

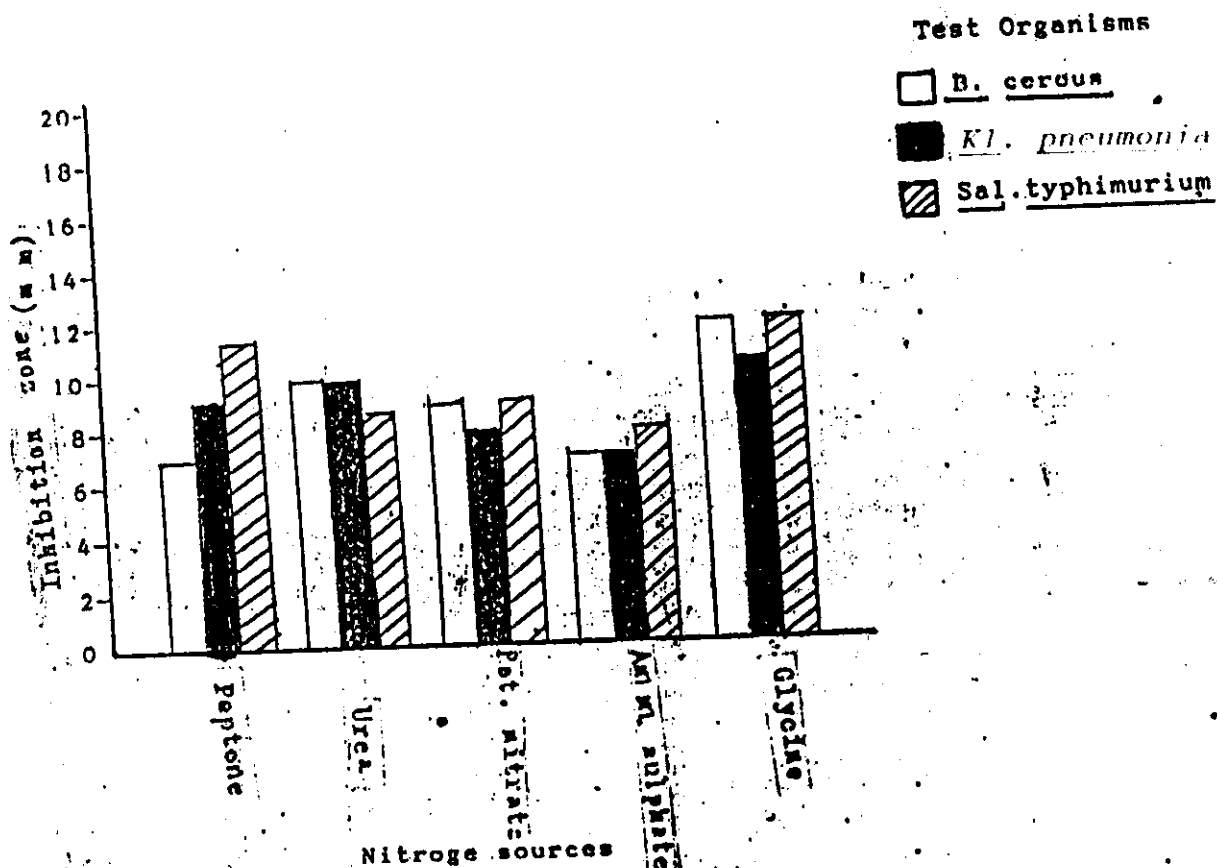


Fig. (13): Effect of different nitrogen sources on the antibiotic production by Streptomyces sp. 560.

