AMIES TRANSPORT WITH CHARCOAL

CAT Nº: 1535

For transport and maintenance of microbiological samples

FORMULA IN g/l

Activated Charcoal	10.00	Monopotassium Phosphate	0.20
Sodium Chloride	3.00	Calcium Chloride	0.10
Disodium Phospate	1.10	Magnesium Chloride	0.10
Sodium Thioglicollate	1.00	Agar Nº2	7.50
Potassium Chloride	0.20		

Final pH 7.3 ± 0.2 at 25ºC

PREPARATION

Suspend 23.2 grams of the medium in one liter of distilled water .Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into tubes and sterilize in autoclave at 121°C for 15 minutes. Maintain a homogeneous mixture of the charcoal throughout the medium by inverting the tubes as they cool. The prepared medium should be stored at 2-8ºC. The color is black.

The dehydrated medium should be homogeneous, free-flowing and black in color. If there are any physical changes, discard the medium.

USES

AMIES TRANSPORT MEDIUM WITH CHARCOAL is used for collecting, transporting and preserving microbiological specimens. It is formulated to maintain the viability of microorganisms without significant increase in growth, being non-nutritive, phosphate buffered and semi-solid.

Amies developed his formula (1967) with charcoal upon proving that *Neisseria gonorrhoeae* increased its survival rate when charcoal swabs were used. Amies solved the problem of charcoal removal from the swabs by incorporating charcoal into the formulation. Amies Transport Medium is recommended for throat, vaginal, and wound samples.

In the formulation, Charcoal neutralizes fatty acids that are toxic to microorganisms. The Chloride salts supply essential electrolytes for transport and osmotic balance. Phosphates act as a buffer system. Sodium thioglycollate suppresses oxidative changes and provides a reduced environment.

Insert inoculated sterile swabs into the upper third of the transport medium within the transport container; break off the protruding portion of the swab stick and tightly screw shut. Send to laboratory within 24 hours for culture analysis. Specimens may be refrigerated until ready for shipment.

The survival of bacteria in a transport medium depends on various factors such as bacteria type and concentration in the specimen, transport medium formulation, the temperature and duration of transport, and inoculation to appropriate culture media within 24 hours. Optimal growth and typical morphology can only be expected if direct inoculation and appropriate cultivation are followed

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures kept at different temperatures (4°C and room temperature) for up to 72 hours

Microorganisms	Recovery at 4ºC	Recovery at 25ºC
Neisseria gonorrhoeae ATCC 19424	≥ 50%	≥ 50%
Brucella abortus ATCC 4315	≥ 50%	≥ 50%
Streptococcus pneumoniae ATCC 6303	≥ 50%	≥ 50%
Shigella flexneri ATCC 12022	≥ 50%	≥ 50%
Salmonella typhi ATCC 6539	≥ 50%	≥ 50%

BIBLIOGRAPHY

Amies C.R. (1967) "A Modified Formula for the Preparation of Stuart's Transport Medium". Can. J. Public Health 58: 296-300.

STORAGE

Once opened keep powdered medium closed to avoid hydration.