



## Smiberts Semisolid Brucella Medium

M960

Smiberts Semisolid Brucella Medium is used for the cultivation of *Campylobacter* species.

### Composition\*\*

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Peptic digest of animal tissue	10.000
Dextrose	1.000
Yeast extract	2.000
Sodium chloride	5.000
Sodium bisulphite	0.100
Neutral red	0.020
Agar	1.600

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 29.72 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense in sterile tubes.

### Principle And Interpretation

*Campylobacter* were originally classified in the genus *Vibrio*. Most strains associated with acute gastroenteritis in humans have the ability to grow at 42°C (heat tolerant). Heat-tolerant *Campylobacters* are oxidase-positive, catalase-positive, and gram-negative bacteria. Diagnostic characteristics of these organisms are growth at 42°C and not at 25°C. Smiberts Semisolid Brucella Medium is used for the cultivation of *Campylobacter* species, as recommended by APHA (1). It can be used for maintenance during transport of swab samples (at 4°C). For maintenance of stock cultures, Smiberts semisolid Brucella Medium can be inoculated, incubated under aerobic/ microaerobic conditions and subcultured weekly (2).

Casein enzymic hydrolysate, peptic digest of animal tissue and yeast extract act as carbon and nitrogen sources. Dextrose acts as source of fermentable carbohydrates. Neutral red acts as a pH indicator. Sodium chloride maintains osmotic equilibrium. Addition of sodium bisulphite, a reducing agent, improves the oxygen tolerance of the medium for growth of *Campylobacter*. Growth of *Campylobacter* at 25°C, 30.5°C and 42°C is examined. Development of a yellow colour (alkaline) in the semisolid Brucella Medium containing neutral red indicates growth of *Campylobacter*. If the original medium colour is not changed and no growth is apparent, record as no growth. Development of a darker red colour indicates contamination by non-*Campylobacter* microorganisms. For maintenance of stock cultures, inoculate medium and do not tighten the screw caps. Incubate at 37°C under aerobic or microaerobic conditions. Transfer weekly or when most of the medium turns yellow. This medium can be used for storage of stock cultures for upto a month without serial passage at room temperature after cells were grown at 42°C for 24 hours.

### Quality Control

#### Appearance

Light yellow to pink homogeneous free flowing powder

#### Gelling

Semisolid, comparable with 0.16% Agar gel.

#### Colour and Clarity of prepared medium

Orange red coloured clear to slightly opalescent gel forms in tubes as slants

#### Cultural Response

M960: Cultural characteristics observed after an incubation at 35-37°C for 24-72 hours under aerobic/ microaerobic atmosphere.

Organism	Growth
----------	--------

*Brucella melitensis* ATCC 4309 good  
*Brucella suis* ATCC 4314 good  
*Campylobacter jejuni* ATCC 29428 good

### Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

### Reference

1. Speck M. L., (Eds.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd Ed., APHA, Washington, D.C.
2. Holdeman L.V., Cato E. P., and Moore W. E. C., 1977, Campylobacter, In Anaerobe Laboratory Manual, 4th Ed., Virginia Polytechnic Institute and State University, Blacksburg, VA., pp114 -115.

Revision : 1 / 2011



#### Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.