

Yeast Extract Soy Agar

For the selective isolation of dermatophytes and other pathogenic fungi

Practical information

| Applications | Categories |
|---------------------|------------------|
| Selective isolation | Pathogenic fungi |
| Selective isolation | Dermatophytes |
| Industry: Clinical | |

Principles and uses

Yeast Extract Soy Agar is used for the selective isolation of dermatophytes and other pathogenic fungi in clinical samples. This medium is becoming a preferred method as the use of antibiotics for suppressing bacteria results in a better recovery of fungal cells, which are sensitive to an acid environment.

Yeast Extract Soy Agar is a modification of Sabouraud Medium and was formulated by Carmichael and Claus for the selective isolation of *Trychophyton verrucosum* as well as other fungi associated with contagious diseases. It contains streptomycin and chloramphenicol, antibiotics that inhibit bacterial growth but allow for the detection of pathogenic fungi.

Soy peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is a source of vitamins, particularly of the B-group. Dextrose is the fermentable carbohydrate providing carbon and energy. Bacteriological agar is the solidifying agent.

Formula in g/L

| | | | |
|----------------------|----|-----------------|------|
| Bacteriological agar | 17 | Chloramphenicol | 0,05 |
| Dextrose | 40 | Soy peptone | 10 |
| Yeast extract | 5 | Streptomycin | 0,03 |

Preparation

Suspend 72 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 118°C for 15 minutes. Cool to 45-50°C, mix well and dispense into plates.

Instructions for use

- Inoculate plates with sample and incubate at 25–30°C for up to 2-5 days.

Quality control

| Solubility | Appearance | Color of the dehydrated medium | Color of the prepared medium | Final pH (25°C) |
|------------|-------------|--------------------------------|------------------------------|-----------------|
| w/o rests | Fine powder | Beige | Amber, slightly opalescent | 6,6±0,2 |

Microbiological test

Incubation conditions: (25-30 °C / 2-5 days)

| Microorganisms | Specification |
|--|------------------|
| <i>Candida albicans</i> ATCC 10231 | Good growth |
| <i>Escherichia coli</i> ATCC 25922 | Inhibited growth |
| <i>Trychophyton mentagrophytes</i> ATCC 9533 | Good growth |

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

Cooke, W.B., and A. R. Brazis. 1968. Occurrence of molds and yeasts in dairy products. *Mycopathol. Mycol. Appl.* 35: 281-289. International Dairy Federation. Standard Methods ISO/DIS 6611.

Beuchat, L.R. 1979. Comparison of acidified and antibiotic-supplemented potato dextrose agar from three manufactures for its capacity to recover fungi from foods. *J. Food Prot.* 42: 427-428.

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