STANDARD METHODS CHROMOGENIC AGAR (P.C.A)

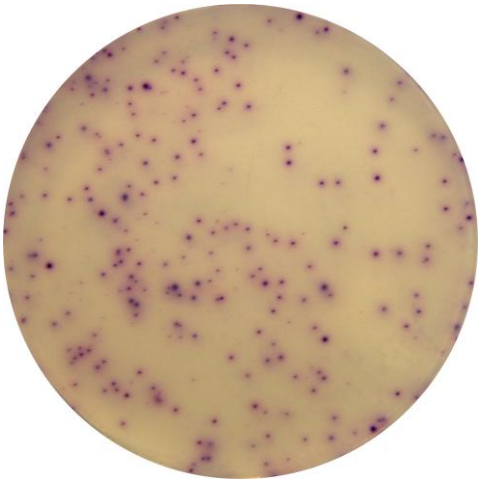
CAT Nº: 1585

For total microbial plate count in foods

FORMULA IN g/l

Enzymatic Digest of Casein	5.00	Chromogenic Mixture	0.12
Yeast Extract	2.50	Bacteriological Agar	15.00
Glucose (anhydrous)	1.00		

Final pH 7.0 ± 0.2 at 25ºC



Staphylococcus aureus
ATCC 25923

PREPARATION

Suspend 23.6 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. AVOID OVERHEATING. DO NOT AUTOCLAVE. Dispense into appropriate containers. The prepared medium should be stored from 8-15°C. The color is clear 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

STANDARD METHODS CHROMOGENIC AGAR (P.C.A.) is recommended for the enumeration of bacteria, which are indicators of contamination or microbial load in foods.

Enzymatic Digest of Casein provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract is source of vitamins, particularly the B-group. Dextrose is the fermentable carbohydrate providing carbon and energy. Bacteriological agar is the solidifying agent. Chromogenic substrate allows quicker differentiation of aerobic microorganisms due to the magenta colonies. Yeast colonies grow as white colonies.

In general, 1 ml of the appropriate test dilution is added to the sterile medium at a temperature of 44 – 45°C, mixed gently and poured into sterile Petri dishes. Alternatively, dispense a portion of each test dilution (e.g., 0.1, 0.01 ml) into separate sterile Petri dishes. Add 10 – 12 ml of tempered (45°C) Standard Methods Agar to Petri dishes containing test dilutions. Swirl the dishes to thoroughly mix the medium and test dilution. Allow plates to cool and solidify.

Incubate the Petri dishes at 32 ± 2°C for 18 – 48 hours and count the developed colonies.

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 32 ± 2ºC and observed after 18-48 hours

Microorganisms	Growth	Colony color
Escherichia coli ATCC 8739	Good	Magenta
Salmonella thyphimurium ATCC 14028	Good	Magenta

Staphylococcus aureus ATCC 25923	Good	Magenta
Enterobacter aerogenes ATCC 13048	Good	Magenta
Staphylococcus epidermidis ATCC 12228	Good	Magenta
Candida albicans ATCC 10231	Good	White

BIBLIOGRAPHY

Standard Methods for the Examination of Dairy Products, 13th Ed. APHA, 1972. American Public Health Association. Recommended Methods for the Microbiological Examination of Foods, APHA Inc. New York, 1958. Standard Methods for the Examination of Water and Wastewater, APHA Inc. New York, 1960.
*APHA: American Public Health Association Inc.

STORAGE

Once opened keep powdered medium closed to avoid hydration.