DRBC Agar (BAM)
SKU: 700003045,700003046,700003047,700003048
(NCM0029)

Intended Use

DRBC Agar (BAM) is used for the selective isolation and enumeration of yeasts and molds from foods in a laboratory setting. DRBC Agar is not intended for use in the diagnosis of disease or other conditions in humans.

Description

DRBC Agar (BAM) is based on Dichloran Rose Bengal Chlortetracycline (DRBC) Agar formula described by King, Hocking, and Pitt. DRBC Agar conforms with APHA guidelines for the mycological examination of foods containing chloramphenicol rather than chlortetracycline as proposed by King, Hocking, and Pitt. DRBC Agar is a selective medium, supporting good growth of yeasts and molds.

Typical Formulation

Enzymatic Digest of Animal Tissue	5.0 g/L
Dextrose	10.0 g/L
Monopotassium Phosphate	1.0 g/L
Magnesium Sulfate	0.5 g/L
Rose Bengal	0.025 g/L
Dichloran	0.002 g/L
Chloramphenicol	0.1 g/L
Agar	15.0 g/L

Final pH: 5.6 ± 0.2 at 25°C
Formula is adjusted and/or supplemented as required to meet performance specifications.

Precaution

Refer to SDS

Preparation

1. Suspend 31.6 g 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. DO NOT OVERHEAT.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing, and beige to pink-beige to pink.
Prepared Appearance: Prepared medium is trace to slightly hazy and bright pink.
Expected Cultural Response: Cultural response on DRBC Agar incubated aerobically at 25 - 30°C and examined for growth after 2 - 7 days.

Microorganism	Approx. Inoculum (CFU)	Expected Results
Aspergillus niger ATCC® 16404	Point inoculation	Growth, reduced colony diameter
Bacillus subtilis ATCC® 9372	~ 1000	Inhibited
Candida albicans ATCC® 10231	10 - 300	Growth, may have reduced recovery
Escherichia coli ATCC® 25922	~ 1000	Inhibited
Mucor racemosus ATCC® 42647	Point Inoculation	Growth, reduced colony diameter
Penicillium roquefortii ATCC® 10110	Point Inoculation	Growth, reduced colony diameter
Saccharomyces cerevisiae ATCC® 9763	10 - 300	Growth, may have reduced recovery

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

Test Procedure

1. Inoculate 0.1 mL of appropriate decimal dilutions of the sample in duplicate onto the surface of DRBC Agar plates.
2. Spread the inoculum over the entire surface of plate using a sterile, bent-glass rod.
3. Incubate plates upright at 22 - 25°C. Examine for growth of yeasts and molds after 3, 4, and 5 days incubation.

Results

Colonies of mold and yeast should be apparent within 5 days incubation. Colonies of yeast appear pink from the absorption of Rose Bengal. Report results as colony forming units per gram or milliliter of sample.

Expiration

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

Limitation of the Procedure

1. Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.
2. Protect the prepared medium from light since photodegradation of the Rose Bengal dye produces by-products that are toxic to fungi.

Storage

Store sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. King, A. D., A. D. Hocking, and J. I. Pitt. 1979. Dichloran-rose bengal medium for the enumeration and isolation of molds from foods. Appl. Environ. Microbiol. 37:959-964.
2. Mislivec, P. B., L. R. Beuchat, and M. A. Cousin. 1992. Yeasts and molds, p. 239-249. *In* C. Vanderzant, and D. F. Splittstoesser, (eds.). 2015 Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
3. APHA Technical Committee on Microbiological Methods for Foods, 2015. *Compendium of Methods for the Microbiological Examination of Foods*, 4th Edition, APHA, Washington, D.C.
4. Banks, J.G. R.G. Board. 1985. Preservation by the lactoperoxidase system (LP-S) of a contaminated infant formula. *Letters in Applied Microbiology* 1:81-85.
5. www.fda.gov/Food/ScienceResearch/LaboratoryMethods/BacteriologicalAnalytical manualBAM/default.htm.