

## Sabouraud Dextrose Agar (NCM0008)

### Intended Use

Sabouraud Dextrose Agar is used for the cultivation of fungi. Conforms to Harmonized USP/EP/JP performance requirements and is not intended for use in the diagnosis of disease or other conditions in humans.

### Description

A medium recommended by the Harmonized Pharmacopeia for the isolation and identification of *Candida albicans* from non-sterile samples. Conforms to USP/EP/JP performance specification. The medium is commonly abbreviated to SDA. The medium is also used for the preparation and maintenance of fungal test strains as described by the Harmonized Pharmacopeia. The peptone digests and dextrose provide a nutritious base for luxuriant fungal growth and the acidic pH affords selectivity against bacteria. Due to the high carbohydrate content and low pH this medium is highly sensitive to overheating which will cause a drop in the gel strength. According to the Harmonized Pharmacopeia, Sabouraud Dextrose Broth is used as an enrichment broth, with subculture performed onto Sabouraud Dextrose Agar.

### Typical Formulation

Dextrose	40.0 g/L
Peptic Digest of Animal Tissue	5.0 g/L
Pancreatic Digest of Casein	5.0 g/L
Agar	15.0 g/L

Final pH: 5.6 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

### Precaution

Refer to SDS

### Preparation

1. Suspend 65 grams of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 45-50°C.

### Test Procedure

Consult appropriate references for recommended test procedures.

### Quality Control Specifications

**Dehydrated Appearance:** Powder is homogeneous, free flowing and beige.

**Prepared Appearance:** Prepared medium is clear with no precipitate and yellow.

**Expected Cultural Response and USP/EP/JP Growth Promotion Testing:** Cultural response on Sabouraud Dextrose Agar tested at Harmonized USP/EP/JP specified temperatures and incubation times.

# Technical Specification Sheet



<u>MICROORGANISM</u>	<u>ATCC</u>	<u>APPROX. INOCULUM (CFU)</u>	<u>EXPECTED RESULTS</u>	<u>ACTUAL RESULTS</u>
<i>Aspergillus brasiliensis</i>	16404	10-100	70-200%	Meets Expected Result
<i>Candida albicans</i>	10231	10-100	70-200%	Meets Expected Result
<i>Microsporum canis</i>	36299	Point inoculation	Growth	Meets Expected Result
<i>Penicillium roquefortii</i>	10110	Point inoculation	Growth	Meets Expected Result
<i>Saccharomyces cerevisiae</i>	9763	10-100	70-200%	Meets Expected Result
<i>Trichophyton mentagrophytes</i>	9533	Point inoculation	Growth	Meets Expected Result

The organisms listed are the minimum that should be used for quality control testing.

## Results

Yeasts grow creamy to white colonies. Molds will grow as filamentous colonies of various colors. Count the number of colonies and consider the dilution factor (if the test sample was diluted) in determining the yeast and/or mold counts per gram or milliliter of material.

## Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if it is not free flowing, or if the medium has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

## Limitations of the Procedures

1. Some strains may be encountered that grow poorly or fail to grow on this medium.
2. Antimicrobial agents added into a medium to inhibit bacteria may also inhibit certain pathogenic fungi.
3. Avoid overheating a medium with an acidic pH, this may result in a soft medium.

## Storage

Store dehydrated culture media at 2 – 30°C away from direct sunlight. Once opened and recapped, place the container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

## References

1. European Pharmacopoeia 10<sup>th</sup> Edition (2020)
2. United States Pharmacopeia National Formulary 2018: USP 41 NF 36
3. Japanese Pharmacopoeia 17<sup>th</sup> Edition (2017)