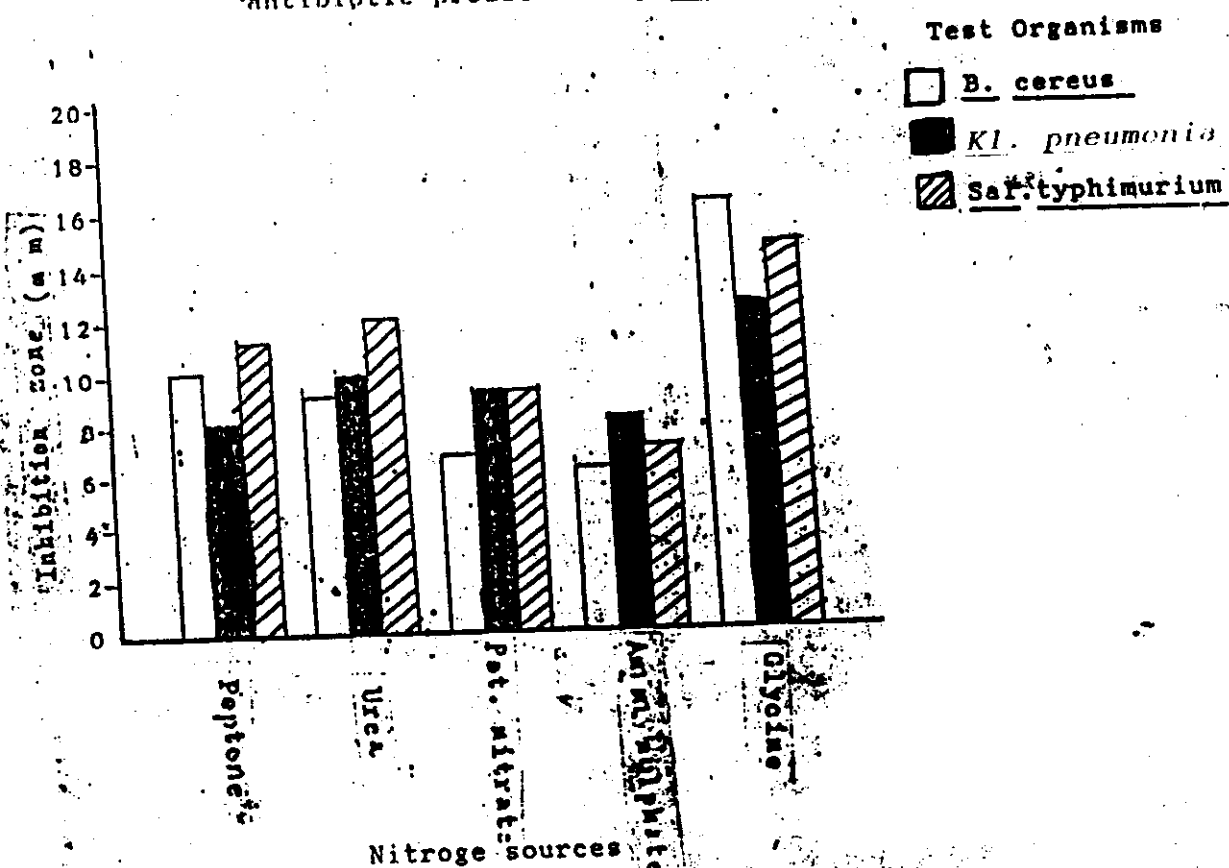


Fig. (14): Effect of different nitrogen sources on the antibiotic production by Streptomyces sp. 720.

Effect of different starch concentration on the antibiotic production:-

This experiment was carried out to find the most suitable concentration of starch to give the highest antibiotic production by Streptomyces spp., 560 & 720. Different concentration of starch zero %, 0.6 %, 0.8 %, 1 %, 1.2 % and 1.4 % were used to substitute glucose (10 gm/lit.) in the fermentation medium.

The results recorded in Tables (19 & 20) and illustrated by Figs.(15 & 16) show that the most suitable concentration of starch in the fermentation medium was found to be 12 gm/lit. of the fermentation medium for Streptomyces sp.560 which gave the higher inhibition zone against the test organisms. While the most suitable concentration of starch in the fermentation medium was 10 gm/lit. for Streptomyces sp.,720. So, the optimal starch concentration was used in the following experiments. These results are in accordance with the findings of Waksman (1959); Alexander (1961) and Mahmoud et al.(1982) who found that the addition of 10 - 12 gm/lit. from starch in the fermentation medium of Streptomyces sp. isolates increased antibiotics production.

