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| OXOID QUALITY ASSURANCE PRODUCT SPECIFICATION | | |
| S.S. AGAR CM0099 | | |

SALMONELLA SHIGELLA AGAR (S.S. AGAR)

CM0099

Typical Formula*

| | | |
|---------------------|-----------------|---------|
| 'Lab-Lemco' powder | grams per litre | 5.0 |
| Peptone | | 5.0 |
| Lactose | | 10.0 |
| Bile salts | | 8.5 |
| Tri-sodium citrate | | 10.0 |
| Sodium thiosulphate | | 8.5 |
| Iron (III) citrate | | 1.0 |
| Brilliant green | | 0.00033 |
| Neutral red | | 0.025 |
| Agar | | 15.0 |

* adjusted as required to meet performance standards

Directions

Suspend 63g 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

Straw/pink, free-flowing powder
 Colour on reconstitution - pink/red
 Moisture level - less than or equal to 7%
 pH 7.0 ± 0.2 at 25°C
 Clarity - clear
 Gel strength - firm, comparable to 15.0g/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

| | | |
|-------------------------------|------------|---|
| <i>Salmonella enteritidis</i> | ATCC®13076 | 0.5-1.5mm straw colonies with or without black centre |
| <i>Salmonella typhimurium</i> | ATCC®14028 | 0.5-2mm straw colonies with black centre |
| <i>Salmonella virchow</i> | NCTC5742 | 0.5-1.5mm 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

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| <i>Pseudomonas aeruginosa</i> | ATCC®27853 | 0.5-1mm straw colonies |
| <i>Proteus mirabilis</i> | ATCC®12453 | 0.25-2.5mm straw colonies, with or without grey/black centre, no swarming |
| <i>Proteus mirabilis</i> | ATCC®29906 | 0.25-2.5mm straw colonies, with or without grey/black centre, no swarming |
| <i>Escherichia coli</i> | ATCC®11775 | No growth or 0.5-2mm pink colonies |

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

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| <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 10% of the control medium.

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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

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| <i>Salmonella typhimurium</i> | ATCC®14028 | 0.5-2mm straw colonies with black centre |
| <i>Shigella flexneri</i> | ATCC®12022 | 1-3mm translucent pink 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

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| <i>Escherichia coli</i> | ATCC®25922 | No growth or 0.5-1mm pink colonies |
|-------------------------|------------|------------------------------------|

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

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| <i>Enterococcus faecalis</i> | ATCC®29212 | No growth |
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Negative strains are inhibited

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Revision History

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