



# Sabouraud Dextrose Agar + LTHTh – ICR 90 mm

Ordering number: 1665100020-CN

Sabouraud Dextrose Agar + LTHTh - ICR is designed for the determination of the total aerobic count of yeasts and molds in air via active or passive air monitoring as well as finger-prints of personnel in Isolators and Clean Rooms.

Ten settle plates each with a diameter of 90 mm are triple-bagged in transparent, hydrogen peroxide impermeable bags. The product is gamma-irradiated in the final packaging at a dose of 9-20 kGy. The bags consist of polypropylene with a barrier of PE-EVOH-PE.

To differentiate TSA (Tryptic soy agar) from Sabouraud Dextrose agar (SDA), SDA ICR media are filled in pink colored dish.

The formulation of the basic medium (Peptone Dextrose Agar) 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 neutralizers.

## Mode of Action

Sabouraud Dextrose Agar (SDA) is a complex medium for cultivation and isolation of yeasts and molds. The medium is supplemented with pyruvate in order to provide an efficient neutralization of hydrogen peroxide for use in isolators. Internal studies confirmed the neutralization efficiency of the neutralizers lecithin, polysorbate (Tween®) 80, histidine and sodium thiosulfate for disinfectants containing the following active agents:

- Alcohol (70 % ethanol or isopropyl alcohol)
- Aldehyde
- Dichloroisocyanurate
- Glucoprotamine
- Hydrogen Peroxide
- Peracetic acid
- Phenols (low and high pH value)
- Low concentrated quaternary ammonium compounds

The high concentration of Dextrose in addition with the low pH promotes the growth, the formation of spores (conidia and sporangia) as well as the formation of pigments of yeasts and molds. On the other side the growth of bacteria is inhibited.

## Typical Composition

Casein Peptone	5 g/l
Meat Peptone	5 g/l
Dextrose	40 g/l
Polysorbate (Tween®) 80	5 ml/l
Lecithin	0.7 g/l
Histidine	0.5 g/l
Sodium thiosulfate	0.3 g/l
Agar	18 g/l

The appearance of the medium is clear and yellowish. The pH value is in the range of 5.4-5.8. The medium can be adjusted and/or supplemented according to the performance criteria required.

## Application and Interpretation

The plates are introduced into cleanrooms grade A or B by removing one bag in each material lock. For use in isolators the inner bag has a hole in the sealing to hang up the bag during decontamination. Do not leave plates which are unprotected (unwrapped) in an isolator during decontamination.

Each plate is provided with a label including a data matrix code for paperless plate identification. The code consists of a two-dimensional 24-digit serial number, which harbors the following information:

Digits 1-3: here code N10 (corresponds to article 166510); digits 4-13: lot number; digits 14-18: batch specific individual number; digits 19-24: expiration date (YY/MM/DD).

Please check each agar plate before using it on sterility and pay attention to aseptic handling in order to avoid false positive results.

The plates may be used for passive or active air monitoring as described in USP chapter <1116> or ISO 14698. For active air sampling please follow the guidance of the air sampler. Typically, 1000 liter of air are sampled for quantification of CFU. The exposure time of opened settle plates should be validated with respect to the environmental conditions of the sampling area such as flow rates, temperatures and relative humidity to preclude desiccation. After-

wards the plates are closed and transferred to an incubator. To protect the plates from secondary contamination during transport and incubation outside of the cleanroom zone, sterile transport bags (article number 146509) may be used.

Several recommendations are given by different guidelines for incubation: according to USP <1116> the plates used for environmental monitoring should be incubated between 20 and 35 °C for not less than 72 hours. According to the FDA Aseptic Guide the plates for determination of the total yeast and mold count should be incubated at 20 to 25 °C for 5 to 7 days. Individual incubation conditions can be chosen and should be validated at the application side.

Finally, the number of CFU per plate is examined.

Grown colonies are recommended to be identified.

## Storage and Shelf Life

The product can be used for sampling until the expiry date if stored upright, protected from light and properly sealed at 2 °C to 25 °C.

Condensation can be prevented by avoiding quick temperature shifts and mechanical stress.

Please store the plates at stable temperatures. The plates show minimum water condensation when stored at 15 °C to 25 °C.

The testing procedures as described on the CoA can be started up to the expiry date printed on the label.

## Disposal

Please mind the respective regulations for the disposal of used culture medium (e.g. autoclave for 20 min at 121 °C, disinfect, incinerate etc.).

## Quality Control

Control Strains	ATCC #	Inoculum CFU	Incubation	Expected Result Recovery
Candida albicans	10231	10-100	44-48 h at 20-25 °C	50-200 %
Aspergillus brasiliensis	16404	10-100	70-74 h at 20-25 °C	50-200 %

Please refer to the actual batch related Certificate of Analysis.

## Literature

European Pharmacopoeia: 2.6.12. Microbial examination of non-sterile products (microbial enumeration tests).

ISO 14698-1:2003: Cleanrooms and associated controlled environments - Biocontamination control - Part 1: General principles and methods.

Japanese Pharmacopoeia: 4.05 Microbiological Examination of Non-Sterile Products.

PDA Technical Report No. 13: Fundamentals of an Environmental Monitoring Program.

United States Pharmacopoeia: <61> Microbiological Examination of Non-Sterile Products: Microbial Enumeration Tests; <1116> Microbiological Control and Monitoring of Aseptic Processing Environments.

## Ordering Information

Product	Cat. No.	Pack size
Sabouraud Dextrose Agar + LTHTh - ICR	1665100020-CN	20 x 90 mm plates

Merck Life Science Technologies (Nantong) Co., Ltd  
No. 39 Jiang Gang Rd. Economic Development Zone  
Nantong, Jiangsu, China. 226017, +86 513-69917000  
SigmaAldrich.com

