TECHNICAL DATA SHEET

Article No. 9716

Clostridium Perfringens Supplement (MUP + Cycloserine Selective Supplement)

SPECIFICATION

Sterile selective supplement used for isolation and presumptive identification of *Clostridium perfringens* by using fluorogenic substrates.

COMPOSITION (G/VIAL)

D-Cycloserine.....0.100
4-Methylumbelliferyl phosphate..... 0.025

Reconstitute the original freeze-dried vial by adding:

Sterile Distilled Water.....6 ml

Each vial is sufficient to supplement 200 ml of TSC Agar (base) (Art. no. 8032).
10 vials with freeze–dried supplement per box.

DESCRIPTION

Clostridium Perfringens Selective Supplement is added to TSC Agar (Base) in order to obtain a final selective medium which has the advantage to simplify the counting of plates with high numbers of colonies because smaller colonies of *C. perfringens* are formed. Sodium metabisulfite and ferric ammonium citrate are used as an indicator of sulfite reduction made by *C. perfringens* that produce black colonies in TSC agar (44 ±1 ºC). The addition of MUP (4-methylumbelliferyl phosphate) demonstrates the ability of *C. perfringens* using this fluorogenic substrate.

TECHNIQUE

Collect, dilute and prepare samples and volumes as required according to specifications, directives, official standard regulations and/or expected results. Reconstitute the vial with 6 ml of sterile diluent in aseptic conditions and add it to 200 ml of melted TSC Agar cooled to 50 ºC. Do not overheat once supplemented.
Pour the complete medium into Petri dishes and inoculate by MF Methods. Incubate the plates in anaerobic atmosphere at 44 ±1 ºC for 21 ±3 h.
After incubation, count all the colonies that have appeared onto the surface of MF. *C.perfingens* grows in black colonies, due to the iron sulfide precipitation and is fluorescence positive under UV light (365 nm).

Th. Geyer GmbH & Co. KG

Dornierstr. 4 – 6
D-71272 Renningen
Tel.: +49 7159 1637-0
Fax: +49 7159 1637-710
renningen@thgeyer.de
www.thgeyer.de

BW-Bank (Swift/BIC SOLADEST600)
IBAN DE85600501010002036302
Postbank Stuttgart (Swift/BIC PBNKDEFFXXX)
IBAN DE32600100700000020708
Deutsche Bank (Swift/BIC DEUTDESSXXX)
IBAN DE06600700700125518100

St.-Nr. 70093/40018 / USt-IdNr. DE147510304
Amtsgericht Stuttgart / HRA-Nr. 254140
Persönlich haftende Gesellschafterin:
Geyer Beteiligungsgesellschaft mbH
Amtsgericht Stuttgart / HRB-Nr. 252035
Geschäftsführer: Lutz-Alexander Geyer / Thomas Roth

QUALITY CONTROL

- Physical/chemical control: Colour white grey
  pH at 25 °C
- Microbiological control: Reconstitute 1 vial as indicated, shake and dissolve completely.
  Distribute the complete medium, cooled at 50 ºC, in filtration plates.
  Anaerobiosis. Incubation at 44 ±1.0 °C, 20-24 h.

Microorganism	Growth	Remarks
Clostridium perfringens ATCC® 13124	Good - black colonies, fluorescent	None
Clostridium perfringens ATCC® 10543	Good - black colonies, fluorescent	None
Bacillus subtilis ATCC® 6633	Inhibited	None
Clostridium sporogenes ATCC® 11437	Good – no fluorescence	None

- Sterility control: Incubation 48 h at 30-35 ºC and 48 h at 20-25 ºC: No growth.
  Check at 7 days after incubation at the same conditions.

REFERENCES

- ADCOCK, P.W. & C.P. SAINT (2001) Rapid Confirmation of *Clostridium perfringens* by Using Chromogenic and Fluorogenic Substrates. App. Environm. Microbiol. 67(9):4382-4384.
- ARAUJO, M. R.A. SUEIRO, M.J. GÓMEZ & M.J. GARRIDO (2001) Evaluation of fluorogenic TSC agar for recovering *Clostridium perfringens* in groundwater samples. Water Sci. Technol. 43:201-204.
- ARAUJO, M. R.A. SUEIRO, M.J. GÓMEZ & M.J. GARRIDO (2004) Enumeration of Clostridium perfringens spores in groundwater samples: comparison of six culture media. J. Microbiol. Methods 57:175-180.
- SARTORY, D.P., R. WALDOCK, C.E. DAVIES & A.M. FIELD (2006) Evaluation of acid phosphatase as confirmation test for *Clostridium perfringen*s isolated from water. Letter App. Microbiol. 42:418-424.
- ISO 7937:2004. Microbiology of Food and Animal Feeding Stuffs. Horizontal Method for Enumeration of *C. perfringens*. Colony-count technique.
- ISO 6461-2 : 1986 Water Quality.- Detection and enumeration of the spores of sulfite-reducing anaerobes (Clostridia).- Part 2: Method by Membrane Filtration.
- ISO 11133:2014. Microbiology of food, animal feed and water. Preparation, production, storage and performance testing of culture media.
- ISO 14189:2013. Water quality. Enumeration of *Clostridium perfringens* — Method using membrane filtration.

STORAGE

2-25 °C

Th. Geyer GmbH & Co. KG

Dornierstr. 4 – 6
D-71272 Renningen
Tel.: +49 7159 1637-0
Fax: +49 7159 1637-710
renningen@thgeyer.de
www.thgeyer.de

BW-Bank (Swift/BIC SOLADEST600)
IBAN DE85600501010002036302
Postbank Stuttgart (Swift/BIC PBNKDEFFXXX)
IBAN DE32600100700000020708
Deutsche Bank (Swift/BIC DEUTDESSXXX)
IBAN DE06600700700125518100

St.-Nr. 70093/40018 / USt-IdNr. DE147510304
Amtsgericht Stuttgart / HRA-Nr. 254140
Persönlich haftende Gesellschafterin:
Geyer Beteiligungsgesellschaft mbH
Amtsgericht Stuttgart / HRB-Nr. 252035
Geschäftsführer: Lutz-Alexander Geyer / Thomas Roth

SHELF LIFE

49 months from date of production.

Th. Geyer GmbH & Co. KG

Dornierstr. 4 – 6
D-71272 Renningen
Tel.: +49 7159 1637-0
Fax: +49 7159 1637-710
renningen@thgeyer.de
www.thgeyer.de

BW-Bank (Swift/BIC SOLADEST600)
IBAN DE85600501010002036302
Postbank Stuttgart (Swift/BIC PBNKDEFFXXX)
IBAN DE32600100700000020708
Deutsche Bank (Swift/BIC DEUTDESSXXX)
IBAN DE06600700700125518100

St.-Nr. 70093/40018 / USt-IdNr. DE147510304
Amtsgericht Stuttgart / HRA-Nr. 254140
Persönlich haftende Gesellschafterin:
Geyer Beteiligungsgesellschaft mbH
Amtsgericht Stuttgart / HRB-Nr. 252035
Geschäftsführer: Lutz-Alexander Geyer / Thomas Roth