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Research Note

UTILIZATION OF A NEW CULTURE MEDIUM IN BIOCHEMICAL TESTS FOR THE MYCOBACTERIAL CLASSIFICATION

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With the declination in the rate of *Mycobacterium tuberculosis* infection, there has been a relative increase in the isolation of mycobacteria from the opportunistic group. Although usually existing in the environment as saphrophytes, they can give rise to opportunistic infection, especially in lung tissue which has already been damaged by pre-existing disease (H. W. Clague et al., 1986, *Postgrad Med. J., 62:* 363; F. M. Collins, 1986, *Int J. Leprosy, 54:* 458; M. Casal, *Bacteriologia de la Tuberculosis y Micobacteriosis;* R. J. O. Brien, 1986, *J. MAG, 75:* 35; R. J. O. Brien, 1987, *Am. Rev. Respir. Dis., 135:* 1007; R. P. Spart et al., 1988, *AJBC, 142:* 106; F. Robicsek et al., 1988, *Ann. Thorac. Surg., 46:* 703).

Before the Acquired Immunodeficiency Syndrome (AIDS) epidemic, nontuberculous mycobacterial diseases had had a reduced percentage, however the incidence of this disease turned to very high, specially among AIDS patients. Nontuberculous mycobacteria usually cause chronic pulmonary and gastrointestinal tract infection in AIDS patients and in other immunologically compromised persons (F. P. Duncanson et al., 1986, *Tubercle, 67:* 295; J. R. Perfect, 1988, *J. Elect. Micros. Tech., 8:* 105; P. P. Nunn et al., 1988, *Brist. Med. Bull., 44:* 801; C. R. Horsburgh et al., 1989, *Am. Rev. Respir. Dis., 139:* 4; T. Modilevsky et al., 1989, *Arch. Intern. Med., 149:* 2201).

The species of nontuberculous mycobacteria having more incidence in this group of patients are in order of frequency: *M. avium Complex, M. fortuitum* and *M. chelonei* (P. Gontijo Filho et al., 1990, *Colabat, 6:* 56; S. M. Winter et al., 1985, *J. Infec. Dis., 144:* 814). For the classification of these species of mycobacteria biochemical tests for identification are needed. Two of these tests, Arylsulfatase and Tellurite Reduction, are essential for the strain identification of *M. avium-intracellulare (MAI)* and *M. fortuitum Complexes.* Reduction takes place on two liquid culture media, Dubos and Middlebrook 7H-9 (A. L. Vestal, 1975, *Procedures for the isolation and Identification of Mycobacteria; Bacteriologia de la Tuberculosis Humana y Animal, 1979,* C. P. Z., Buenos Aires, Argentina).

The modified liquid medium UIT-L is employed currently in our laboratory for biomass obtention which is simpler in its composition than Dubos and Middlebrook 7H-9 avoiding the use of BSA and the subsequent membrane filtration step (L. M. Mederos et al., 1988, *Rev. Cub. Med. Trop., 3:* 82; L. M. Mederos et al., 1990, *Rev. Cub. Ciencias, Vet., 21:* 86).

The elements that compound this modification are:

Reagents	Concentration
Kaliumdihidrogenphosphat	3.5 g
Magnesium Sulphate 7 H_2O	0.4 g
Magnesium Citrate	1 g
Asparagine	5 g
Glycerine	12 ml
Sodium Pyruvate	4 g
Water	600 ml

We succeed in the use the UIT-L for the Arylsulfatase and Tellurite Reduction tests with similar results to those obtained with the recommended media from comercial source. No differences were found when comparing them for identification of 100 strains of *MAI Complex* and 100 of *M. fortuitum Complex.*

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