Instructions For Use

ENGLISH

Sabouraud Dextrose Agar

Medium for the cultivation and enumeration of yeasts and moulds

INTENDED PURPOSE

Medium for the cultivation and enumeration of yeasts and moulds from non-clinical specimens.

DESCRIPTION

Sabouraud Dextrose Agar (SDA) is a non-selective isolation medium used for the growth and maintenance of pathogenic and non-pathogenic fungi from nonclinical specimens. It is also used for recovery and total counting of yeasts and moulds in environmental monitoring.
This medium complies with EN ISO 11133 for microbiological examination of food, animal feed and water, where it is described as the main reference medium to carry out quantitative testing on culture media intended for fungi.
Its formula conforms to the recommendations of the harmonized method in the United States Pharmacopoeia (USP), European Pharmacopoeia (EP) and Japanese Pharmacopoeia (JP) for the microbiological examination of non-sterile products. The medium is also available as gamma-irradiated triple bagged plates, particularly suitable for use in restricted areas like isolators and clean rooms.

TYPICAL FORMULA* (Per Litre of Purified Water)

Pancreatic Digest of Casein	5.0 g
Peptic Digest of Animal Tissue	5.0 g
Dextrose	40.0 g
Agar	15.0 g
Final pH 5.6 ± 0.2 at 25°C	

*Adjusted and/or supplemented as required to meet performance specifications.

METHOD PRINCIPLE

Pancreatic digest of casein and peptic digest of animal tissue provide amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Dextrose is an energy source. Agar is the solidifying agent. The high concentration of dextrose and the acidic pH of the medium permit selectivity of fungi.

MATERIALS REQUIRED BUT NOT PROVIDED

Standard microbiological supplies and equipment such as: Test tubes, inoculating loops, incubator, quality control organisms.

TEST PROCEDURE

For use in food, animal feed and water testing

Refer to EN ISO 11133 for specific instructions.

For use in industrial microbiology

Control of non-sterile products

Refer to the procedure described in the harmonized chapters of the Pharmacopoeia.

Passive Air Monitoring

Take the lid off the settle plate and leave the medium exposed to the air for a period of time no longer than 4 hours (settling plates filled with 30 ml of medium may compensate for water loss during extended incubation periods). Plates can be placed according to the 1/1/1 scheme (for 1 h, about 1 above the floor, at least 1 m from the walls or any obstacle).

Surfaces and Personnel Hygiene Monitoring

Take a swab sample for irregular surfaces or use the sampling template 10x10 (ref. 96762) to sample a well defined area of the test surface. Inoculate a 90 mm plate by streaking the swab over the agar surface. Furthermore, the medium is suitable for personnel hygiene monitoring to detect microbial contamination of gloves or hands e.g. in a 5-finger-print.

Incubate the plates at 20-25°C for 5-7 days or at 30-35°C for 24-48 hours.

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INTERPRETING RESULTS

Transfer of growth from slants to plated media may be required in order to obtain pure cultures of fungi. Examine for fungal colonies exhibiting typical microscopic and colonial morphology. Biochemical tests may be required for final identification.
The total combined yeasts/moulds count (TYMC) is considered to be equal to the number of CFU found per each plate. When an acceptable criterion for microbiological quality is prescribed it is interpreted as follows:

- 10^1 CFU: maximum acceptable count = 20;
- 10^2 CFU: maximum acceptable count = 200;
- 10^3 CFU: maximum acceptable count = 2000, and so forth.

In procedures intended for environmental and personnel hygiene monitoring, observe daily for the formation of colonies.

STORAGE

Store prepared plates at 10-25°C away from direct light in their original pack until just prior to use. Do not use the product beyond its expiry date on the label or if product shows any evidence of contamination or any sign of deterioration.

SHELF LIFE

55 mm contact plates and 90 mm plates: 9 months
60 mm plates: 6 months

QUALITY CONTROL

Appearance of prepared medium: Light amber, slightly opalescent.

