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
Liver Digest	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.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-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 piurified / 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 1vial 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****
Campylobacter fetus subsp. *jejuni* (29428)	Good	Good
Candida albicans 3147 (10231)	Partial Inhibition	Moderate
Enterococcus faecalis (29212)	Partial Inhibition	Partial Inhibition
Escherichia coli (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. In fect. 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 Splittstoesser 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.	Product description	Pack Size
201030010500	Dehydrated Culture Media	500 g