than 70% of the control medium.

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

Medium is challenged with 10-100 colony-forming units

<i>Shigella dysenteriae</i>	NCTC9721	1-3mm translucent pink colonies
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For *Shigella dysenteriae* NCTC9721, a satisfactory result is represented by recovery equal to or greater than 50% of the control medium.

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

<i>Enterococcus faecalis</i>	ATCC®29212	No growth or ppt clear/pink colonies
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Negative strains are inhibited or produce a negative diagnostic reaction.

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Revision History

Section / Step	Description of Change	Reason for Change	Reference
Microbiological Tests – mixed cultures	Update the number of cfu that medium is challenged with for <i>E. coli</i> in mixed cultures.	Change control	MOC-2023-0676