Technical Data Sheet

Potato dextrose agar (Ph.Eur.)

Art. **84651.0500**

DEHYDRATED MEDIUM

Also known as
PDA

Intended use
Medium for the detection and enumeration of yeast and moulds in food, dairy products and other samples, acc. to the Pharm. Harm.

Formula * - Composition in g/L
Potato peptone 4.0 (1)
Glucose 20.0
Agar 15.0

Final pH 5.6 ±0.2 at 25 °C

(1) Equivalent to 200 g infusion from potatoes

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

Instructions for preparation
Suspend 39 g of powder in 1 l of purified water and bring to the boil. Distribute into suitable containers and sterilise in the autoclave at 121°C for 15 minutes. Do not overheat.

Principle of the method and general information
Potato Dextrose Agar is a weakly selective medium for fungi due to its high sugar content and acidic pH. Pigment production and aerial mycelium development is enhanced by the potato peptone, especially in *Fusarium*, *Aspergillus* and *Penicillium* species.
The selectivity can be increased by adding antibiotics such as chloramphenicol or tetracycline, or by simply decreasing the pH to an acidic level. At pH 3,5 bacterial growth is almost totally inhibited without a significant effect on fungi. This acidification can be obtained by the aseptic addition of an adequate amount of organic acid to the medium after sterilization: 10-15 mL/L of a 10% sterile solution of tartaric or lactic acid is usually sufficient.
After its acidification the medium should not be overheated or reheated since it can hydrolyze the agar causing a pontential loss in the solidification property of the medium.
The formulation has been adopted by the ISO 16212 standard that recommends adding chloramphenicol to the medium to increase the selectivity.

Instruction for use
Distribute the diluted samples into sterile Petri plates. Pour molten agar cooled to 45-50 °C in the plates and gently mix to homogenise the mixture. After solidification, plates are incubated for 5-7 days at 20-25 °C to permit the complete development of the fungal colonies.
Proceed according to normative or methodology of the laboratory.

Quality control

Incubation temperature: 20-25°C **Incubation time:** 48 h-5-7 days

Inoculum: Practicalrange 100 ±20 CFU. Min. 50 CFU (productivity), according to ISO 11133:2014 and Ph. Eur. Spiral Plate Method.

Microorganism	Growth	Remarks
Candida albicans ATCC® 10231	Productivity > 0.70	-
Saccharomyces cerevisiae ATCC® 9763	Productivity > 0.70	-
Aspergillus brasiliensis ATCC® 16404	Productivity > 0.70	Black sporulation at 5 days

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References

· ATLAS R.M. (1995) Handbook of Microbiological Media for the Examination of Food. CRC Press. Boca Raton. Florida. USA.
· EUROPEAN PHARMACOPOEIA 8.0 (2014) 8th ed. § 2.6.13. Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. EDQM. Council of Europe. Strasbourg.
. ISO 11133:2014. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
· ISO 16212 Standard (2017) Cosmetics - Microbiology - Enumeration of yeast and mould.
· RICHARDSON, G.H. (1985) Standard Methods for the examination of dairy products 15th ed. APHA. Washington.
· USP 33 - NF 28 (2011) <62> Microbiological examination of non-sterile products: Test for specified microorganisms. Harmonised Method. USP Corp. Inc. Rockville. MD. USA.
· VANDERZANT, C. & D.F. SPLITTSTOESSER (1992) Compendium of methods for the microbiological examination of foods. 3rd ed. APHA. Washington.

Storage conditions

Keep tightly closed, away from light, in a dry place (4-30 °C).

Ordering information

84651.0500 Potato dextrose agar (Ph.Eur.) Bulk of 500 g.
Note: For supplements see the section - Instructions for preparation.