



MOPS Minimal Media Kit

PRODUCT NUMBER: M2106

KIT COMPONENTS:

Part #	Description	Storage Conditions	Quantity*
M2101	10X MOPS Buffer	Frozen (-20°C) [†]	5 x 100 mL
M2102	0.132 M Potassium Phosphate Dibasic Solution (K_2HPO_4)	2–30°C	50 mL
G0520	20% Glucose Solution	2–30°C	100 mL

* Each kit makes a total of 5 L of 1X MOPS Minimal Media.

[†] Avoid temperatures below -20°C . Excessive freezing will cause precipitation within the frozen components of this kit. Products can experience temperatures significantly below the set point when placed directly in front of the cold air stream within the freezer; therefore, avoid placement of products in this air stream.

APPLICATION:

MOPS Minimal Media was originally designed for the growth of *E. coli*. Minimal media is generally used to grow wildtype bacteria, since bacteria with specific mutations may require additional nutrients to grow well.

Unlike MOPS EZ Rich Defined Media (product # M2105), MOPS Minimal Media does not contain nitrogenous bases (i.e., ACGU Solution) or amino acids/vitamins (i.e., Supplement EZ). The MOPS Minimal Media formulation is a modification of Neidhardt supplemented MOPS defined media¹.

INFORMATION:

- MOPS Minimal Media is a chemically defined media.
- All solutions are provided sterile and should not be autoclaved. If treatment to destroy potential viruses is necessary, we recommend heating to 60–80°C for 5 minutes.
- A 20% solution of glucose (product # G0520) is supplied as the carbon source. However, additional carbon sources (e.g., glycerol, sucrose, arabinose, mix of lactose/glucose/glycerol) are available separately.
- MOPS EZ Rich Defined Media, some of which are missing specific amino acid(s) or ammonium chloride, also are available separately.



MOPS Minimal Media Kit

PRODUCT NUMBER: M2106

INSTRUCTIONS:

- Thaw frozen components overnight in the refrigerator (2–8°C) and mix well by inverting 5 times before combining with room-temperature components to create the minimal defined media.

Component	Amount
10X MOPS Modified Rich Buffer	100 mL
0.132 M Potassium Phosphate Dibasic Solution (K ₂ HPO ₄)	10 mL
20% Glucose Solution	10 mL
Sterile filtered water*	880 mL
TOTAL	1000 mL

*Sterile filtered water is not included in the kit but may be ordered separately.

- Adjust the amount of water to account for any customized addition of carbon source or other supplement(s).
- The 1X media can be stored in the refrigerator (2–8°C) for up to two weeks without loss in performance. Do not freeze 1X media.

FORMULATION DETAILS:

10X MOPS Buffer (M2101)	10X Concentration	1X Concentration
MOPS	400 mM	40 mM
Tricine (MW 179.2)	40 mM	4 mM
Iron Sulfate	0.1 mM	0.01 mM
Ammonium Chloride	95 mM	9.5 mM
Potassium Sulfate	2.76 mM	0.276 mM
Calcium Chloride	5 μM	0.5 μM
Magnesium Chloride	52.5 mM	0.525 mM
Sodium Chloride	500 mM	50 mM
Ammonium Molybdate	2.92 x 10 ⁻⁶ mM	2.92 x 10 ⁻⁷ mM
Boric Acid	4.00 x 10 ⁻⁴ mM	4.00 x 10 ⁻⁵ mM
Cobalt Chloride	3.02 x 10 ⁻⁵ mM	3.02 x 10 ⁻⁶ mM
Cupric Sulfate	9.62 x 10 ⁻⁶ mM	9.62 x 10 ⁻⁷ mM
Manganese Chloride	8.08 x 10 ⁻⁵ mM	8.08 x 10 ⁻⁶ mM
Zinc Sulfate	9.74 x 10 ⁻⁶ mM	9.74 x 10 ⁻⁷ mM

REFERENCES:

1. Neidhardt FC, Bloch PL, and Smith DF. (1974) Culture medium for enterobacteria. J Bacteriol 119:736–747.

Questions? We're here to help. Get in touch with us at info@teknova.com or call 1.800.209.4488.