Technical Information

King's OF Medium Base

Product Code: DM 2235

Application: - Kings OF Medium is used for studying oxidation-fermentation reaction of carbohydrates by *Campylobacter* species.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	2.000
Phenol red	0.030
Agar	3.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Campylobacter is a motile gram-negative bacterium that causes Campylobacteriosis when it gets lodged in the walls of intestine. They are usually carried in the intestinal tract of animals and therefore contaminate foods of animal origin. Although raw milk is a frequently reported source of outbreaks of *Campylobacter enteritis,* studies have revealed that mishandled poultry is more important than raw milk in transmitting *Campylobacter jejuni* enteritis [1-3]. The utilization pattern for several carbohydrates (e.g. lactose, maltose, xylose, sucrose etc) is often needed to help identify an organism genus and species. Kings OF Medium is formulated and recommended by APHA for studying the oxidation-fermentation reaction of carbohydrates by *Campylobacter* species [4].

Kings OF Medium contains casein enzymic hydrolysate, which supplies nitrogenous compounds required for the growth of *Campylobacter* species. Phenol red is the pH indicator. Oxidation of carbohydrate is indicated by a yellow colour formation. The medium will be yellow (acid) when removed from the microaerobic atmosphere due to CO_2 absorption. To read OF reactions, let the tubes stand at room temperature until the OF control becomes neutral or alkaline, usually within 2 hours.

Methodology

Suspend 5 grams of powder media in 1000 ml distilled water. Shake well & heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 40-50°C and aseptically add filter sterilized solution of desired carbohydrate to get a final concentration of 1% and dispense in sterile tubes.

Quality Control

Physical Appearance
Light yellow to beige homogeneous free flowing powder

Gelling
Semisolid, comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium
Light pink coloured, clear to slightly opalescent gel forms in tubes as butts

Reaction
Reaction of 0.5% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH Range 6.6 – 7.0

Cultural Response/Characteristics
DM2235: Cultural characteristics observed with added Dextrose under reduced oxygen atmosphere, after an incubation at 42°C for 24-48 hours.

Organism	Growth	Acid (with dextrose)
Campylobacter jejuni ATCC 29428	good	Positive reaction, yellow colour

Storage and Shelf Life

Dried media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1.Deming M. S., Jauxe R. V., Blake P. A., Dixas S. E., Fowler B. S., Jones T. S., Lockamy E. A., Patten C. A. and Sikes R. O., 1987, Am. J. Epidemiol., 126: 526

2. Gill C. O., and Harris L. M., 1982, Appl. Environ. Microbiol., 44:259

3.Harris N.V., Weiss N. S., and Nolan C. M., 1986, Am. J. Publ. Health, 76:406

4. Vanderzant C. and Splittstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington, D.C.

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- User must ensure suitability of the product(s) in their application prior to use.
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