

Wort Agar

Wort Agar Recommended for the cultivation and enumeration of yeasts.

REF: BS.1/NZ01.100.0100	100 Gram	REF: BS.1/NZ01.250.0250	250 Gram
REF: BS.1/NZ01.500.0500	500 Gram		

PRINCIPLE AND INTERPERTATION :

Wort Agar is used for the cultivation, isolation and enumeration of yeast and moulds. According to Rapp (7), addition of certain dyes to Wort Agar allows differentiation between yeast and bacterial colonies. It is particularly well adapted for counting osmophilic yeast in butter, sugar and syrups, in lemonades and more generally in sweet or soft drinks. Wort Agar is a medium equivalent to the medium described by Parfitt (6) and equally suitable for the cultivation and enumeration of yeasts. Parfitt investigated the relative merits of Wort Agar and other media for the count of yeasts and moulds in butter, and recommended the use of dehydrated whey, malt or wort for the purpose. Scarr (8) employed a modified Wort Agar (Osmophilic Agar) for the examination of sugar products for presence of osmophilic yeasts. For more selective utilization, it is possible to adjust the pH to 4.5 or 3.5 by adding 10 ml/l of a 10% solution of lactic acid or tartaric acid before sterilization. Yeasts grow well in culture media containing dextrose or maltose in an acidic environment. In this medium, peptone and malt extract provide nitrogenous and other nutrients for the growth of yeasts. Dextrin and maltose are the fermentable carbohydrates. The agar medium should not be re-liquified as it causes alteration with hydrolysis of agar at low pH and results in failure of agar to gel when cooled (5). For the microbiological examination of butter, make suitable dilutions in quarter strength Ringer solution. Transfer 1 ml of each dilution to a separate Petri dish; add 15 ml of melted Wort Agar, cooled to 45-48°C, mix by rotary movements in a horizontal plane. Incubate the plates and subsequently count the colonies.

MEDIA COMPOSITION

Item	Formula per liter of medium
Malt extract	15.00 gm
Peptone	0.780 gm
Maltose	12.750 gm
Dextrin	2.750 gm
Dipotassium hydrogen phosphate	1.00 gm
Ammonium chloride	1.00 gm
Agar	15.00 gm

Final pH (at 25°C) 4.8 ± 0.2 ** Formula adjusted, standardized to suit performance parameters.

PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental contamination.

S61: avoid release in environment.

For further information, refer to the Wort Agar material safety data sheet.

STORAGE AND STABILITY

BioScien Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

PREPARATION

Suspend 48.28 grams in 1000 ml purified / distilled water containing 2.35 grams of glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour in sterile Petri plates.

Deterioration

The color of BioScien Wort Agar is light yellow to brownish-yellow, appearing as a homogeneous, free-flowing powder. Upon preparation and pouring into Petri plates, it forms a yellow-colored, opalescent gel with a flocculent precipitate

EQUIPMENT REQUIRED NOT PROVIDED

- Sterile petri dishes
- Incubator
- Autoclave

PERFORMANCE CHARACTERISTICS

Cultural characteristics observed with added glycerol after an incubation at 25-30°C for 40-48 hours.

Organisms	Growth
Aspergillus brasiliensis ATCC 16404 (00053)	luxuriant
Candida albicans ATCC 10231 (00054*)	uxuriant
Saccharomyces cerevisiae ATCC 9763 (00058*)	luxuriant

QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control still out of range please contact **BioScien** technical support.

REFERENCE

1. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
2. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

SYMBOLS IN PRODUCT LABELLING		
	For in-vitro diagnostic use	 Number of <n> test in the pack
	Batch Code/Lot number	 Caution
	Catalogue Number	 Do not use if package is damaged
	Temperature Limitation	 Consult Instruction for use
	Expiration Date	
	Manufactured by	