Wort Agar

Art. No. 01-132

Specification

General solid medium for the cultivation of fungi.

Formula* in g/L

Malt extract	15,00
Casein peptone	0,75
Maltose	12,75
Dextrine	2,75
Dipotassium hydrogen phosphate	1,00
Ammonium chloride	1,00
Agar	17,00

Final pH 4,8 ± 0,2 at 25°C

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

Directions

Suspend 50,25 g of powder in 1 L of distilled water and add 2-3 mL of glycerol and bring to the boil to dissolve completely. Distribute into final containers and sterilize in the autoclave at 121°C for 15 minutes. **Do not overheat.** Prolonged heating will diminish the gelling strength of the medium.

Description

Wort Agar is used for the cultivation, isolation and enumeration of yeast and moulds.It is particularly well adapted for counting osmophilic yeast in butter, sugar and syrups, in lemonade and more generally in sweet or soft drinks.

For a more selective utilization it is possible to adjust the pH to 4,5 or 3,5 but this acidification can inhibit the agar solidification. In order to disminish this effect it is advisable to supplement the medium with 10 g/L Bacteriological Agar (Art. No. 07-004). Never heat the medium after adding acid, in order to prevent the loss of solidifying properties of the agar. The acid pH inhibits the growth of bacteria and favours that of yeast.

Technique

A decimal dilution series is performed from the original simple. Aliquots of 1 mL pf each dilution are deposited in sterile Petri dishes. The medium melted and cooled to 45-50°C is poured into the dishes and the mixture is homogenized and allowed to set. Read the plates after incubation for 5 days at 25°C.

References

- ATLAS, R.M., L.C. PARKS (1993) Handbook of Microbiological Media. CRC Press, Inc. London.
- ISO/TS 11133-1: 2009. Microbiology of food and animal feeding stuffs.- Guidelines on preparation and production of culture media. Part 1: General guidelines on quality assurance for the preparation of culture media in the laboratory.
- ISO/TS 11133-2: 2003 Corr. 2004. Microbiology of food and animal feeding stuffs.- Guidelines on preparation and production of culture media. Part 2: Practical guidelines on performance testing of culture media.
- MBAA (2002) The Practical Brewer. 3rd ed. Masters Brewers Association of the Americas. Saint Paul. Minnesota.
- PASCUAL ANDERSON. Mª.Rº. (1992) Microbiología Alimentaria. Díaz de Santos, S.A. Madrid.
- RAPP, M. (1974) Indikator-zusätze zur Keimdifferenzierung auf Würze und Malzextrakt-Agar. Milchwiss. 29:341-344.
- SCARR (1959) Selective media used in the microbiological examination of sugar products. J. Sci. Food Agric. 10:678-681.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4°C to 30°C and <60% RH).

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Quality control

Incubation temperature: 25°C ± 2,0
Incubation time: 48 h - 5 days
Inoculum: 10-100 CFU. Spiral Plate Method (according to standard ISO/TS 11133-1/2)

Microorganism	Growth	Remarks
Candida albicans ATCC 10231	Productivity > 0.70	-
Saccharomyces cerevisiae ATCC 9763	Productivity > 0.70	-
Penicillium aurantiogriseum ATCC 16025	Productivity > 0.70	-
Aspergillus brasiliensis ATCC 16404	Productivity > 0.70	-

Aspergillus brasiliensis ATCC 16404

Saccharomyces cerevisiae ATCC 9763

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