

Product Information

Solus Agar-OA Medium (AGAR-OA020S)

Description

Solus Agar-OA (according to the formulation of Ottaviani and Agosti) is a selective medium for the isolation and presumptive identification of *Listeria monocytogenes* from foodstuffs and related materials as described in ISO 11290-1:1997.

Lithium chloride in the base medium and supplementary antimicrobial compounds Ceftazidime, Polymyxin, Nalidixic acid and amphotericin provide the medium's selectivity. Chromogenic activity is as a result of a chromogenic substrate for the detection of the β -glucosidase enzyme, common to all *Listeria* spp. and to a few strains of Enterococci and Bacilli.

The specific differential activity of this agar is obtained with a proprietary lecithin substrate for the detection of the phospholipase enzyme that will only be present in the *L. monocytogenes* colonies growing on this media. This enzyme activity will result in a halo of precipitation surrounding the target colonies.

With the combination of both the chromogenic and phospholipase enzyme reactions, it is possible to differentiate *Listeria monocytogenes* (blue colonies surrounded by an opaque halo) from other *Listeria* spp (blue colonies without an opaque halo).

Formulation

| | g/litre |
|--|-----------------|
| Meat peptone | 18.0 |
| Tryptone | 6.0 |
| Yeast extract | 10.0 |
| Lithium chloride | 10.0 |
| Sodium chloride | 5.0 |
| Disodium hydrogen orthophosphate anhydrous | 2.5 |
| Sodium pyruvate | 2.0 |
| Glucose | 2.0 |
| Glycerophosphate | 1.0 |
| Magnesium sulphate | 0.5 |
| 5-bromo-4-chloro-3-indolyl- β -D- glucopyranoside | 0.05 |
| Agar | 13.5 |
| | mg/litre |
| Naladixic Acid | 20 |
| Ceftazidime | 20 |
| Polymyxin B | 10 |
| Amphotericin | 10 |
| Phosphatidylinositol | ~600 |

pH 7.2 +/- 0.2

Appearance

Finished medium: opaque, cream-yellow gel

Hazard classification

NR, Not regulated

Storage

Store at 2-8°C.

Inoculation

Surface inoculation - streak out to single colonies. This medium is selective and so a heavy inoculum can be used.

Incubation

37°C aerobically for 48 hours.

Minimum Q.C. organisms

Listeria monocytogenes NCTC 11994

Listeria monocytogenes NCTC 10527

Escherichia coli ATCC 25922 (Inhibited)

Enterococcus faecalis ATCC 29212 (Inhibited)

Interpretation

| Organism | Colony size (mm) | Colony shape | Colony Colour |
|-------------------------------|------------------|----------------|---|
| <i>Listeria monocytogenes</i> | 1-2 | Round, regular | Blue to blue-green, surrounded by opaque halo |
| <i>Listeria</i> spp. | 1-2 | Round, regular | Blue to blue-green, without opaque halo |

Isolates presumptively identified as *Listeria* spp. and *Listeria monocytogenes* must be subjected to further biochemical tests to confirm their identity. Some strains of *Listeria ivanovii* may demonstrate lecithinase activity.

References

ISO 11290-1:1997 Microbiology of food and animal feeding stuffs - Horizontal method for the detection of *Listeria monocytogenes* - Part 1: Detection method. Incorporating Amendment 1.

ISO/TS 11133-2:2003. Microbiology of food and animal feed stuffs- Guidelines on preparation and production of culture media – Part 2: Practical guidelines on performance testing of culture media.



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