Oxoid Chromogenic MRSA Agar
P01091A (UK only)
P05083A (other)

Oxoid Chromogenic MRSA Agar is designed for the screening of clinical samples for the presence of MRSA.

- **CONVENIENT**
  Quick and easy screening test, ready-to-use, off the shelf

- **EASY TO USE**
  Direct inoculation from swab, isolate or suspension

- **EASY TO READ**
  Denim blue colonies = MRSA positive

- **SENSITIVE & SPECIFIC**
  Based on cefoxitin, for accurate diagnosis of MRSA

- **COST EFFECTIVE**
  Eliminates false positives, minimising confirmatory testing

- **RAPID**
  Results after 18 hours’ incubation, helping to minimise the opportunity for transmission

- **EFFECTIVE**
  A powerful tool in an effective Infection Control Policy
Oxoid Chromogenic MRSA Agar
Codes: PO1091A (UK only) / PO5083A (other)

INTENDED USE
Oxoid Chromogenic MRSA Agar is designed for the screening of clinical samples for the presence of Methicillin Resistant Staphylococcus aureus (MRSA).

BACKGROUND
The importance of screening, as part of an effective programme to limit the spread of MRSA, is well recognised. Speed and accuracy of results are critical aspects of this. Colonised patients can be accurately targeted for isolation and appropriate treatment as early as possible. Resource is not wasted on patients who are not colonised.

A variety of media have been used to screen for MRSA. These include Mannitol Salt Agar with oxacillin and extra salt, Baird-Parker Agar with ciprofloxacin and Bromocresol Purple Agar with aztreonam and oxacillin. Most of these have issues of sensitivity or specificity and all require up to 48 hours incubation.

Since its development by Oxoid, Oxacillin Resistance Screening Agar (ORSA) has been widely adopted as an MRSA screening medium. The sensitivity of this product at 48 hours has recently been shown to be comparable with that of new chromogenic MRSA products\(^1,(2)\). However, a small number of MRSA do not ferment mannitol, while S. haemolyticus can give false positive reactions. So, Oxoid has developed Oxoid Chromogenic MRSA Agar to overcome these issues.

PRINCIPLES
Oxoid Chromogenic MRSA Agar (PO1091A) is an opaque medium which uses a novel chromogen that yields a blue colour as a result of phosphatase activity. This enzyme is present in all MRSA. To allow the medium to differentiate MRSA accurately, it contains a combination of antibacterial compounds designed to inhibit the growth of a wide variety of competitor organisms. This includes cefoxitin; the relationship between cefoxitin resistance and methicillin resistance in S. aureus is well established\(^3\). Also included are compounds that encourage the production of MRSA pathogenicity markers, thus ensuring expression of the phosphatase enzyme and so providing enhanced sensitivity and specificity.

Oxoid Chromogenic MRSA agar can be inoculated from a screening swab taken from hospital patient or staff, from an isolated colony or from liquid suspension. MRSA grows as denim blue colonies which are very easy to read against the light-coloured, opaque agar. Plates are incubated at 35-37°C, and provide high sensitivity and specificity, with results available in just 18 hours. This allows a rapid response, so enabling the patient to receive the most appropriate treatment as early as possible. Accuracy minimises costs, by helping to ensure that only those in need receive what can be costly treatment.

FORMULATION

<table>
<thead>
<tr>
<th>Grams per litre</th>
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<tbody>
<tr>
<td>Peptone mix</td>
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<tr>
<td>Salt mix</td>
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<tr>
<td>Agar</td>
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<tr>
<td>Kaolin</td>
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<tr>
<td>Chromogenic mix</td>
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<td>Antibiotic cocktail</td>
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Final pH 7.3 ± 0.2 @ 25 °C

RECOMMENDATIONS FOR USE
Oxoid Chromogenic MRSA Agar can be inoculated from screening swabs taken from hospital patients or staff, an isolated colony or from liquid suspension, according to local guidelines. The medium should be allowed to warm to room temperature before inoculation. Incubate for 18-20 hours at 35-37°C. Do not incubate beyond 24 hours as this can affect specificity.

Denim blue colonies are presumptive positive for MRSA.

Identifications can be confirmed as MRSA with Staphytect Plus (DR0850B/M) or Dryspot Staphytect Plus (DR0100M), and PBP2′ (DR0900A).

APPEARANCE
Prepared Medium: Pale, off-white, opaque gel medium in Petri dishes

PRECAUTIONS
Oxoid Chromogenic MRSA Agar is for in vitro diagnostic use only. It must not be used beyond the expiry date given on the label, or if the product shows any sign of deterioration.

STORAGE AND STABILITY
Oxoid Chromogenic MRSA Agar should be stored in the original packaging at 2–10°C, and protected from direct light. When stored as directed, the unopened product will remain stable until the expiry date on the label.

Refs