

Product Data Sheet

ASPARAGINE GELATIN LACTATE MEDIUM BASE

Product No. GB-DCM-00048-1A

INTENDED USE

For isolation of sulphur bacteria.

Product Description

The bulk of soil sulphur is in the organic form which is metabolized by soil microorganisms to make it available in an inorganic state for plant nutrition. Sulphur is bound in organic state in proteins of vegetable and animal origin and in the protoplasm of microorganisms in the form of sulphur containing amino acids (cystine and methionine) and B-vitamins. The conversion of organically bound sulphur to the inorganic state is termed as mineralization of sulphur and is mediated through microorganisms. The sulphur thus released is either absorbed by plants or escapes to the atmosphere in the form of oxides. In the absence of oxygen, certain microorganisms produce hydrogen sulphide from organic sulphur substrates especially in water logged soils. Sulphur bacteria or sulphate reducing bacteria comprise several groups of bacteria that use inorganic sulphate as an oxidizing agent and reduce it to hydrogen sulphide. This may diminish the availability of sulphur for plant nutrition and thus influence agricultural production. Desulfovibrio species belonging to this class of bacteria is an obligate anaerobe, capable of producing hydrogen sulphide at a rapid rate. Asparagine Gelatin Lactate Medium is used for the isolation of sulphur bacteria.

Product Specifications

Ingredients	Gms / Ltr
L-Asparagine	7.000
Ammonium chloride	7.000
Dipotassium phosphate	1.310
Sodium citrate	0.900
Magnesium sulphate	1.500
Ferric citrate	0.300
Dextrose	10.000

PRINCIPLE

Asparagine is the nitrogen source and is readily available for microbial energy and growth while the salts in medium help for growth of microorganisms. Gelatin acts as solidifying agent.



QUALITY CONTROL SPECIFICATIONS

Appearance of Powder: Off-white to yellow homogeneous free flowing powder.
 Appearance of prepared medium: Yellow coloured clear solution with brownish precipitate.
 PH (at 25°C): 7.0±0.2

Microorganism	ATCC	Inoculum (CFU)	Growth	Incubation Temperature	Incubation Period
Desulfovibrio desulfuricans	13541	50-100	Good-Luxuriant	30°C	7 week

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration:

Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

Precautions and Disclaimer

- Mix thoroughly and then dispense in a wide bottom flask, to give a depth of 1 to 1.5 inches.
- Add 5 grams of sodium lactate. Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 10 psi pressure (121°C) for 15 minutes.
- Dissolve 152.5 grams in 1000 ml warm purified / distilled water.

This product is for research use only.