17154 Lactobacillus bulgaricus Agar, Base

Used with acetate buffer for isolation and identification of *Lactobacillus bulgaricus*.

Composition:

Ingredients	Grams/Litre
Casein enzymic hydrolysate	10.0
Yeast extract	5.0
Beef extract	10.0
Dextrose	20.0
Dipotassium phosphate	2.0
Tomato juice	2.0
Polysorbate 80	1.0
Agar	20.0
Final pH 6.8 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-8°C.
Appearance: Beige to yellow coloured, homogeneous, free flowing powder.
Gelling: Firms
Color and Clarity: Light brownish-orange coloured, clear to slightly opalescent gel form in Petri plates.

Directions:
Suspend 70 g in 920 ml distilled water and heat to boiling to dissolve the medium completely. Add 80 ml Acetate Buffer (11.36% Sodium acetate and 0.99% Acetic acid). Sterilize by autoclaving at 121°C for 15 minutes. Do not overheat the medium.

Principle and Interpretation:
The formuation of Lactobacillus bulgaricus Agar is based on the formulation of the Lactobacilli medium recommended by Kulp and White (1). APHA proposed a modified formulation of the medium for the isolation and identification of *Lactobacillus bulgaricus* from foods.
Casein enzymic hydrolysate, yeast extract and beef extract provides nitrogenous, carbonaceous compounds and other essential growth nutrients like vitamin B_{12}-complex. Dextrose is the fermentable carbohydrate source. Polysorbate 80 provides fatty acids required for the metabolism of Lactobacilli. Tomato juice provides an acid environment favour acidophilic bacteria (3) and contains factors which promote the growth of Lactobacilli. Sodium acetate and acetic acid lowers as well the pH and prevents as well swarming of *Lactobacillus bulgaricus*. Dipotassium phosphate and the acetates act as buffering system.

Cultural characteristics after 18-48 hours at 37°C.

Organisms (ATCC)	Growth
Lactobacillus bulgaricus (11842)	+++

References:
1. W.L. Kulp, V. White, A modified medium for plating L. acidophilus, Science, 76, 17 (1932)
2. Compendium of Methods for Microbiological Examination of Foods, Eds. C. Vanderzant and D. Splittstoesser, Third Edition, APHA., Washington, D.C. (1992)
3. Mickle and Breed, Technical Bulletin 110, NY State, Agriculture Exp. Station (1925)

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.