

The importance of sodium chloride in studies of staphylococci
(preliminary report)

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Koch (Zentralbl. Bakt. Abt. 1 Orig. 149:122, 1942) showed that 7.5% NaCl agar inhibited all bacteria except staphylococci. This was confirmed in this laboratory and it was found that when 7.5% NaCl is added to Bacto phenol red mannitol agar, 36 hour growths consist solely of staphylococci. Probable pathogenic staphylococcal colonies are surrounded by yellow zones and grew much more luxuriantly than do most non-pathogenic staphylococci. The medium is so highly selective that unusually heavy inocula of badly contaminated cultures may be plated on it with little chance that the other bacteria will grow. When 7.5% NaCl is added to proteose lactose agar (Difco) for stock cultures and transplants are made from the phenol red mannitol agar isolation medium, all cultures that eventually develop pigment by the best previous methods will be unmistakably chromogenic in 12 hours. Staphylococcus albus strains do not produce pigment under these conditions. Ability to coagulate plasma is improved because NaCl is the substance in broth that enhances the reaction. Fermentation of mannitol is practically unhindered but the "Stone" reaction is almost completely inhibited in a few strains and the significance of this observation is being investigated. There are fewer cultures with intermediate reactions when these methods are used.