

## Product Insert

### ANAEROBIC ENRICHMENT AGAR (MTGE)

#### Products

AS-777 Anaerobic Enrichment Agar (MTGE)

4 plates / pkg

#### Intended Use

Anaerobic Enrichment Agar (MTGE) is an enriched non-selective medium used for the cultivation of most anaerobic bacteria and other fastidious microorganisms.

#### Summary

MTGE is an enriched non-selective medium developed at Anaerobe Systems for the cultivation and isolation of most anaerobic bacteria and other fastidious microorganisms. A protein formulation and yeast extract comprise the basal medium, which is then supplemented with vitamin K<sub>1</sub>, calf serum, and volatile fatty acids as growth factors for many anaerobic bacteria. This media is prepared, dispensed, and packaged under oxygen-free conditions to prevent the formation of oxidized products prior to use.

#### Formulation\*

Proteose Peptone	5.00	g
Heart Infusion	5.00	g
Agar	15.00	g
Yeast Extract	5.00	g
Sodium Bicarbonate	5.00	g
Sodium Formate	0.50	g
Sodium Fumarate	1.00	g
Sodium Succinate	0.50	g
Potassium Phosphate Dibasic	2.00	g
Sodium Chloride	5.00	g
Magnesium Sulfate Heptahydrate	0.20	g
Dextrose	1.00	g
Volatile Fatty Acid Mix	3.00	mL
Vitamin K <sub>1</sub> (1.0% solution)	1.00	mL
Sodium Pyruvate	0.80	g
Thiamine Pyrophosphate	0.025	g
L-Cysteine Hydrochloride (25.0% solution)	2.00	mL
Calf Serum	100.00	mL
DI Water	1.00	L

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

Final pH: 7.3 ± 0.4 at 25° C

Final weight: 16.0 g ± 1.6 g

#### Precautions

For *IN VITRO DIAGNOSTIC USE* only. Utilize approved biohazard precautions and aseptic technique when using this product. This product is for use only by properly-trained and qualified personnel. Sterilize all biohazard waste prior to disposal.

## Storage and Shelf Life

**Storage:** Upon receipt, store at room temperature in original package until used. Avoid overheating or freezing. Do not use media if there are signs of deterioration (shrinking, cracking, or discoloration due to oxidation of media) or contamination. The expiration date applies to the product in its original packaging and stored as directed. Do not use product past the expiration date shown on the label.

**Shelf Life:** 90 days from date of manufacture.

## Procedure

**Specimen Collection:** Protect specimens for anaerobic culture from oxygen during collection, transportation, and processing. Consult appropriate references for detailed instructions concerning collection and transportation of anaerobes.

**Methods for Use:** MTGE should be inoculated directly with clinical specimen or from a broth that has been inoculated from a clinical specimen. Streak plates with inoculum to obtain isolated colonies and immediately place into an anaerobic atmosphere, incubating at 35-37°C for 18-48 hours. Extended periods of incubation may be required to recover some anaerobes. Detailed instructions for processing anaerobic cultures can be found in the listed references.

## Materials Required, But Not Provided

Standard microbiological supplies and equipment such as loops, saline blanks, slides, staining supplies, microscope, incinerator / autoclave, incubators, anaerobic chamber / anaerobic jars, disinfectant, other culture media, and serological / biochemical reagents.

## Interpretations of Results

If used properly, MTGE will support the good growth of many fastidious and non-fastidious anaerobes isolated from clinical specimens.

## Limitations

MTGE agar will not provide complete information for identification of bacterial isolates. Additional test procedures and media are required for complete identification. In some cases, MTGE agar may be overgrown with swarming *Proteus* spp. or *Clostridium* spp. It is recommended that selective media such as Laked Brucella Blood Agar with Kanamycin and Vancomycin (LKV, catalog #: AS-112) and/or Brucella Blood Agar with Phenylethyl Alcohol (PEA, catalog #: AS-113) also be inoculated from clinical specimens to prevent such overgrowth and thus provide isolated colonies. Consult reference materials for additional information.

## Quality Control

The following organisms are routinely used for quality control testing at Anaerobe Systems.

Organism Tested	ATCC #	Results	Time
Campylobacter ureolyticus	33387	Growth	24 hrs
Bacteroides fragilis	25285	Growth	24 hrs
Bacteroides vulgatus	8482	Growth	24 hrs
Prevotella melaninogenica	25845	Growth	24 hrs
Fusobacterium necrophorum	25286	Growth	24 hrs
Fusobacterium nucleatum	25586	Growth	24 hrs
Clostridium perfringens	13124	Growth	24 hrs
Peptostreptococcus anaerobius	27337	Growth	24 hrs
Clostridium novyi Type A	7659	Growth	24 hrs
Propionibacterium acnes	6919	Growth	24 hrs
Staphylococcus aureus	25923	Growth	24 hrs
Porphyromonas gingivalis	33277	Growth	48 – 72 hrs
Prevotella intermedia	25611	Growth	24 – 48 hrs

**User Quality Control:** The final determination to the extent and quantity of user laboratory quality control must be determined by the end user.

If sterility testing is to be performed on this product, a representative sample of the lot(s) should be incubated anaerobically and aerobically for 48 – 96 hours.

If the nutritive capacity of this media is to be tested for performance, it is recommended that the following ATCC organisms be evaluated for growth.

Organism	ATCC #	Expected Results
B. fragilis	25285	24 hrs
P. melaninogenica	25845	24 hrs
F. necrophorum	25286	24 hrs
C. perfringens	13124	24 hrs
P. anaerobius	27337	24 hrs
S. aureus	25923	24 hrs

**Physical Appearance:** MTGE should appear opaque to translucent light yellow in color.

## References

1. Dowell, V. R., Jr., G. L. Lombard, F. S. Thompson and A. Y. Armfield. 1977. *Media for the Isolation, Characterization and Identification of Obligately Anaerobic Bacteria*. USDHHS, CDC. Atlanta, GA 30333.
2. Engelkirk, P. G., Duben-Engelkirk, J. and Dowell, V. R. 1992. *Principles and Practices of Clinical Anaerobic Bacteriology*. Star Publishing Co., Belmont, CA 94002.
3. Holdeman, L. V., F. P. Cato and W. E. C. Moore. 1987. *Anaerobe Laboratory Manual*. Virginia Polytechnic Institute and State University. Blacksburg, VA 24061
4. Jousimeis-Somer, H. R., Summanen, P., Citron, D. M., Baron, E. J., Wexler, H. M. and S. M. Finegold. 2002. *Wadsworth – KYL Anaerobic Bacteriology Manual*. Star Publishing Co., Belmont, CA 94002.
5. CLSI. *Quality Control for Commercially Prepared Microbiological Culture Media; Approved Standard- Third Edition*. (2004). CLSI document M22-A3. CLSI, 940 West Valley Road, Suite 1400, Wayne, PA 19087-1898.

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