

LMDA AGAR

CAT N°: 1084 Multi differential agar that has the capacity to differentiate among a great variety of bacteria, including bacteria found in the beer

FORMULA IN g/l

Tomato Juice	20.0	Monopotassium Phosphate	0.50
Peptonized Milk	20.0	Tween 80	0.50
Yeast Extract	10.0	Magnesium Sulfate	0.20
Glucose	10.0	Bromocresol Green	0.022
Calcium Carbonate	5.0	Sodium Chloride	0.01
Calcium Patothenate	2.0	Manganase Sulfate	0.01
Citric Acid	1.1	Ferrous Sulfate	0.01
Dipotassium Phosphate	0.50	Bacteriological Agar	15.0

Final pH 5.5 ± 0.2 at 25°C

PREPARATION

Suspend 84.8 grams of the medium in one litre 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. If desired, add 0.007 grams of Cycloheximide. The prepared medium should be stored at 8-15°C. The color of the prepared medium is bluish green..

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

USES

LMDA AGAR is a nutrient medium that detects most organisms commonly found in the brewery.

Beer is not a very appropriate medium for the development of bacteria due to its characteristics, such as the low quantity of available nutrients, the presence of alcohol, carbon dioxide and sulphur dioxide, as well as low conservation temperatures. Beer filtration and pasteurization phases also contribute to the stabilization of the product against microorganisms.

The number of genera and species which usually contaminate it is limited. As is the case with wild yeasts, the contaminating bacteria cause turbidity and generate anomalous smells and bouquets.

Inoculate and incubate at 30°C during 4-7 days. Acid producing bacteria can be identified by the presence of a clear zone around the colonies. Further identification is facilitated by the characteristic color reactions. Cycloheximide can be added to the medium to inhibit the growth of culture yeast.

If you wish to detect yeasts, don't add Cycloheximide and incubate under the same conditions (time and temp) in aerobic conditions.

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures, added 0.007 grams of Cycloheximide, after incubation at a temperature of 30°C in anaerobic conditions and observed after 4-7 days.

Microorganisms	Growth
<i>Lactobacillus fermentum</i> ATCC 9338	Good
<i>Pediococcus damnosus</i> ATCC 29358	Good
<i>Lactobacillus brevis</i> ATCC 8291	Good
<i>Pediococcus acidicalcti</i> ATCC 8042	Good

BIBLIOGRAPHY

Beer Spoilage Bacteria and hop Resistance Kanta Sakamoto and Wil N. Konings
Max Louise and H. W. Scgoenlein, compilation of Culture Media

STORAGE

Once opened keep powdered medium closed to avoid hydration.

