

Campylobacter Blood-Free Selective Medium (Modified CCDA) CE (NCM2022)

Intended Use

Campylobacter Blood-Free Selective Medium (Modified Charcoal Cefoperazone Deoxycholate Agar or mCCDA) is used for the cultivation of campylobacters in clinical laboratories.

Description

A blood free medium which will support the growth of most enteric campylobacters. The selective supplement X112 (X212) makes the medium selective for *C. jejuni* and *C. coli* when incubated at 37°C. With this product incubation at 42°C is no longer necessary and higher recovery rates have been reported at 37°C than at 42°C. The supplement X112 (X212) consists of cefoperazone and amphotericin and is superior to the selective combination of Skirrow, Butzler and Blazer-Wang all of which contain antibiotics shown to be inhibitors to *C. coli*. The colonial morphologies of *Campylobacter* spp. on this medium are distinctive.

Typical Formulation

Peptone Mix	25.0 g/L
Bacteriological Charcoal	4.0 g/L
Sodium Chloride	3.0 g/L
Sodium Deoxycholate	1.0 g/L
Ferrous Sulphate	0.25 g/L
Sodium Pyruvate	0.25 g/L
Agar	12.0 g/L

Final pH: 7.4 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Supplements

X112 Cefoperazone / Amphotericin selective supplement – 1 vial per 500mL

Precaution

Refer to SDS

Preparation

1. Suspend 45.5 grams of the medium and add to 1 liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 45-50°C then add 2 vials of X112 supplement, mix well and pour into Petri dishes.
5. Continuously mix whilst pouring to prevent the charcoal settling.

Test Procedure

Campylobacter jejuni and *Campylobacter coli* surface streaking to single colonies. Incubate at 37°C for 48 hours in an atmosphere of 5% oxygen, 10% carbon dioxide and 85% nitrogen. *Campylobacter cinaedi* and *Campylobacter fennelliae* require up to 7 days.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing and black.

Prepared Appearance: Prepared medium is a black agar.

Technical Specification Sheet



Minimum QC:

Campylobacter jejuni

Escherichia coli (inhibition) WDCM 00090

Candida albicans (inhibition)

Results

Organism	Colony Size (mm)	Color	Other
<i>C. jejuni</i>	2.0-3.0	Grey/White	Efflorescent (spreading moist)
<i>C. coli</i>	1.0-2.5	Creamy Grey	Moist

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing or appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedures

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Campylobacter cinaedi and *Campylobacter fennelliae* require up to 7 days for growth.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

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