Expected Cultural Response:

Control strain		Inoculum	Incubation	Criteria
Saccharomyces cerevisiae	WDCM 00058; (ATCC® 9763; NCTC 10716)	50-100 CFU	3-5 days / 22.5 ± 2.5°C	Good Growth ($P_R \geq 0.7$)
Aspergillus brasiliensis	WDCM 00053; (ATCC® 16404)		72 ± 2 h / 22.5 ± 2.5°C	
Candida albicans	WDCM 00054; (ATCC® 10231)		46 ± 2 h / 22.5 ± 2.5°C	
Candida albicans	WDCM 00054; ATCC® 10231		24 - 48 h / 32.5 ± 2.5°C	

A productivity ratio (P_R) of 0.7 is equivalent to a recovery rate of 70%.
Please refer to the actual batch related Certificate of Analysis (CoA).

PERFORMANCE CHARACTERISTICS

Performance testing of Sabouraud Dextrose Agar was carried out using the QC strains listed above. The results obtained met the established criteria.

LIMITATIONS

Invalid results can be caused by poor specimen quality, improper sample collection, improper transportation, improper laboratory processing, or a limitation of the testing technology. The operator should understand the principles of the procedures, including its performance limitations, in advance of operation to avoid potential mistakes.
Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.
Incubation temperature may influence the recovery of fungi. While many yeasts grow well at temperatures between 30–37 °C, some filamentous fungi may grow more optimally at temperatures ≤ 30 °C.
The relatively high carbohydrate content of the medium may not support the optimal recovery of certain fastidious fungi. Mixed cultures may occur when samples contain multiple microorganisms.
For further characterization or examination, isolates should be obtained in pure culture.

WARNING AND PRECAUTIONS

For professional use only. Operators must be trained and have certain experience. Please read the instructions carefully before using this product. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this document. Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

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DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

BIBLIOGRAPHY

See the references at the end of this document.

TABLE OF SYMBOLS

See the table of symbols at the end of this document.

ORDER INFORMATION

Product	Format	Packaging	Ref.
Sabouraud Dextrose Agar	90 mm Plate (triple-wrapped and irradiated)	20 plates	10035S
	90 mm Plate (triple-wrapped and irradiated, filled with 30 ml volume	20 plates	10114S
	60 mm Plate	20 plates	163402
		450 plates	173402
	55 mm Contact Plate	20 plates	15327
	55 mm Contact Plate (triple-wrapped and irradiated)	20 plates (in blister packs)	15327S

Revision History

Revision	Release Date	Change Summary
0	2026-02-27	Updated layout and content, version reset to revision 0. Extended shelf life for gamma-irradiated triple-bagged 90 mm plates

This IFU document and the SDS are available from the online Support Center:

liofilchem.com/ifu-sds

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References

1. EN ISO 11133:2014+Amd1:2018. Microbiology of food, animal feed and water – Preparation, production, storage and performance testing of culture media.
2. European Pharmacopoeia 6.5 2009 2.6.13. Microbiological examination of non-sterile products: Test for specified microorganisms.
3. United States Pharmacopoeia 32 NF 27 2009 Microbiological examination of non-sterile products: Test for specified microorganisms.
4. Japanese Pharmacopoeia 4.05 2008 Microbiological examination of non-sterile products: Test for specified microorganisms. Sabouraud, R. 1892 Ann. Dermatol. Syphilol. 3:1061.

Table of Symbols

	Batch code
	Catalogue number
	Manufacturer
	Use by
	Fragile, handle with care
	Temperature limitation
	Contains sufficient for <n> tests
	Consult instructions for use
	Do not reuse
	Keep away from sunlight

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Liofilchem® s.r.l.

Via Scozia, 64026 Roseto degli Abruzzi (TE) Italy
Tel. +39 0858930745 Fax +39 0858930330 www.liofilchem.com liofilchem@liofilchem.com