AuSaMicS™ Life Science

TECHNICAL DATA SHEET

AS-1340

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Rose Bengal Chloramphenicol Agar (RBC)

Selective Medium for Enumeration of Yeasts and Moulds — Neutral pH

Document Control	Version 1.0 · Reviewed 04 September 2026
Technical Review	Hassan Salimi, Technical Director, AuSaMicS Pty Ltd (18+ years culture media formulation)

Product Identification

Product Name	Rose Bengal Chloramphenicol Agar (RBC)
Catalogue Number	AS-1340
HS Code	3821.00.00
Medium Type	Selective fungal agar
Format	Dehydrated powder
Manufacturer	AuSaMicS Pty Ltd, Melbourne, Australia

Intended Use

Selective medium for the isolation and enumeration of yeasts and moulds from food, water, environmental, cosmetic, and pharmaceutical samples.

Mode of Action

Peptone and dextrose support fungal growth. Rose Bengal restricts colony spreading and height, particularly of fast-growing moulds, improving recovery of discrete colonies. Chloramphenicol, a heat-stable broad-spectrum antibiotic, suppresses bacterial contaminants. The neutral pH (7.2 ± 0.2) is a deliberate design feature supporting fungal recovery, distinguishing this medium from acidified alternatives such as DRBC (pH 5.6).

Formulation (per litre)

Ingredient	Quantity	Function
Peptone (Soy / Casein Digest)	5.0 g	General nutrient support
Dextrose	10.0 g	Fermentable energy source
Monopotassium Phosphate (KH2PO4)	1.0 g	Buffering component
Magnesium Sulfate (MgSO4.7H2O)	0.5 g	Mineral source
Rose Bengal	0.05 g	Restricts colony spread; aids visualisation
Chloramphenicol	0.1 g	Inhibits bacterial contaminants
Agar	15.0 g	Solidifying agent

Total: 31.65 g/L

> *Final pH: 7.2 ± 0.2 at 25°C (neutral). Verified against HiMedia Rose Bengal Agar Base (M842), an exact composition match, and independently against Hardy Diagnostics (7.2 ± 0.3). This is NOT the same as DRBC Agar, which is acidified to pH 5.6 as part of a different, dichloran-modified formulation — the two media should not be confused.*

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Preparation

- Suspend 31.65 g of dehydrated medium in 1 L purified water
- Heat with agitation and boil for about 1 minute until completely dissolved
- Heat-labile chloramphenicol: autoclave the base at 121°C for 15 minutes, cool to 45–50°C, then aseptically add sterile chloramphenicol solution
- Heat-stable chloramphenicol format: autoclave the complete medium per the validated procedure
- Mix thoroughly and pour into sterile Petri plates

Incubation Conditions

Parameter	Condition
Temperature	25–28°C
Time	3–5 days standard; up to 7 days for slow-growing fungi
Light	Protect prepared plates from excessive light exposure

Quality Control — Cultural Response

Organism	ATCC No.	Expected Result
Aspergillus niger	16404	Good growth
Candida albicans	10231	Good growth
Escherichia coli	25922	Inhibited / no growth (bacterial suppression control)

RBC Agar vs DRBC Agar

Property	RBC Agar (this product)	DRBC Agar
Final pH	7.2 ± 0.2 (neutral)	5.6 ± 0.2 (acidic)
Dichloran	Not present	0.002 g/L — restricts spreading moulds
Rose Bengal	0.05 g/L	0.025 g/L (halved vs RBC)

Storage & Shelf Life

Dehydrated medium	10–30°C, dry, tightly sealed — 24 months
Prepared plates	2–8°C, protected from light — use within 3 months for optimal recovery

Limitations & Technical Considerations

- No spreading-mould control — unlike DRBC, RBC contains no dichloran, so fast-spreading moulds may still overgrow plates at high fungal loads.
- Chloramphenicol format matters — heat-labile chloramphenicol must be added after autoclaving, not before.
- Short prepared-plate shelf life — use within 3 months of preparation for optimal recovery.
- Not diagnostic for mycotoxin producers — enumerates yeasts and moulds generally; does not select for or identify specific toxigenic species.

Literature & References

- Jarvis, B. (1973). Comparison of an improved rose bengal-chlortetracycline agar with other media for the selective isolation and enumeration of moulds and yeasts in foods. Journal of Applied Bacteriology, 36, 723–727.
- Smith, N.R., Dawson, V.T. (1944). The bacteriostatic action of rose bengal in media used for the plate count of soil fungi. Soil Science, 58(6), 467–471.
- United States Pharmacopeia. USP <61> Microbiological Examination of Nonsterile Products: Microbial Enumeration Tests.
- U.S. Food and Drug Administration. Bacteriological Analytical Manual (BAM), Chapter 18: Yeasts, Moulds and Mycotoxins.

For laboratory use only. Product suitability should be verified by the user under validated sample preparation, incubation, recovery, and regulatory testing conditions. AuSaMicS Pty Ltd (ABN 56 676 640 467) accepts no liability for results obtained outside the stated preparation and storage conditions.