

Phytone™ Yeast Extract Agar

Intended Use

Phytone Yeast Extract Agar is used for the selective isolation of dermatophytes, particularly *Trichophyton verrucosum*, and other pathogenic fungi from routine clinical specimens.

Summary and Explanation

Carmichael and Kraus modified the classical formula of Sabouraud medium in order to selectively recover *Trichophyton verrucosum*, one of the species associated with ringworm, from clinical specimens.^{1,2}

Phytone Yeast Extract Agar is used in Petri dishes for early detection of dermatophytes. Skin scrapings or hairs are rubbed over the surface of the agar. Blood agar plates should be inoculated in parallel to permit isolation of pyogenic cocci which may also be present. The medium is of value for increasing the yield of isolation of ringworm organisms and for early identification, especially of *T. verrucosum*.

Principles of the Procedure

The incorporation of the antimicrobial agents streptomycin and chloramphenicol in the medium inhibits growth of bacterial species and promotes detection of pathogenic fungi.

User Quality Control

Identity Specifications

BBL™ Phytone™ Yeast Extract Agar

Dehydrated Appearance:	Fine, homogeneous, free of extraneous material.
Solution:	7.2% solution, soluble in purified water upon boiling. Solution is light to dark, yellow to tan, clear to moderately hazy.
Prepared Appearance:	Light to dark, yellow to tan, clear to moderately hazy.
Reaction of 7.2% Solution at 25°C:	pH 6.6 ± 0.2

Cultural Response

BBL™ Phytone™ Yeast Extract Agar

Prepare the medium per label directions. Inoculate with fresh cultures as described below and incubate at 25 ± 2°C for 7 days.

ORGANISM	ATCC™	INOCULUM CFU	RECOVERY
<i>Aspergillus brasiliensis (niger)</i>	16404	Undiluted	Good
<i>Candida albicans</i>	10231	Undiluted	Good
<i>Penicillium roquefortii</i>	9295	Undiluted	Good
<i>Staphylococcus aureus</i>	25923	10 ⁴ -10 ⁵	Complete inhibition
<i>Trichophyton verrucosum</i>	38485	Undiluted	Good

Formula

BBL™ Phytone™ Yeast Extract Agar

Approximate Formula* Per Liter	
Papaic Digest of Soybean Meal.....	10.0 g
Yeast Extract	5.0 g
Dextrose	40.0 g
Streptomycin.....	0.03 g
Chloramphenicol.....	0.05 g
Agar	17.0 g

*Adjusted and/or supplemented as required to meet performance criteria.

Directions for Preparation from Dehydrated Product

1. Suspend 72 g of the powder in 1 L of purified water. Mix thoroughly.
2. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder.
3. Autoclave at 121°C for 15 minutes.
4. Test samples of the finished product for performance using stable, typical control cultures.

Procedure

Inoculate skin scrapings, hair or other materials directly on the agar surface of Petri plates. Incubate plates in an aerobic atmosphere at 25-30°C or at 30-37°C if *T. verrucosum* is suspected.

Expected Results

After the plates have been incubated for 2-3 days, examine them directly under the microscope. If microcolonies are observed, they should be transferred to fresh plates before the original plates become overgrown.

References

1. Carmichael and Kraus. 1959. Alberta Med. Bull. 24:201.
2. Carmichael. 1961. Mycopathologia 14:129.

Availability

BBL™ Phytone™ Yeast Extract Agar

Cat. No. 211546 Dehydrated – 500 g