PRODUCT CODE: 413799

Standard Methods Agar (APHA) (ISO 4833:2003) (Dehydrated Culture Media) for microbiology

Preparation

Suspend 23.5 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. The prepared medium should be stored from 8-15°C.

The colour is clear amber, slightly opalescent. The dehydrated medium should be homogeneous, free-flowing and light toasted in colour. If there are any physical changes, discard the medium.

Uses

STANDARD METHODS AGAR (P.C.A.) (PLATE COUNT AGAR) is recommended by APHA when enumerating bacteria of sanitary interest, 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.

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.

Consult the specific texts of APHA for the particular sample applications. This medium is recommended by the ISO normative 4833 for the colony count technique of microorganisms at 30ºC. Inoculate 1ml of the sample, (if necessary 2 continuous decimal dilutions to be able to count between 10-300 colonies per plate), put 12-15 ml per plate of agar cooled to 44 – 47 ºC in each Petri dish. The time of preparation shouldn't exceed 45 minutes. Invert the plates and incubate at 30 ± 1ºC for 72 ± 3 hours. Post incubation count the colonies.

Composition

See in Data Sheet (TDS).

PanReac Química S.L.U.
C/ Garraf, 2 • Polígono Pla de la Bruguera • E-08211 Castellar del Vallès (Barcelona) Spain
Phone + 34 937 489 400 • Fax + 34 937 489 401 • info.es@itwreagents.com • www.itwreagents.com

Microbiological Test

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

Microorganism	Growth
**Escherichia coli ATCC 25922*	Good
Escherichia coli ATCC 8739	Good
Staphylococcus aureus ATCC 25923	Good
**Staphylococcus aureus ATCC 6538*	Good
Staphylococcus epidermidis ATCC 12228	Good
**Bacillus subtilis ATCC 6633*	Good

* According ISO 4833 Incubate at 30ºC for 72 ± 3 hours

According ISO 11133 72±3 h/30±1°C (Productivity)

Microorganism	Inoculum (CFU)	Reference media	Productivity Quantitative
Escherichia coli ATCC 8739	10^2	TSA	pr ≥ 0.7
Staphylococcus aureus ATCC 6538	10^2	TSA	pr ≥ 0.7
Bacillus subtilis ATCC 6633	10^2	TSA	pr ≥ 0.7

Storage

Once opened keep powdered medium closed to avoid hydration.

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