**IDM40** - For the simultaneous detection and presumptive identification of *Candida albicans*, *Candida tropicalis* and other *Candida* spp. and yeasts.

**Typical Formula**

<table>
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<th>Grams per litre</th>
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<tr>
<td>Peptone</td>
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<tr>
<td>Special chromogenic mix</td>
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<tr>
<td>Chloramphenicol</td>
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<tr>
<td>Agar</td>
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pH approx. 6.3

**Directions**

1. Suspend by swirling the contents of the sachet, which are to be added slowly, into 100ml of distilled or deionised water.

2. Bring to the boil and stir regularly until the agar is completely dissolved. DO NOT AUTOCLAVE OR OVERHEAT.

3. Allow to cool to not less than 50ºC. Swirl in order to homogenise and pour into sterile petri dishes. Allow to set on a flat surface.

4. Plates can be kept at room temperature for one day, or stored at 4-8°C for up to 2 weeks.

**Description**

Yeasts of the genus *Candida*, although resident as normal flora in the mouth or vagina in about 20% of the population, are implicated in a variety of diseases.

*Candida albicans* is the most common yeast isolated in the clinical microbiology laboratory and candidosis is increasing as a problem in both the immunocompromised and immunocompetent. Over the past 15 years the number of hospital infections caused by yeasts has shown a steady rise. Antifungal therapy must be initiated early for a favourable prognosis, and since the clinical symptoms of candidosis are non-specific, the mycology laboratory can play an essential role in the establishment of a diagnosis. Yeasts being isolated more frequently, e.g. *C. tropicalis* colonising medical devices, there is now a requirement for rapid and cost effective differentiation of *C. albicans* from other *Candida* species.

Diagnosis of yeast conditions has recently become more important due to the increasing immunocompromised population and the number of patients receiving antimicrobial chemotherapy (which alters the normal flora thus allowing the entry of opportunists such as yeasts).

A requirement for speciation of *Candida* isolates has been most notable in oncology patients receiving cytotoxic chemotherapy. Reports of resistant yeasts from such patients have revealed polyene (eg Amphotericin B, Nystatin) resistant *C. albicans*, *C. tropicalis* and *C. glabrata*, and Fluconazole resistant *C. glabrata*.

The need for differentiation of *Candida* has led to a variety of new diagnostic tests. Traditionally, the rapid test for *C. albicans* is the germ tube test. Although completed within 2-3 hours, false negatives as well as misinterpretation are common. Also the health hazards of using pooled human serum must be considered. The use of carbon assimilation tests is time consuming and reading can prove difficult, and is therefore undesirable to perform in routine laboratories.

Improved tests for *C. albicans* have recently been developed around two bases; immunological (eg enzyme linked immuno sorbent assay (ELISA), latex agglutination), and by enzymic profiles. The simplest have proved to be the enzyme tests. The colorimetric/fluorimetric colours produced are very easy to read and interpret by staff not fully mycologically trained.
In 1990, Rambach found that use of chromogenic substrates for the differentiation of *Salmonella* species was more desirable than the traditional biochemical plate methods. On this basis, a similar method has now been developed for the detection of pathogenic yeasts. MAST ID CHROMagar® *Candida* is a multi-chromogen medium incorporating species specific chromogenic substrate systems enabling individual colonies to be rapidly identified by the colouring acquired during growth as well as colonial morphology. The medium allows identification and differentiation of *C. albicans* and *C. tropicalis* from other *Candida* species and other yeasts.

Furthermore, differentiation of other *Candida* species is possible due to the range of colours produced especially allowing good discrimination of *C. krusei* and *Trichosporon beigelii*.

**In Use**

Plates are to be dried before use. Pick suspect colonies and streak onto the medium. Incubate for 24-48 hours at 37°C. Optimum colour intensity is achieved after 48 hours incubation.

**Interpretation**

<table>
<thead>
<tr>
<th>COLONY COLOUR</th>
<th>MICRO ORGANISMS</th>
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<tbody>
<tr>
<td>Green</td>
<td>Presumptive of <em>C. albicans</em></td>
</tr>
<tr>
<td>Blue</td>
<td>Presumptive of <em>C. tropicalis</em></td>
</tr>
<tr>
<td>White to Pink</td>
<td>Other species</td>
</tr>
</tbody>
</table>

*C. krusei* may be identified as pale pink to purple crenated, rough spreading colonies with pale edges. *T. beigelii* may be identified as pale “dirty pink” to “dirty green-grey” small colonies which become darker and rough on prolonged incubation (ie 72 hours)°.

**Presentation**

Packs of 10 preweighed sachets. Each sachet for the preparation of 100ml medium

Order Code: IDM40/L

**References**