AuSaMicS™ Life Science

PRODUCT DESCRIPTION

AS-1379 | Yeast Extract Agar

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Yeast Extract Agar

Nutritive Solid Medium for Plate Count of Microorganisms in Water

Catalogue Number: AS-1379

Intended Use	Medium Type	Final pH	HS Code
Plate count — microorganisms in water	Nutritive non-selective solid agar	7.2 ± 0.2 at 25 °C	3821.00.00

Intended Use

Yeast Extract Agar is a highly nutritive solid culture medium recommended for the plate count of microorganisms in water. The combination of peptone and yeast extract provides a rich, balanced nutrient environment supporting the growth of a broad range of heterotrophic bacteria, yeasts, and moulds from water, environmental, and food samples.

Formula adjusted and standardised to suit performance parameters and other reliable sources.

Principle of the Medium

Peptone (5.0 g/L)	Primary nitrogen source — enzymatic digest providing peptides and amino acids for broad microbial growth support
Yeast Extract (3.0 g/L)	Supplementary nutrient — supplies B-group vitamins, nucleotides, minerals, and growth factors not present in peptone alone
Agar (15.0 g/L)	Standard gelling agent — provides a firm solid surface for colony isolation, enumeration, and morphological assessment
Combined nutrient system	Peptone + yeast extract delivers a more complete and nutritive environment than yeast extract alone, supporting stressed and slow-growing environmental organisms

Composition (per litre of prepared medium)

Ingredient	CAS Number	Function	Amount (g/L)
Peptone	73049-73-7	Primary nitrogen and carbon source	5.0

Yeast Extract	8013-01-2	Vitamins, growth factors, minerals	3.0
Agar	9002-18-0	Solidifying agent	15.0
Purified Water	7732-18-5	Solvent	q.s. 1 L

Total (without water): 23.0 g/L | Final pH: 7.2 ± 0.2 at 25 °C

Formula adjusted and standardised to suit performance parameters and other reliable sources.

Key Features

- Highly nutritive — peptone + yeast extract combination supports diverse heterotrophic organisms
- Recommended for plate count of microorganisms in water
- Non-selective — broad-spectrum recovery of bacteria, yeasts, and moulds
- Slightly alkaline pH (7.2) — optimised for water sample organisms
- Transparent agar — clear colony observation and morphological assessment from beneath plate
- Compatible with APHA Standard Methods, ISO 8199, and ISO 6222
- Suitable for environmental monitoring and food/beverage QC

Applications

Water Microbiology

- Heterotrophic Plate Count (HPC) of drinking water, wastewater, and environmental water samples
- Total viable count of microorganisms from water treatment systems
- Enumeration of environmental heterotrophs from groundwater, surface water, and process water
- Biofilm organism recovery from water system swabs

Food, Beverage & Environmental QC

- Total viable count from food and beverage matrices
- Yeast and mould enumeration (at 25 °C)
- Environmental monitoring — air, surface, and water samples in production facilities
- Raw material and finished product microbiological testing

Research & Teaching

- Reference strain maintenance and stock culture storage
- Demonstration of colony morphology and environmental microbial diversity

- Comparison studies with R2A Agar and Nutrient Agar

Preparation Instructions

1. Dissolve 23.0 g of dehydrated medium in 1 litre of purified water.
2. Heat with stirring until completely dissolved. Do not overheat.
3. Sterilise by autoclaving at 121 °C for 15 minutes.
4. Cool to 47–50 °C in a water bath before pouring.
5. Pour approximately 15–20 mL into each sterile Petri dish on a level surface.
6. Allow to solidify, then invert plates and store at 2–8 °C until use.
7. Pre-dry plates in a laminar flow cabinet or incubator at 37 °C for 30 minutes if surface moisture is present.

Typical Performance & Incubation

Application	Temperature	Duration	Typical Observation
Heterotrophic Plate Count — water	20–22 °C	5–7 days	Diverse colony morphologies; total count recorded
Total Viable Count — food/beverage	30–35 °C	48–72 h	Diverse bacterial colonies
Yeast & Mould Count	25 °C	5 days	Yeast: smooth, cream; Moulds: mycelial, coloured
Environmental monitoring	30–35 °C	48–72 h	Representative environmental flora

Organism Performance

Organism	ATCC No.	Expected Growth	Incubation
Escherichia coli	25922	Good — cream/white colonies	35 °C, 48 h
Staphylococcus aureus	25923	Good — cream/golden colonies	35 °C, 48 h
Pseudomonas aeruginosa	27853	Good — green pigment	35 °C, 48 h
Bacillus subtilis	6633	Good — rough spreading colonies	35 °C, 48 h
Saccharomyces cerevisiae	9763	Good — cream smooth colonies	25 °C, 5 days

Aspergillus brasiliensis	16404	Good — black sporulating colonies	25 °C, 5 days

Storage & Stability

Dehydrated powder	15–30 °C, tightly sealed, dry, original container
Prepared plates	2–8 °C, inverted, sealed in bag; use within 2 weeks
Prepared bottled medium	2–8 °C; re-melt in boiling water bath at 50 °C before use
Shelf life (powder)	As per labelled expiry date
Do not use if	Plates cracked, contaminated, pH shifted, or agar discoloured

Quality & Compliance

Manufactured under controlled conditions for batch-to-batch consistency. Performance tested against ATCC reference organisms prior to release. Compatible with APHA Standard Methods for the Examination of Water and Wastewater (HPC), ISO 8199, and ISO 6222.

Customs & Trade Information

HS / AHECC Code	3821.00.00
Description	Prepared culture media for the development or maintenance of microorganisms
Country of Origin	Australia

Disclaimer