



Reference : 01-513

Scharlau Microbiology - Technical data sheet

Product :  
m-CP AGAR BASE

### Specification

Solid medium for the enumeration and isolation of *Clostridium perfringens* in water according to the European Directive 12767/97.

### Formula \* in g/L

Tryptose.....	30,00
Yeast Extract.....	20,00
Sucrose.....	5,00
L-Cysteine HCl.....	1,00
Magnesium sulfate.7H <sub>2</sub> O.....	0,10
Bromocresol purple.....	0,04
Agar.....	15,00

Final pH 7,6 ±0,2 at 25 °C

\* Adjusted and /or supplemented as required to meet performance criteria

### Directions

Suspend 35,57 g of powder in 500 mL of distilled water and bring to the boil. Distribute in suitable containers and sterilize in the autoclave at 121°C for 15 minutes. Cool to 45-50°C and aseptically add 1 vial of Selective Supplement m-CP (Art. No. 06-125LYO1). Mix well avoiding bubble formation and pour into Petri dishes.

### Description

The m-CP Agar Base is a solid medium for counting and isolating vegetative cells and spores of *Clostridium perfringens* by the membrane filtration method. Its use is compulsory in determining the quality of water for human consumption according to the European Union by Directive 12767 (12-07-1997) of the European Council.

### Technique

A suitable volume of water is filtered through a membrane filter of 47 mm diameter and 0,45 µm pore. The membrane is then placed on the surface of freshly prepared m-CP medium and incubated in an anaerobic atmosphere at 44 ± 1°C for 21 ± 3 hours. Expose the growth obtained to ammonium hydroxide vapours for 20-30 seconds. Count as *Clostridium perfringens* all the opaque yellow colonies that turn pink or red after ammonium hydroxide exposure. Express the results as CFU/mL.

Necessary supplements

m-CP Selective Supplement (Art. No.928320NL)

Vial Contents:

Necessary amount for 500 mL of complete medium

D-Cycloserine.....	200,0 mg
Polymyxin B sulfate.....	12,5 mg
3-Indoxyl-β-D-Glucopyranoside.....	30,0 mg
Phenolphthalein bi-phosphate.....	50,0 mg
Iron III chloride.....	45,0 mg

Distilled water (Solvent)



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### Quality control

**Incubation temperature:** 44 ±0,1°C

**Incubation time:** 24-48 h

**Inoculum:** Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity) / 10<sup>4</sup>-10<sup>6</sup> CFU (Selectivity) / ≥ 10<sup>3</sup> CFU (specificity) according to ISO 11133:2014/Amd 1:2018 . Anaerobic. MF method.

### Microorganism

*Escherichia coli* ATCC® 8739

*Clostridium perfringens* ATCC® 10543

*Clostridium perfringens* ATCC® 13124

*Clostridium bifermentans* NCTC® 506

### Growth

Inhibited

Productivity > 0.50

Productivity > 0.50

Good (Specificity)

### Remarks

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Yellow colonies turn to pink-red

Yellow colonies turn to pink-red

Blue colonies no change w. reagent



*Clostridium perfringens* ATCC 13124  
Left: (w/o ammonia solution 32%) yellow  
Right: (w. ammonia solution 32%) red-violet

### References

- BISSON, J.W. & V.J. CABELLI (1979) Membrane Filter Enumeration Method for *Clostridium perfringens*. Appl. Environm. Microbiol., 37:1:55-68.
- EUROPEAN COUNCIL (1998) Directive 98/83/EC of Council of 3rd of November 1998 on the quality of water intended for human consumption. Off. J. Eur. Commun., L330:32-54
- HARMON, S.M., D.A. KAUTTER & J.T. PEELER (1971) Comparison of media for the enumeration of *Clostridium perfringens*. Appl. Microbiol. 21:922-927.

### Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).