DEVELOPMENT OF A MEDIUM FOR INCREASING THE YIELD OF A BACTERIAL POLYSACCHARIDE

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The capsular polysaccharides of gram negative bacteria form a protective barrier, and are responsible for their immunogenicity. The nature of the sugars and their sequence is important in determining their cross reactivity. *Escherichia coli* serotype K 45 was grown in Mac Conkey agar containing 1.0% w/v lactose and capsular polysaccharide isolated. Since *E. coli* are lactose consuming bacteria (1), this medium was chosen for the growth of the organism. The yield of polysaccharide obtained using Mac Conkey agar was very poor. In order to increase the yield, the effect of added lactose and peptone was studied. Addition of lactose to Mac Conkey agar resulted in a dramatic change in polysaccharide yield.

The effect of added lactose and peptone to nutrient agar, was also studied. The results showed that for a maximum yield of polysaccharide, Mac Conkey agar with 2.5% w/v total lactose was the most suitable.

Financial assistance from NARESA is acknowledged.

References

Kauffmann., F.(1966). "The Bacteriology of Enterobacteriaceae" Munksgaard, Copenhagen. p20