

Campylobacter Agar Base

Intended Use

Campylobacter Agar Base is used for the selective isolation of *Campylobacter* species from faecal, food and environmental specimens.

Summary

Infection with a *Campylobacter* species is one of the most common causes of human bacterial gastroenteritis. Most species are found in animals (cattle, swine) and cause infertility and abortion. *C. jejuni* was originally isolated on a blood-containing media with antibiotics. Skirrow described a selective medium for *Campylobacter* species consisting of Blood Agar Base No. 2 supplemented with horse blood and antibiotics. Further, Blaser *et al.*, isolated *C. jejuni* on Brucella Agar supplemented with sheep blood and four antibiotics. Later on, a fifth antibiotic, cephalothin was added to improve the selectivity of the medium by inhibition of accompanying faecal bacteria. Campylobacter Agar Base is recommended by APHA for selective isolation of *Campylobacter* species.

Principle

Campylobacter Agar Base is well supplemented to support luxuriant growth of *Campylobacter* species. Osmotic equilibrium of the medium is maintained by sodium chloride. The antibiotic supplements namely Blaser-Wang and Skirrow markedly reduce the growth of normal enteric bacteria while enhancing the growth and recovery of *C. jejuni* from faecal specimens. Amphotericin B in Blaser- Wang supplement greatly or completely inhibits growth of fungi.

Formula*

Ingredients	g/L
Proteose Peptone	15.0
MX Nutrient 3#	2.5
Yeast Extract	5.0
Sodium Chloride	5.0
Agar	12.0
Final pH (at 25°C)	7.4 ± 0.2

*Adjusted to suit performance parameters.

Equivalent to intended performance of Liver Digest

Storage and Stability

Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen

Clinical samples - Faeces; Food and dairy samples; Environmental samples

Specimen Collection and Handling

Ensure that all samples are properly labelled.

Follow appropriate techniques for handling samples as per established guidelines.

Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.

The samples must be stored and tested within the permissible time duration.

After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 19.75 g of the powder in 500 mL purified / distilled water & mix thoroughly.
2. Boil with frequent agitation to dissolve the powder completely. Do not overheat.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool the medium to 45°C -50°C, aseptically add 5%-7% sterilized horse blood or 10% sterile defibrinated sheep blood. Mix thoroughly.
5. Add rehydrated content of 1 vial of Campylobacter Selective Supplement to prepare Blaser's Medium or add rehydrated content of 1 vial of Campylobacter Supplement to prepare Skirrow's Medium.
6. After addition, the medium must be gently but thoroughly mixed to ensure that the antibiotics are uniformly distributed throughout the medium.

Quality Control

Dehydrated Appearance: Yellow coloured, homogenous, free flowing powder.

Prepared Appearance: Basal medium yields yellow coloured, clear to slightly opalescent gel without any precipitate. Addition of 5%-7% v/v lysed blood forms reddish brown coloured, opaque gel in petridishes.

Cultural Response: Cultural characteristics observed after an incubation of 24-48 hours at 30°C-35°C under reduced oxygen atmosphere.

Organism (ATCC)	Growth*	Growth**
<i>Campylobacter fetus</i> subsp. <i>jejuni</i> (29428)	Good	Good
<i>Candida albicans</i> 3147 (10231)	Partial Inhibition	Moderate
<i>Enterococcus faecalis</i> (29212)	Partial Inhibition	Partial Inhibition
<i>Escherichia coli</i> (25922)	Partial Inhibition	Partial Inhibition

* after addition of Campylobacter supplement I (Blaser-Wang)

** after addition of Campylobacter supplement II (Skirrow)

Interpretation of Results

1. *C. jejuni* colonies appear non-haemolytic, flat and gray with an irregular edge or raised and round with a mucoid appearance. Some strains may appear tan or slightly pink.
2. Swarming may be observed on moist surfaces.
3. Incubation at 35°C-37°C may show a delayed growth of *C. jejuni* cultures. Incubating the plates at 42°C can fasten this.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Precautions/Limitations

Due to nutritional variations, some strains may show poor growth.

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Koneman E. W, Allen S. D., Janda W. M, Schreckenberger P. C., Winn W. C. Jr, 1992, Colour Atlas and Textbook of Clinical Microbiology, 4th Edition, J. B. Lippincott Company.
2. Dekeyser P., Hossuin-Detrain M, Butzler J. P. Sterron J., 1972, J. Infect. Dis., 125: 390
3. Skirrow M. D., 1977, Br. Med. J. 2:9
4. Blaser M. J., Cravens B. W., Powers and Wang W. L., 1978, Lanect (ii) : 979
5. Wilson and Wang, 1979, Information flier, Campylobacter Laboratory, Veterans Administration Hospital, Denver. Co.
6. Vanderzant C., and Splitstoesser D. F., (Eds.), 1992, Compendium of Methods for the Microbiological Examination of foods, 3rd Ed., APHA, Washington, D.C.

7. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No. 201030010500	Product description Dehydrated Culture Media	Pack Size 500 g
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 Temperature Limit	 Manufacturer	 LOT	Batch Code	 Date of Manufacture	 This way up	 RO Received on
REF Catalogue Number	 Consult Instructions for use	 Use-by Date	 HC	Hygroscopic keep container tightly closed	OO Opened on	

Revision: 0725/VER-03

Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.