AuSaMicS™ Life Science

Technical Data Sheet
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Ascospore Agar

Catalogue No. AS-1436 · Dehydrated Culture Medium

Section 1 — Product Identification

Product Name	Ascospore Agar
Catalogue Number	AS-1436
Product Format	Dehydrated powder
Intended Use	Selective detection and isolation of ascosporogenous yeasts from food, beverage, environmental, and industrial samples
Manufacturer	AuSaMicS Pty Ltd
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Section 2 — Mode of Action

Ascospore Agar is a selective medium formulated to promote ascosporogenesis in yeast species. Potassium acetate serves as the primary carbon source and acts as a sporulation stimulus by creating a nutritionally stressful environment that triggers yeast cells to form ascospores. Yeast extract and dextrose provide minimal nutrition to maintain cell viability during incubation. The high agar concentration (30 g/L) produces a firm medium that supports colony morphology examination. The selective pressure imposed by limited nutrients inhibits non-sporulating yeasts and most bacteria, enabling the detection of Zygosaccharomyces, Saccharomyces, and related ascosporogenous genera from processed food and beverage samples.

Section 3 — Composition

Ingredient	g / L
Yeast Extract	2.5
Dextrose (Glucose)	1.0
Potassium Acetate	10.0
Agar	30.0
Total (per litre)	43.5 g

Final pH at 25°C: 6.4 ± 0.2

Section 4 — Preparation

1. Suspend 43.5 g of the dehydrated powder in 1 litre of distilled or deionised water.
2. Mix thoroughly and heat to boiling with agitation until completely dissolved.
3. Sterilize by autoclaving at 121°C for 15 minutes.
4. Allow to cool to 45–50°C before pouring into Petri dishes.
5. Allow plates to solidify and dry before use.

Note: Do not overheat — excessive heating may reduce gel strength and alter pH.

Section 5 — Quality Control

Organism (ATCC)	Inoculum (CFU)	Incubation	Expected Result
Saccharomyces cerevisiae (9763)	≤100	25±2°C / 3–5 days	Good growth · ascospore formation
Zygosaccharomyces rouxii (2623)	≤100	25±2°C / 3–5 days	Good growth · ascospore formation
Escherichia coli (25922)	≤100	25±2°C / 3–5 days	Inhibited / No growth
Staphylococcus aureus (25923)	≤100	25±2°C / 3–5 days	Inhibited / No growth

Dehydrated Appearance: Cream-white to light beige, free-flowing homogeneous powder.
Prepared Appearance: Light amber, clear to slightly opalescent gel.

Section 6 — Storage

Dehydrated Powder	Store at 15–25°C in a tightly sealed container, away from moisture and direct sunlight
Prepared Medium	Store at 2–8°C; use within 4 weeks of preparation
Shelf Life	Refer to expiry date on label

Section 7 — Applicable Standards

Standard	Relevance
ISO 11133:2014	Culture media performance testing — QC criteria
ISO 21527-2:2008	Yeasts and moulds in food with low water activity (osmotolerant)
ISO 7954:1987	Enumeration of yeasts and moulds (general method)

Section 8 — Literature / References

#	Reference	Relevance
1	Lodder J, Kreger-van Rij NJW. The Yeasts: A Taxonomic Study. Amsterdam: North-Holland; 1952.	Classical taxonomy of ascosporogenous yeasts
2	International Organization for Standardization. ISO 21527-2:2008. Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2: Colony count technique in products with water activity less than or equal to 0.95. Geneva: ISO; 2008.	Primary standard for osmotolerant yeast enumeration
3	International Organization for Standardization. ISO 11133:2014. Microbiology of food, animal feed and water — Preparation, production, storage and performance testing of culture media. Geneva: ISO; 2014.	QC performance criteria
4	Beuchat LR. Thermal inactivation of yeasts in fruit juices supplemented with food-grade additives. J Food Sci. 1981;46(4):1137–1139.	Heat-resistant yeast detection in food

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