

## POTATO DEXTROSE AGAR (EUROPEAN PHARMACOPOEIA)

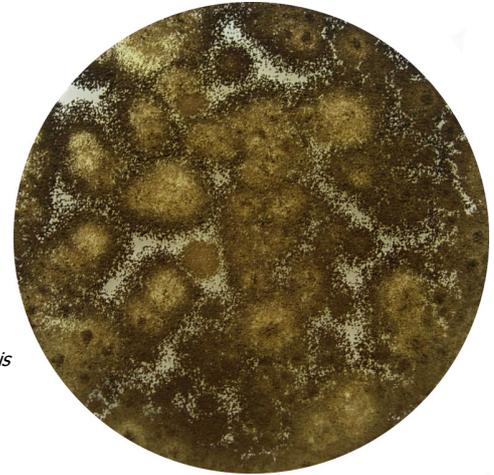
**CAT N°: 1022**

For the identification, cultivation and enumeration of yeast and molds in foods

### FORMULA IN g/l

Dextrose	20.00	Bacteriological Agar	15.00
Infusion From Potatoes ( 200 g)	4.00		

**Final pH 5.6 ± 0.2 at 25°C**



*Aspergillus brasiliensis*  
ATCC 16404

### PREPARATION

Suspend 39 grams of 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 118-121°C for 15 minutes. Cool to 45-50°C, mix well and dispense into plates. The prepared medium should be stored at 8-15°C. The color is amber, slightly opalescent.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

### USES

POTATO DEXTROSE AGAR is recommended by APHA and F.D.A for culturing yeast and molds from dairy products and foods. It can also be used in the identification of fungi and yeasts in parallel with their cellular morphology, or in methods of micro cultivation in slides.

This general purpose medium can be supplemented with acid or antibiotics to inhibit bacterial growth. The nutritionally rich base (potato infusion) encourages a very rich fungal and mold growth. Dextrose is the fermentable carbohydrate as a carbon and energy source. Bacteriological Agar is the solidifying agent.

Inoculate the medium with test organisms. Incubate plates at 25-30°C for 18-48 hours. If the cultivation of *Trichophyton mentagrophytes* is desired, incubate up to 5-7 days.

Yeasts will grow as cream to white colonies. Molds will grow as fuzzy colonies of various colors. To differentiate and isolate genus and species, carry out further Microscopic and Biochemical tests.

When the medium is to be used for the enumeration of yeasts and molds, the pH should be lowered to inhibit bacteriological growth. Add to the cooled to 45 - 50°C sterilized medium, approximately 14 ml of a sterilized 10% solution of tartaric acid to obtain a pH of 3.5. Do not reheat the adjusted medium after adding the acid because the agar may hydrolyze and not solidify.

The European Pharmacopoeia recommends in Paragraph 2.6.12 "Microbiological examination of non - sterile products: Microbial enumeration test. Preparation and use of test microorganisms": inoculation of *Aspergillus brasiliensis* at 20-25°C for 5-7 days or until good sporulation is achieved.

## MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 25-30°C and observed after 18-48 hours.

Microorganisms	Growth
* <i>Aspergillus brasiliensis</i> ATCC 16404	Good
<i>Candida albicans</i> ATCC 10231	Good
<i>Saccharomyces cerevisiae</i> ATCC 9763	Good
* <i>Trychophyton mentagrophytes</i> ATCC 9533	Good

\*According to European Pharmacopoeia Incubation at 20-25 °C 5-7 days or until good sporulation is achieved.

\*\* Incubate at 25-30°C during 5-7 days.

## BIBLIOGRAPHY

American Public Health Association. Standard Methods for the Examination of Dairy Products, 13th Ed. APHA, Inc. New York, 1960.

American Public Health Association. Recommended Methods for the Microbiological Examination of Foods. APHA, New York, 1958.

Association of Official Analytical Chemists. 1995. Bacteriological analytical manual, 8th ed. AOAC International. Gaithersburg, MD.

European Pharmacopoeia 7.0



## STORAGE

Once opened keep powdered medium closed to avoid hydration.

