Campylobacter Blood-Free Selective Medium (Modified CCDA) (ISO) (NCM0195)

Revision: 3 Effective Date: 5/12/2022

Intended Use
Campylobacter Blood-Free Selective Medium ISO (Modified Charcoal Cefoperazone Deoxycholate Agar or mCCDA) is used for the cultivation of campylobacters, and is not intended for use in the diagnosis of disease or other conditions in humans.

Description
A blood free medium, formulated to ISO 10272-2, which will support the growth of most enteric campylobacters. The mCCDA Selective Supplement (NCM4019) consists of Cefoperazone and Amphotericin B 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

Meat Extract	10.0 g/L
Enzymatic Digest of Animal Tissue	10.0 g/L
Sodium Chloride	5.0 g/L
Activated Charcoal	4.0 g/L
Enzymatic Digest of Casein	3.0 g/L
Sodium Deoxycholate	1.0 g/L
Iron (II) Sulfate Hydrate	0.25 g/L
Sodium Pyruvate	0.25 g/L
Agar	13.5 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
NCM4019 mCCDA Selective Supplement

Precaution
Refer to SDS

Preparation
1. Suspend 47.0 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 NCM4019-0.5*, each reconstituted using 5mL sterile deionized/RO water. Mix well and pour into Petri dishes.
5. Continuously mix whilst pouring to prevent the charcoal settling.

*Larger vials may be available. Please see appropriate supplement data sheet for availability and preparation instructions.

Test Procedure
Campylobacter jejuni and *Campylobacter coli*. surface streaking to single colonies or by following other appropriate methods. Incubate at 41.5°C ± 1°C for 40-48 hours in an atmosphere of 5% oxygen, 10% carbon dioxide and 85% nitrogen.

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

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Prepared Appearance: Prepared medium is a black agar.

Expected Cultural Response: Cultural response at 41.5 ± 1 °C for 44 ± 4 hours.

Microorganism	ATCC	Approx. inoculum (CFU)	Expected Results
Campylobacter jejuni	33291	$>10^4$ 50-200	Satisfactory growth, Recovery >50%
Campylobacter jejuni	29428	$>10^4$ 50-200	Satisfactory growth, Recovery >50%
Campylobacter coli	43478	$>10^4$ 50-200	Satisfactory growth, Recovery >50%
Escherichia coli	8739	$>10^4$	Total or partial inhibition
Escherichia coli	25922	$>10^4$	Total or partial inhibition
Staphylococcus aureus	25923	$>10^4$	Total inhibition
Staphylococcus aureus	6538	$>10^4$	Total inhibition

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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.

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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