Media Type - Sabouraud Dextrose Agar (SDA) with Neutralisers

cherwell
an analytichem company

Other common names and intro: Sabouraud Dextrose Agar (SDA), developed by Dr. Raymond Sabouraud in 1892, is a selective medium for fungal culture. It is primarily used to isolate dermatophytes, yeasts, and other fungi, both pathogenic and non-pathogenic. Sabouraud Dextrose Agar (SDA) is a complex medium for cultivation and isolation of yeasts and moulds as well as the absence test for Candida albicans.

According to pharmacopoeia and ISO 18415, the neutralisers lecithin, polysorbate (Tween®) 80, histidine and sodium thiosulfate are suitable for neutralisation of disinfectant residues containing the following active agents: aldehydes, bis-biguanides, oxidizing compounds, parabens, phenolic compounds, and quaternary ammonium compounds.

Commonly used in research and clinical studies, SDA traditionally inhibits bacterial growth through its low pH (5.6). The mycological peptone (a mixture of animal and plant peptones) and dextrose helps the rapid growth of the fungi.

The medium contains a variety of neutralising agents to reduce the growth inhibiting effects of a range of potentially interfering or antimicrobial substances.

The base formulation is prepared according to the recommendations of the current European, Japanese and United States Pharmacopoeia (EP, 2.6.12.; JP, 4.05 and USP, 61) and supplemented with neutralisers.

Primary Use: For the determination of the total count of yeasts and moulds on dry, sanitised surfaces and personnel in cleanrooms and isolators.

Key Components:

- **Peptones:** Provide amino acids and nitrogenous compounds for fungal growth.
- **Dextrose:** Energy and carbon source.
- **Neutralisers:** Lecithin, polysorbate 80, histidine, sodium thiosulphate, and pyruvate.
- **pH:** Approximately 5.6, promoting fungal growth and suppressing bacterial growth.

Media Type - Sabouraud Dextrose Agar (SDA) with Neutralisers

cherwell
an analytichem company

Applications:

- Environmental monitoring in cleanrooms.
- Microbial enumeration in pharmaceutical and cosmetic products.
- Monitoring raw materials and finished products for fungal contamination.

Incubation Parameters:

Organism Type	Temperature Range	Incubation Duration
Candida albicans Aspergillus brasiliensis	20-25°C	≤ 5 days

Different guidelines provide recommendations for incubation:

- USP <1116>: Environmental monitoring plates should be incubated at 20–35°C for at least 72 hours.
- FDA Aseptic Guide: Plates for yeast and mould count should be incubated at 20–25°C for 5–7 days.

Incubation conditions can be adjusted as needed but must be validated for specific applications.

Media Type - Sabouraud Dextrose Agar (SDA) with Neutralisers

cherwell
an analytichem company

Appearance:
Prepared medium: slightly opalescent, light amber.

Fungal Species	Colony Colour	Texture	Size (mm)	Shape	Additional Features
Candida Albicans	Cream to white	Smooth, glossy	2-3mm	Circular	Often have a yeasty Odour
Aspergillus fumigatus	Greenish to brown	Powdery	3-5mm	Often radial or with a characteristic “fuzzy” appearance	Conidiophores and conidia visible under microscopy
Trichophyton rubrum	Cream to white	Velvety or cottony	3-5mm	Circular to irregular	Slow-growing, may produce red pigment on reverse
Penicillium spp.	Blue-green to blue	Powdery or granular	3-6mm	Circular to irregular	Produces a characteristic greenish-blue pigment
Cryptococcus neoformans	Cream to pinkish	Smooth, mucoid	2-5mm	Circular to irregular	Often encapsulated, visible capsules under microscopy
Fusarium spp.	Pink to orange	Cottony or fluffy	3-7mm	Irregular	Produces pink or orange pigment. May have aerial hyphae
Mucor spp.	White to Grey	Cottony or fluffy	4-8mm	Irregular	Large, rapidly growing colonies with sporangia

Media Type - Sabouraud Dextrose Agar (SDA) with Neutralisers

Fungal Species	Colony Colour	Texture	Size (mm)	Shape	Additional Features
Malassezia spp.	Cream to yellow brown	Creamy or waxy	1-3mm	Circular	Lipophilic, may produce a “spaghetti and meatballs” appearance under microscopy
Rhizopus spp.	Grey to brown	Cuttony or fluffy	4-9mm	Irregular	Rapid growth, sporangia with characteristic sporangiospores

Fungus or Yeast	Colony Morphology	Colony Elevation	Colony pigmentation
Dermatophytes	Smooth, white, powdery	Flat	White
Yeasts	Smooth, cream-Coloured yeast like	Flat	White, cream or pink
Moulds	Raised, fuzzy	Varies	Green, brown, black or other Colours

Media Type - Sabouraud Dextrose Agar (SDA) with Neutralisers

Ingredients and Typical Amounts:

Ingredients	Amounts (g/L)
Sabouraud Dextrose Agar	65.0
Agar No 1	1g
Polysorbate 80 (Tween 80)	5.0
Lecithin	0.7
Histidine	1.0
Sodium Thiosulfate	0.5

Final pH non irradiated: pH - 6.2 ± 0.2, irradiated Final pH: 5.8 ± 0.2

cherwell

an analytichem company

7 & 8 Launton Business Centre, Murdock Road, Bicester, OX26 4XB, United Kingdom

T. +44 (0)1869 355500 E. sales@cherwell-labs.co.uk

www.cherwell-labs.co.uk