Table (19): Effect of different starch concentration in the fermentation medium on the antibiotic production by Streptomyces sp.560.

<u>Streptomyces</u> sp.	<u>Streptomyces</u> sp.560.		
	Inhibition zone (mm)		
Test organism	<u>B. cereus</u>	<u>Kl. pneumonia</u>	<u>Sal.typhimurium</u>
Starch Concent.			
0 %	7	7	7
0.6 %	8.5	8	7
0.8 %	11	10.5	10
1 %	10	12.	12
1.2 %	12.5	14	12
1.4 %	8	9	8.5

Table (20): Effect of different starch concentration in the fermentation medium on the antibiotic production by Streptomyces sp.720.

<u>Streptomyces</u> sp.	<u>Streptomyces</u> sp.720.		
	Inhibition zone (mm)		
Test organism	<u>B. cereus</u>	<u>Kl. pneumonia</u>	<u>Sal.typhimurium</u>
Starch Concent.			
0 %	8	8	8
0.6 %	8.5	9.5	9
0.8 %	11	9	10
1 %	14.5	15	13
1.2 %	13	13.5	12
1.4 %	8	9.5	9

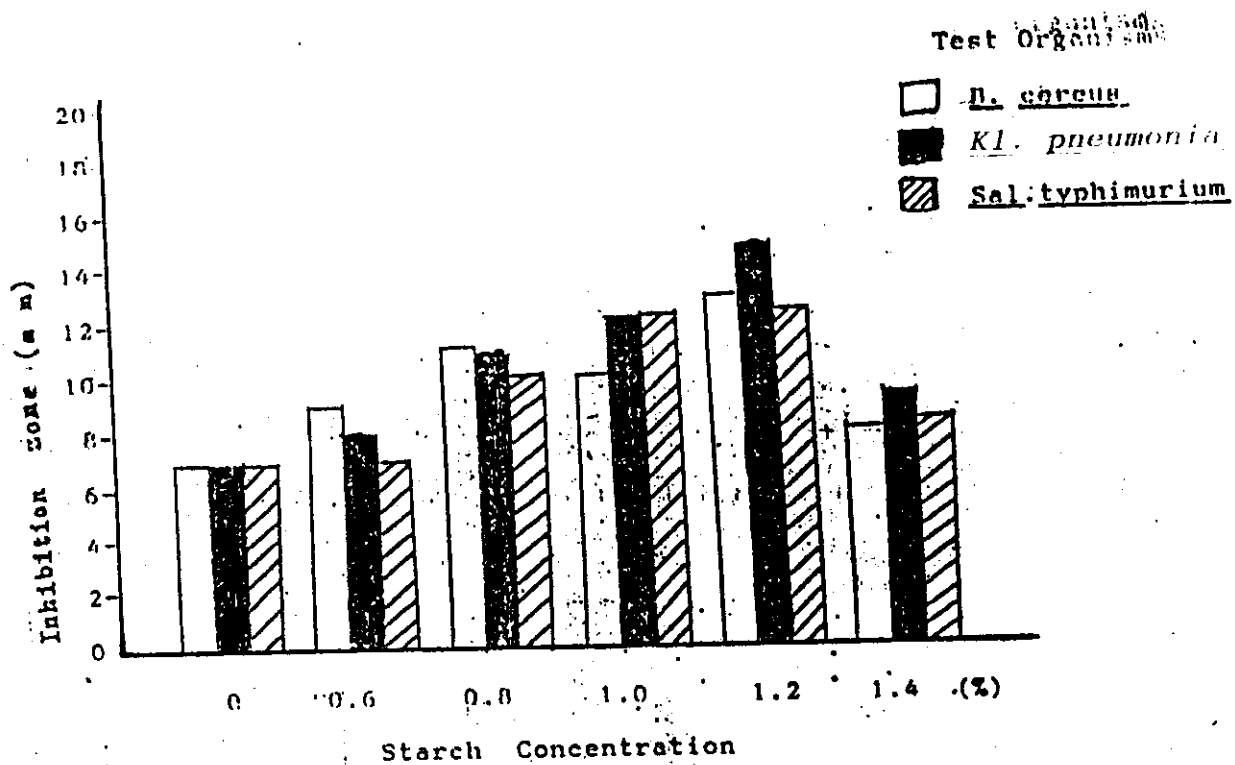


Fig. (15): Effect of starch concentration on the antibiotic production by Streptomyces sp. 560.

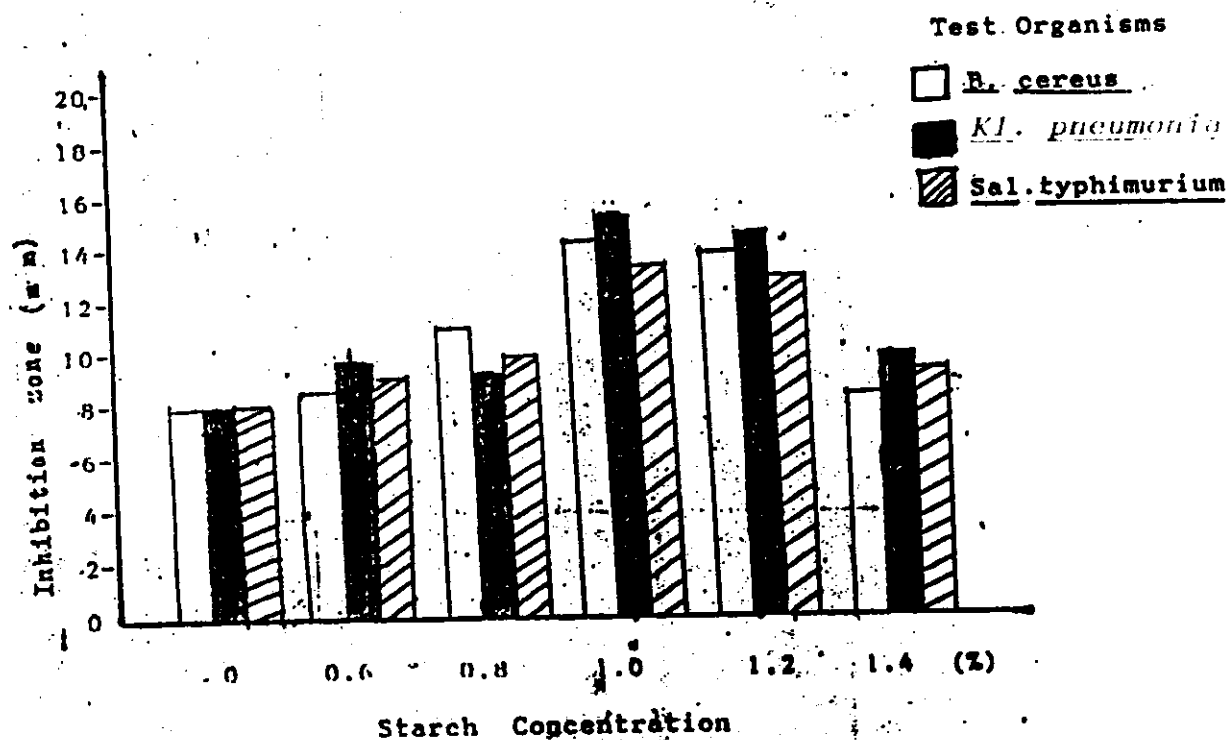


Fig. (16): Effect of starch concentration on the antibiotic production by Streptomyces sp. 720.