

TM 056 – CAMPYLOBACTER AGAR BASE

INTENDED USE

For selective isolation of *Campylobacter* species from faecal, food and environmental samples.

PRODUCT SUMMARY AND EXPLANATION

Campylobacter species are ubiquitous in the environment inhabiting a wide variety of ecological niches. 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. Subsequently, 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.

Campylobacter Agar Base is well supplemented to support luxuriant growth of *Campylobacter* species. Osmotic equilibrium of the medium is maintained by sodium chloride. Blood serves as an additional source of nutrients including X-factor. 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. *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. Swarming may be observed on moist surfaces. Incubation at 35-37°C may show a delayed growth of *C.jejuni* cultures. Incubating the plates at 42°C can fasten this.

The contaminated food sample (10 to 25 grams) is enriched in Campylobacter Enrichment Broth Base. The broth is incubated with agitation under a micro aerobic atmosphere for 16-18 hrs. The enrichment culture is then plated onto the selective media i.e. Campylobacter Agar Base.

COMPOSITION

Ingredients	Gms / Ltr
Proteose peptone	15.000
Liver digest	2.500
Yeast extract	5.000
Sodium chloride	5.000
Agar	12.000

PRINCIPLE

Tryptone and yeast extract provides nitrogenous, carbonaceous nutrients along with vitamins. Sodium chloride present helps in maintaining the osmotic balance of the media and agar acts as a solidifying agent.

INSTRUCTION FOR USE

- Dissolve 19.75 grams in 500 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add 5-7 %v/v sterile lysed horse blood or 10% sterile defibrinated sheep blood and rehydrated contents of 1 vial of Campylobacter Supplement-I (BlaserWang) or Campylobacter Supplement-III (Skirrow).
- Mix well and pour into sterile Petri plates.



QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Basal medium: Yellow coloured clear gel After addition of 5-7% v/v lysed blood: Reddish brown coloured opaque gel forms in Petri plates.
pH (at 25°C)	: 7.4±0.2

INTERPRETATION

Cultural characteristics observed after incubation under reduced oxygen atmosphere with Campylobacter supplement I, Blaser-Wang/Campylobacter supplement III, Skirrow.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth with Campylobacter supplement I	Recovery with Campylobacter supplement I	Growth with Campylobacter supplement III	Recovery with Campylobacter supplement III	Incubation Temperature	Incubation Period
<i>Candida albicans</i>	10231	10-100	None - poor	0-10%	Good	40-50%	35-37°C	24-48 Hours
<i>Campylobacter jejuni</i>	29428	50-100	Good-luxuriant	>=50%	Good-luxuriant	>=50%	35-37°C	24-48 Hours
<i>Escherichia coli</i>	25922	50-100	None - poor	0-10%	None - poor	0-10%	35-37°C	24-48 Hours
<i>Enterococcus faecalis</i>	29212	50-100	None - poor	0-10%	None - poor	0-10%	35-37°C	24-48 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL













After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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- Dekeyser P., Hossuin-Detrain M, Butzler J. P. Sterron J., 1972, J. Infect. Dis., 125: 390
- 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/



4. Manning H., Duim B., Wasseenaar T., Wagenaar A., Ridley A., Newell D.G., 2001, Appl. Environ. Microbiol., 67:1185.
5. Skirrow M. D., 1977, Br. Med. J. 2:9.
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. Wilson and Wang, 1979, Information flier, Campylobacter Laboratory, Veterans Administration Hospital, Denver. Co.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP MedNet GmbH Balkstrasse 10, 49163 Moenster, Germany Authorized Representative	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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