



Pagano Levin Base

M1390

Pagano Levin Base is used for isolating and differentiating *Candida* species.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	10.000
Yeast extract	1.000
Dextrose	40.000
Agar	15.000
Final pH (at 25°C)	6.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 33 grams in 490 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C. Aseptically add 5 ml of TTC solution 1% (FD057). Mix well. Then add 5 ml of rehydrated contents of 1 vial of Neomycin Supplement (FD174). Mix well and pour into sterile Petri plates.

Principle And Interpretation

Pagano Levin Base prepared as per the formulation of Pagano, Levin and Trejo (1) is used for the isolation and differentiation of *Candida* species. Differentiation is based on the ability of *Candida* species to reduce TTC (2, 3, 5-Triphenyl Tetrazolium Chloride). TTC is a redox indicator which is colourless in the oxidized form and when reduced forms an insoluble red triphenyl formazan compound which appears as red coloured colonies (2). Pagano Levin Base is superior to Sabouraud Dextrose Agar in detecting yeast species (3).

Peptic digest of animal tissue provides carbon and nitrogen source required for good growth of *Candida* species. Yeast extract provides vitamins and cofactors. Dextrose is an energy source. TTC Solution 1%, added to the basal medium, facilitates the differentiation of yeast colonies based on the color change that occurs when *Candida* reduces TTC. Neomycin helps to inhibit growth of most of the accompanying bacteria.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light amber coloured slightly opalescent gel forms in Petri plates

Reaction

Reaction of 6.6% w/v aqueous solution at 25°C. pH : 6.0±0.2

pH

5.80-6.20

Cultural Response

M1390: Cultural characteristics observed with added TTC solution (FD057) and Neomycin Supplement (FD174), after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of Colony
Cultural Response				
<i>Candida albicans</i> ATCC 10231	50-100	good	40-50%	cream to light pink
<i>Candida parapsilosis</i>	50-100	good	40-50%	red to maroon

<i>Candida krusei</i> ATCC 24408	50-100	good	40-50%	white to cream spreading
<i>Candida tropicalis</i> ATCC 750	50-100	good	40-50%	red to maroon
<i>Escherichia coli</i> ATCC 25922	$\geq 10^3$	inhibited	0%	

Storage and Shelf Life

Store below 30°C in tightly closed container and use freshly prepared medium. Use before expiry date on the label.

Reference

1. Pagano J., Levin J. V. and Trejo W., 1958, *Antibiot. Annu.* 1957-1958:137.
2. MacFaddin J.F, 1985, *Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria*, Vol. 1, Williams and Wilkins, Baltimore
3. Samaranayake L.P., MacFarlane T.W. and Williamson M.I., 1987, *J. Clin. Microbiol.* 25:162.

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