Rogosa SL HiVeg™ Broth

MV407

Intended Use:

Rogosa SL HiVeg™ Broth is recommended for selective isolation of all types of Lactobacilli including oral and fecal lactobacilli.

Composition**

Ingredients	Gms / Litre
HiVeg™ hydrolysate	10.000
Yeast extract	5.000
Dextrose	10.000
Arabinose	5.000
Saccharose	5.000
Sodium acetate	15.000
Ammonium citrate	2.000
Monopotassium phosphate	6.000
Magnesium sulphate	0.570
Manganese sulphate	0.120
Ferrous sulphate	0.030
Polysorbate 80	1.000
Final pH after addition of glacial acetic acid(at 25°C)	5.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 59.72 grams in 1000 ml distilled water. Adjust the pH of the medium with glacial acetic acid approximately (1.32 ml). Heat to boiling (90-100°C) for 3 minutes with frequent agitation to dissolve the medium completely. DO NOT AUTOCLAVE. Mix thoroughly and distribute into sterile culture tubes or flasks. Cool to 45-50°C for direct inoculation.

Principle And Interpretation

Rogosa SL HiVeg™ Broth is prepared by using HiVeg™ hydrolysate No. 1 in place of Tryptose which makes the medium free from BSE/TSE risks. This can be used for the same purpose of Rogosa SL Broth described by Rogosa et al (1) for the qualitative and quantitative studies of *Lactobacillus* species in faeces, saline and in food products. Accompanying bacterial flora is suppressed due to the low pH of the medium and also because of the high sodium acetate concentration.

HiVeg™ hydrolysate No.1, yeast extract provides nitrogenous and carbonaceous compounds, sulphur, trace elements and vitamin B complex essential for growth of *Lactobacillus* species. Dextrose, arabinose and saccharose are the fermentable carbohydrates. Polysorbate 80 acts as a surfactant. Ammonium citrate and sodium acetate inhibit moulds, *Streptococcus* species and many other organisms. The low pH and high acetate concentrations effectively suppress other bacterial flora allowing *Lactobacillus* species to flourish (2). It is recommended that the inoculated broth to be incubated at 30°C for 5 days or at 37°C for 3 days in an atmosphere of 95% hydrogen and 5% carbon-dioxide (3). High acetate concentration and acidic pH suppress many strains of other lactic acid bacteria. All colonies should be checked by gram staining and by catalase test before further identification. The salt in the formulation makes the medium unsuitable for isolation of dairy lactobacilli e.g. *L.lactis, L.bulgaricus* and *L.helveticus* (4).

Quality Control

Appearance

Cream to yellow homogeneous soft lumps which can be easily broken down to powder form.

Colour and Clarity of prepared medium

Light yellow coloured clear to slightly opalescent solution in tubes.

Reaction

Reaction of 5.97 % w/v aqueous solution with 0.132% acetic acid at 25°C. pH : 5.4±0.2

pH
5.20-5.60

Cultural Response
Cultural characteristics observed in 5% Carbon dioxide (CO2) and 95%H2 after an incubation at 35 - 37°C for 40 - 48 hours,.

Cultural Response

Organism	Inoculum (CFU)	Growth
Cultural Response		
Lactobacillus casei ATCC 9595	50-100	good - luxuriant
Lactobacillus fermentum ATCC 9338	50-100	good - luxuriant
Lactobacillus leichmannii ATCC 4797	50-100	good - luxuriant
Lactobacillus plantarum ATCC 8014	50-100	good - luxuriant
Staphylococcus aureus ATCC 25923	>=10^3	inhibited

Storage and Shelf Life
Store dehydrated powder and the prepared medium at 2 - 8°C in tightly closed container. Use before expiry date on the label.

Reference
1.Rogosa M, Mitchell JA, Wiseman RF. J Bact. 1951;62(1).
2.MacFaddin JF. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria Baltimore: Williams and Wilkins; 1985.
3.Sharpe M. Lab-Practice. 1960;9(4).
4.Rogosa, Mitchell, Wiseman. J Dental Res. 1951;30.

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