

PHENYLALANINE MALONATE BROTH

Medium for the differentiation of Gram-negative enteric bacteria.

TYPICAL FORMULA	(g/l)
Yeast Extract	1.0
Ammonium Sulphate	2.0
Dipotassium Phosphate	0.6
Monopotassium Phosphate	0.4
Sodium Chloride	2.0
Sodium Malonate	3.0
DL-Phenylalanine	2.0
Brom Thymol Blue	0.025

Final pH = 6.3 ± 0.2 at 25 °C.

DIRECTIONS

Suspend 11.0 g of powder in 1 liter of distilled or deionized water. Heat until completely dissolved. Dispense into final tubes. Sterilize in autoclave at 115°C for 10 minutes.

DESCRIPTION

PHENYLALANINE MALONATE BROTH is a medium recommended for the differentiation of Gram-negative enterobacteria on the basis of their ability to utilize sodium malonate as the only source of carbon, ammonium sulfate as the only source of nitrogen, and phenylalanine to form pyruvic acid.

TECHNIQUE

Inoculate the medium and incubate at 36 ± 1 °C for 18-24 hours. Organisms capable of utilizing malonate produce an alkaline reaction changing the color of the medium from light green to dark blue. Malonate negative organisms leave the medium a light greenish color. Members of the *Proteus* and *Providencia* groups are capable of forming pyruvic acid from phenylalanine. The production of this material is determined by the addition of 3-5 drops of Ferric Chloride 10% (code 80272) to a 24 hours culture. Organisms producing pyruvic acid from phenylalanine give a deep green color; phenylalanine negative organisms show no change in color.

QUALITY CONTROL

Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: yellowish beige.

Prepared medium

Appearance: clear.

Color: yellowish green.

Incubation conditions: 36 ± 1°C for 18-24 hours.

Microorganism	ATCC	Growth	Malonate	Phenylalanine
<i>Escherichia coli</i>	25922	good	-	-
<i>Salmonella typhimurium</i>	14028	good	-	-
<i>Proteus mirabilis</i>	25933	good	-	+
<i>Klebsiella pneumoniae</i>	13883	good	+	-

STORAGE

The powder is very hygroscopic: store the powder at 10-30 °C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident.

Store prepared tubes at 2-8 °C.

REFERENCES

- Ewing., W.H., B.R. Davis, and R.W. Reavis (1975). Phenylalanine and malonate media and their use in enteric bacteriology. *Publ.Health. Lab*, **15**, 153.
- Shaw, C., and Clarke, Ph.H. (1955). *J. Gen. Microbiol.* **13**: 155-161.



LIOFILCHEM s.r.l.

Via Scozia, Zona Ind.le - 64026, Roseto D.A. (TE) - ITALY

Phone +390858930745 Fax +390858930330

Website: www.liofilchem.net E-mail: liofilchem@liofilchem.net



PRESENTATION







Product	REF	
PHENYLALANINE MALONATE BROTH (45.4 l)	610075	500 g
PHENYLALANINE MALONATE BROTH (9.0 l)	620075	100 g
FERRIC CHLORIDE 10%	80272	2 x 25 ml

TABLE OF SYMBOLS

LOT Batch code	 Caution, consult accompanying documents	 Manufacturer	 Contains sufficient for <n> tests	IVD <i>In Vitro</i> Diagnostic Medical Device
REF Catalogue number	 Fragile, handle with care	 Use by	 Temperature limitation	 Keep away from heat source



LIOFILCHEM s.r.l.

Via Scozia, Zona Ind.le - 64026, Roseto D.A. (TE) - ITALY

Phone +390858930745 Fax +390858930330

Website: www.liofilchem.net E-mail: liofilchem@liofilchem.net

