

m-CP Agar (RT)

Selective medium for detection of *Clostridium perfringens* in water samples, according to Council Directive 98/83/EC.

TYPICAL FORMULA	(g/l)
Tryptose	30.0
Yeast Extract	20.0
Sucrose	5.0
L-Cysteine Hydrochloride	1.0
Magnesium Sulfate	0.1
Bromocresol Purple	0.04
D-Cycloserine	0.4
Polymyxin B Sulfate	0.025
Indoxyl- β -D-Glucoside	0.06
Phenolphthalein Diphosphate	0.1
Ferric Chloride	0.09
Agar	15.0
Final pH 7.6 ± 0.2 at 25°C	

DESCRIPTION

m-CP Agar is a selective medium used for the isolation and enumeration of *Clostridium perfringens* from drinking water by the membrane filtration technique as recommended in the Directive of the Council of the European Union 98/83/EC.

PRINCIPLE

Tryptose provides amino acids, nitrogen, carbon, vitamins and minerals for organisms growth. Yeast extract is a source of vitamins, particularly of B-group. Sucrose is the fermentable carbohydrate. L-Cysteine is the reducing agent. Bromocresol purple is the pH indicator. Cycloserine and polymyxin B are the selective agents inhibiting the accompanying non clostridial flora. Further selectivity is provided by incubation under anaerobic atmosphere at high temperatures of $43-45^{\circ}\text{C}$. Indoxyl- β -D-glucoside is a chromogenic substrate allowing the detection of β -D-glucosidase activity. Phenolphthalein diphosphate is included to differentiate phosphatase-positive bacteria from phosphatase-negative strains. Agar is the solidifying agent.

TECHNIQUE

Filter the water sample through a sterile membranes (pore size $0.45 \mu\text{m}$). Place the membrane onto the agar surface. Incubate anaerobically at $44 \pm 1^{\circ}\text{C}$ for 18-24 hours.

INTERPRETATION OF RESULTS

Clostridium perfringens ferments sucrose and does not ferment cellobiose (β -D-glucosidase-negative) producing characteristic opaque yellow colonies. Furthermore, colonies turn pink or red after 20-30 sec exposure to ammonium hydroxide vapour due to acid phosphatase activity.

Most other clostridia which cleave the chromogenic substrate indoxyl- β -D-glucoside will form either purple or blue-green colonies depending on the ability to ferment sucrose as well.

For confirmation of *C. perfringens*, further biochemical tests may be carried out such as sulphite reduction, Gram staining, sporulating rods, reduction of nitrate, gelatin liquefaction and lactose fermentation.

STORAGE

$10-25^{\circ}\text{C}$ away from light, until the expiry date on the label. Eliminate if signs of deterioration or contamination are evident.

WARNING AND PRECAUTIONS

The product contains hazardous substances and is classified as dangerous. It is recommended to consult the safety data sheet for its correct use. The product is designed for professional use only and must be used by properly trained operators.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

- E.U. (1998) Council Directive 98/83/EC on the quality of water intended for human consumption. Off. J. Eur. Commun. L330:32-54.
- Bisson J.W. and J.V. Cabelli (1979) Applied and Environmental Microbiology. (37), 1:55-88.



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PRODUCT SPECIFICATIONS

NAME

m-CP Agar

PRESENTATION

Ready to use plates (60 mm) containing 10 ± 1 ml of medium

STORAGE

10-25°C

PACKAGING

Ref.	Content	Packaging
168998	20 plates	<ul style="list-style-type: none"> individually packed in transparent blister of 2 pieces double wrapped

pH OF THE MEDIUM

7.6 ± 0.2

USE

m-CP Agar is a selective medium used for isolating and enumerating *Clostridium perfringens* from water samples by the membrane filtration technique as recommended in the Directive of the Council of the European Union 98/83/EC

TECHNIQUE

Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM

Clear, purple

SHELF LIFE










4 months

QUALITY CONTROL

- Control of general characteristics, label and print
- Sterility control
7 days at 22 ± 2°C, in aerobiosis
7 days at 35 ± 2°C, in aerobiosis
- Microbiological control
Inoculum for productivity: 50-100 CFU
Inoculum for selectivity: 10⁴-10⁶ CFU
Incubation Conditions: 18-24 h at 44 ± 1°C, in anaerobiosis

Microorganism	WDCM	Growth	Colony color
<i>Clostridium perfringens</i>	WDCM 00007	Good	Yellow, color change to red after exposure to ammonium hydroxide vapour for 20-30 sec
<i>Escherichia coli</i>	WDCM 00013	Inhibited	---

TABLE OF SYMBOLS

 LOT	Batch code	 Do not reuse	 Manufacturer	 Use by	 Fragile, handle with care
 REF	Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult instructions for use	



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