AMIES TRANSPORT MEDIUM w/ and w/o CHARCOAL

INTENDED USE
Remel Amies Transport Medium w/ and w/o Charcoal are semisolid media recommended for use in qualitative procedures for the transport of clinical swab specimens to the laboratory.

SUMMARY AND EXPLANATION
Amies Transport Medium is a modification of Stuart Transport Medium, introduced by Stuart et al. in 1954.[1,2] Cary and Blair determined that sodium glycerophosphate was an energy source that allowed contaminants to overgrow pathogens that may be present in specimens.[3] Amies substituted a balanced salt solution containing inorganic phosphate buffer for sodium glycerophosphate.[4] In further testing, Amies' formulation was modified to include charcoal which had been shown to increase the survival of gonococci in a transport medium.[5]

PRINCIPLE
This medium contains sodium chloride in a concentration of 0.3% for optimal preservation of *Neisseria gonorrhoeae*. Potassium, calcium, and magnesium salts serve to maintain osmotic equilibrium by controlling the permeability of bacterial cells. Phosphate buffer maintains the pH of the medium. Sodium thioglycollate and agar provide a reduced environment favorable to a variety of bacteria.[6] Charcoal neutralizes metabolic products toxic to gonococci and removes the need for using charcoal impregnated swabs.

REAGENTS (CLASSICAL FORMULA)*

Sodium Chloride	3.0 g	Potassium Chloride	0.2 g
Disodium Phosphate	1.15 g	Calcium Chloride	0.1 g
Sodium Thioglycollate	1.0 g	Magnesium Chloride	0.1 g
Monopotassium Phosphate	0.2 g	Agar	4.0 g
		Demineralized Water	1000.0 ml

pH 7.3 ± 0.2 @ 25°C

The following optional ingredient is available per liter of medium:
Charcoal ..... 10.0 g

*Adjusted as required to meet performance standards.

PROCEDURE
1. Place each swab specimen in transport medium and cut off the protruding portion of the swab.
2. Replace the cap and tighten completely.
3. Send specimens to the laboratory as soon as possible.
4. Upon arrival at the laboratory, remove the swab from the transport medium with forceps.
5. Apply the swab in accordance with accepted microbiological technique to plates containing appropriate media for culture. Apply the material from the swab itself, and not just the adhering transport medium.
6. Incubate plated media using proper microbiological procedures for cultivation of the suspected organisms.
7. Observe for acceptable growth and colonial morphology within 48-72 hours.

QUALITY CONTROL
All lot numbers of Aimes Transport Medium w/ and w/o Charcoal have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, patient results should not be reported.

CONTROL	INCUBATION	RESULTS
Amies Transport Medium w/ Charcoal:		
Bacteroides fragilis ATCC® 25285	Aerobic, 24 h @ 25-30°C	Good recovery on subculture
Haemophilus influenzae ATCC® 10211	Aerobic, 24 h @ 25-30°C	Good recovery on subculture
Neisseria gonorrhoeae ATCC® 43069	Aerobic, 24 h @ 25-30°C	Good recovery on subculture
Streptococcus pyogenes ATCC® 19615	Aerobic, 24 h @ 25-30°C	Good recovery on subculture
Amies Transport Medium w/o Charcoal:		
Bacteroides fragilis ATCC® 25285	Aerobic, 24 h @ 25-30°C	Good recovery on subculture
Streptococcus pyogenes ATCC® 19615	Aerobic, 24 h @ 25-30°C	Good recovery on subculture

LIMITATIONS
1. Gonococci survive well in Amies Transport Medium w/ Charcoal for at least 6 to 12 hours provided they are not exposed to temperature extremes. By 24 hours, the numbers of gonococci decrease to an extent that may prevent their recovery if small numbers were present initially in the specimen.[7]
2. All specimens should be transported to the laboratory promptly and maintained at room temperature until processed. Refrigeration may be detrimental to some organisms.[7]

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BIBLIOGRAPHY

1. Stuart, R.D., S.R. Toshach, and T.M. Patsula. 1954. Can. J. Public Health. 45:73-83.
2. Stuart, R.D. 1959. Public Health Rep. 74:431-438.
3. Cary, S.G. and E.B. Blair. 1964. J. Bacteriol. 88:96-98.
4. Amies, C.R. 1967. Can. J. Public Health. 58:296-300.
5. MacFaddin, J.F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria. Vol. 1. Williams & Wilkins, Baltimore, MD.
6. Barry, A.L., G.D. Fay, and R.L. Sauer. 1972. Appl. Microbiol. 24:31-33.
7. Murray, P.R., E.J. Baron, J.H. Jorgensen, M.L. Landry, and M.A. Pfaller. 2007. Manual of Clinical Microbiology. 9th ed. ASM Press, Washington, D.C.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

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