

AMS (Ammonium Mineral Salts) Broth



Medium used for the cultivation and enumeration of methane-utilizing bacteria.

• CONTENTS (Liter)

Dipotassium Phosphate	0.7 g
Monopotassium Phosphate	0.54 g
Magnesium Sulfate Heptahydrate	1.0 g
Calcium Chloride	0.2 g
Ferrous Sulfate heptahydrate	0.004 g
Ammonium Chloride	0.5 g
Zinc Sulfate Heptahydrate	0.0001 g
Manganese Chloride Tetrahydrate	0.00003 g
Boric Acid	0.0003 g
Cobalt Chloride	0.0002 g
Copper(II) Chloride	0.00001 g
Nickel(II) Chloride	0.00002 g
Sodium Molybdate	0.00006 g
Final pH = 6.8 ± 0.2 at 25°C.	

• PROCEDURE

Suspend 2.94 G of powder in 1 L of distilled or deionized water. Add 0.5% of methanol. Adjust pH to 6.8 ± 0.2 by using NaOH. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Pour into tubes.

• INTERPRETATION

AMS (Ammonium Mineral Salts) Broth is a medium used for the cultivation and enumeration of methane-utilizing bacteria. Phosphates are the buffering agent. Magnesium sulfate heptahydrate is a cofactor for many metabolic reactions. Calcium chloride provides growth factors. Ferrous sulfate heptahydrate is present as oxygen scavengers. Ammonium chloride provides nitrogen. Zinc sulfate, manganese chloride, boric acid, cobalt chloride, copper chloride, nickel chloride and sodium molybdate provide the essential electrolytes and minerals.

• TECHNIC

Inoculate the specimen with stab using a sterile needle to the middle of the medium. Incubate at 30 ± 2°C for 24 - 48 hours up to 5 days under mixture of 50% methane and 50% air. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium

Appearance: free-flowing, homogeneous

Color: beige

Prepared medium

Appearance: opalescent

Color: colorless

Incubation conditions: 30 ± 2°C / 24 - 48 hours up to 5 days / mixture of 50% methane and 50% air

Microorganism	ATCC	Inoculum CFU	Growth
<i>Methylobacterium sp.</i>	21438	50-100	good

• STORE

The powder is very hygroscopic. Store the powder at room temperature, 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 medium at 2 - 8°C.

• REFERENCES

1. DAMES, S. L. & WHITTENBURY, (1970). Fine structure of methane and other hydrocarbonutilizing bacteria. *Journal of General Microbiology* 61,227.
2. WHITTENBURY, R., DAVIES, S. L. & DAVEY, J. F. (1970). Exospores and cysts formed by methane-utilizing bacteria. *Journal of General Microbiology* 61,219.

• PACKAGE

Cat. No : MB-A0722 AMS (Ammonium Mineral Salts) Broth	500 G
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