CHLORAMPHENICOL AGAR (YGC AGAR) ISO 7954

CAT Nº: 1301

Selective medium for the isolation and enumeration of molds in milk and dairy products

FORMULA IN g/l

Dextrose	20.00	Chloramphenicol	0.10
Yeast Extract	5.00	Bacteriological Agar	12.00

Final pH 6.6 ± 0.2 at 25ºC

PREPARATION

Suspend 37.1 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. Sterilize in autoclave at 121ºC for 15 minutes. Cool to 50ºC, mix well and dispense into plates. The prepared medium should be store at 8-15°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

CHLORAMPENICOL AGAR (Yeast Glucose Chloramphenicol Agar) is recommended by the International Dairy Federation (FIL-IDF), International Organization for Standardization (ISO), and Deutsche Institute für Normung (DIN) for the selective isolation and enumeration of yeasts and molds in milk and dairy products.

The antibiotic method for enumerating yeasts and molds in dairy products is the preferred method of choice as it results in a better recovery of injured fungal cells.

Yeast extract is a source of vitamins, particularly of the B-group essential for bacterial growth. Dextrose is the fermentable carbohydrate providing carbon and energy and Chloramphenicol is an antibiotic which aids in isolating pathogenic fungi from heavily contaminated material, as it inhibits most contaminating bacteria. It is a recommended antibiotic for use with media due to its heat stability and wide bacterial spectrum. Bacteriological agar is the solidifying agent.

Inoculate sample dilutions (0.01, 0.001) and incubate at 25ºC ± 1ºC during 3, 4 and 5 days, and count colonies, differentiating yeast from molds by colony morphology.

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 25ºC ± 1ºC after 3, 4 and 5 days.

Microorganisms	Growth	Inoculum	Recovery
Candida albicans ATCC 10231	Good	10^3-10^5	≥ 70
Saccharomyces cerevisiae ATCC 9763	Good	10^3-10^5	≥ 70
Escherichia coli ATCC 25922	Inhibited	$>10^5$	≤ 0.01
Staphylococcus aureus ATCC 25923	Inhibited	$>10^5$	≤ 0.01

According ISO 11133 3-5 days /25 ºC (Productivity and Selectivity)

Microorganisms	Inoculum(cfu/ml)	Productivity Quantitative	Selectivity Qualitative
Candida albicans AATCC 10231	10^2	pr ≥ 0.9	
S. cerevisiae ATCC 9763	10^2	pr ≥ 0.9	
P. cyclopium ATCC 16025	10^2	pr ≥ 0.5	
Aspergillus niger ATCC 16404	10^2	pr ≥ 0.5	
Escherichia coli ATCC 25922	10^4/ 10^6		Inhibited
Bacillus subtilis ATCC 6633	10^4/ 10^6		Inhibited

Reference media Productivity: Sabouraud Dextrose Agar

BIBLIOGRAPHY

FIL-IDF(1991) Standard 94B. Enumeration of yeast and moulds. Colony Count Technique at 25°C.
ISO (1981) ISO/DIS 6611: Milk and Milk products: Enumeration of yeast and molds colony counts technique at 25°C.
ISO 7954- Microbiology – General Guidance for enumeration of yeasts and molds. Colony count technique at 25ºC
DIN Standard 10186. Mikrobiologische Milch Untersuchung. Bestimmung der Anzahl von Hefen und Schimmelpilzen

ISO

STORAGE

Once opened keep powdered medium closed to avoid hydration.