

## Technical Information

### Soya Peptone Yeast Extract Agar

#### Product Code: DM 1935

**Application:** - Soya Peptone Yeast Extract Agar is recommended for selective isolation of dermatophytes especially *Trichophyton verrucosum* and other pathogenic fungi.

#### Composition\*\*

Ingredients	Gms / Litre
Papaic digest of soyabean meal	10.000
Yeast extract	5.000
Dextrose	40.000
Streptomycin	0.030
Chloramphenicol	0.050
Agar	17.000
Final pH ( at 25°C)	6.6±0.2

\*\*Formula adjusted, standardized to suit performance parameters

#### Principle & Interpretation

Soya Peptone Yeast Extract Agar Dermatophytes are a group of parasitic fungi requiring keratin for growth. They have an ability to infect and survive on the top layer of skin, having dead cells thereby causing superficial infection of skin, hair and nails.

Dermatophytes include *Epidermophyton*, *Microsporum* and *Trichophyton*. The organisms colonize the keratin tissues and inflammation is caused by host response to metabolic byproducts. McDonough and Georg et al (1, 2) recommended addition of antibiotics, chloramphenicol and streptomycin to inhibit bacterial growth and assist primary isolation of dermatophytes and fungi.

It contains papaic digest of soyabean meal, yeast extract and dextrose, all of which supply essential nutrients for the fungal growth. Chloramphenicol and streptomycin have inhibitory action on bacteria (3, 4). Temperature of incubation may affect the sensitivity of certain systemic pathogenic fungi to chloramphenicol (5). It is therefore recommended that incubation should be carried out at 25-30°C.

#### Methodology

Suspend 72.08 grams of dehydrated powder media in 1000 ml distilled water. Mix thoroughly & heat to boil to dissolve the medium completely. Sterilize by autoclaving at 118°C for 15 minutes. Shake well before pour into sterile Petri plates.

#### Quality Control

##### Appearance

Cream to yellow homogeneous free flowing powder.

##### Gelling

Firm, comparable with 1.7% Agar gel.

##### Colour and Clarity

Light amber coloured clear to slightly opalescent gel forms in Petri plates.

##### Reaction

Reaction of 7.2% w/v aqueous solution at 25°C. pH : 6.6±0.2

##### pH Range

6.40-6.80

### Cultural Response

DM 1935: Cultural characteristics observed after an incubation at 25-30°C for 48-72 hours.

Organism	Inoculum (CFU)	Growth	Recovery
<i>Candida albicans</i> ATCC 10231	50-100	good-luxuriant	>=50%
<i>Staphylococcus aureus</i> ATCC 29213	>=10 <sup>3</sup>	inhibited	0%
<i>Trichophyton verrucosum</i> ATCC 36058	-	good-luxuriant	-

### Storage and Shelf Life

**Dried Media:** Store between 15-25°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.

### Further Reading

1. McDonough E. S., Ajello L., Georg L. K., Brinkman S., 1960, J. Lab and Clin. Med; 55: 116.
2. Georg L. K., Ajello L., Papageorge C., 1954, J. Lab and Clin. Med., 44: 422.
3. Cooke W. B., 1954, Antibiot. and Chemother, 4:657.
4. Robinson H. M., Cohen M. M., Robinson R. C. V. and Bereston E. S., 1956, J. Am. Med. Assoc; 160:537.
5. McDonough E. S., Ajello L., Georg L. K., Brinkman S., 1960, Mycopath. Mycolog. Appl., 13:113.

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