

OSMOPHILIC AGAR

CAT N°: 1057

For the research of osmophilic yeasts in foods

FORMULA IN g/l

| | | | |
|---------------|-------|----------------------|-------|
| Fructose | 60.00 | Bacteriological Agar | 15.00 |
| Yeast Extract | 5.00 | | |

Final pH 7.0 ± 0.2 at 25°C

PREPARATION

Suspend 80 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121°C for 15 minutes. The prepared medium should be stored at 2-8°C. The color is amber, slightly opalescent.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

USES

OSMOPHILIC AGAR is a selective medium as it has a high concentration of fructose and it is recommended to enumerate yeasts that develop in media with a high osmophilic pressure. These yeasts can change or affect fruit concentrates, syrups and honey, etc.

Yeast extract provides vitamins, particularly the B-group essential for bacterial growth. Fructose is a fermentable carbohydrate as an energy source. Bacteriological agar is the solidifying agent.

Yeasts are the most common osmophilic microorganisms found in non-ionic environments of high osmolarity, such as foods containing high concentrations of sugar. Osmophilic yeast are responsible for the spoilage of high-sugar foods, such as jams, honey, concentrated fruit juices, chocolate candy with soft centers, etc. Osmophilic yeasts are of economic importance to the food industry.

From 1 gram of food sample, make decimal dilutions and place 1 ml aliquots in Petri dishes and add the cooled medium (45 - 50°C). Swirl gently and allow to solidify. Incubate at 20 ± 2°C for 48 - 72 hours.

This medium is formulated according to the standards of the National Center for Foods and Nutrition (CeNAN) for the total counts of osmophilic yeasts.

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 20 ± 2°C and observed after 48 - 72 hours.

| Microorganisms | Growth |
|---------------------------------------|--------|
| <i>Saccharomyces rouxii</i> ATCC 8383 | Good |
| <i>Saccharomyces mellis</i> | Good |
| <i>Zygosaccharomyces spp</i> | Good |

BIBLIOGRAPHY

Pascual Anderson. "Técnicas para el Análisis Microbiológico de Alimentos y Bebidas" (Centro Nacional de Alimentación y Nutrición) (Madrid 1982).

STORAGE

Once opened keep powdered medium closed to avoid hydration.



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