

LIST OF FIGURES

<u>FIG. NO.</u>	<u>NAME</u>	<u>PAGE</u>
2 - 1 :	Rhizopods commonly found during development of activated sludge. (after A.N.Barkar).	2 - 30
2 :	Flagellates commonly found during development of activated sludge (after A.N.Barkar).	32
3 :	Ciliates commonly found during development of activated sludge. (after A.N. Barkar).	34
4 :	Some protozoa common in activated sludge. (After H.W. Hawkes).	36
5 :	A view of Paramecium caudatum (after W.J. Calloway)	36
6 :	A view of Vorticella convallaria x 600 (after Noland and Finley).	38
7 :	A view of Vorticella campanula x 600 (after Noland and Finley).	38
8 :	A view of Vorticella nebulifera x 600 (after Noland and Finley).	40
9 :	A view of Vorticella microstoma x 600 (after Noland and Finley).	40
10 :	A tetotroch of Vorticella.	40
4 - 1 :	Changes in Physico-chemical variables.	4 - 5
2 :	Changes in soluble organic constituents.	9
3 :	Changes in coliform groups density and total colonies count.	16
4 :	Biochemical characteristics of the Bacteria isolated.	20
5 :	Relation between the important Physico-chemical variables and the Protozoan population.	41
6 :	Relation between the Biochemical Constituents and the Protozoan population.	43
7 :	Relation between Total Sugar; and Starch Hydrolyzers and Capsulated Microorganisms.	49
8 :	Relation between Protein Content and the Gelatin Liquefiers.	51
9 :	Relation between Ammonia Nitrogen Content, and Ammonia oxidizing and Nitrate-reducing Bacteria.	53
10 :	Relation between the Fat content, Tributyrin and hydrolyzers and Bacteria storing Fat droplets.	55
11 :	Relation between the Total Colonies Count, Chlorophyll-a, and the Fat content.	58

List of Figures (Contd.)

<u>Fig.No.</u>	<u>Name</u>	<u>Page</u>
5 - 1	: Photomicrographs of Zoogloea colonies showing various shapes and sizes.	5 - 3
2	: Photomicrographs of Bacteria not isolated.	5 - 5
3	: Photomicrographs of typical zoogloea.	- 7
6 - 1	: Photomicrographs of the dominant protozoans found in the viscous scums.	6 - 8
8 - 1	: Turbidity changes noted with different strains and mixture of bacteria.	8 - 3
2	: Changes in acid KMnO_4 (4 hrs.) value noted with different strains and mixture of bacteria.	3
3	: Changes in Orthophosphate content noted with different strains and mixture of bacteria.	5
4	: Changes in Ammonia-nitrogen Content noted with different strains and mixture of bacteria.	5
5	: Photomicrographs of algae used in pure culture studies.	14
6	: Turbidity changes noted with different fast-growing and mixed algae with and without bacteria.	15
7	: Changes in Phenolphthalein alkalinity noted with different fast growing and mixed algae with and without bacteria.	17
8	: Changes in acid KMnO_4 (4 hrs.) value noted with different fast-growing and mixed algae with and without bacteria.	17
9	: Changes in orthophosphate content noted with different fast growing and mixed algae with and without bacteria.	19
10	: Changes in Ammonia-Nitrogen content noted with different fast-growing and mixed algae with and without bacteria.	19.
11	: Turbidity changes noted with different slow-growing and mixed algae with and without bacteria.	29
12	: Changes in Phenolphthalein alkalinity value, noted with different slow growing and mixed algae with and without bacteria.	29

List of Figures (Contd.)

<u>Fig.No.</u>	<u>Name</u>	<u>Page</u>
8 - 13	: Changes in acid KMnO_4 (4 hrs.) value noted with different slow-growing and mixed algae with and without bacteria.	8 - 31
14	: Changes in Orthophosphate content noted with different slow-growing and mixed algae with and without bacteria.	31
15	: Changes in Ammonia-Nitrogen content noted with different slow growing and mixed algae with and without bacteria.	33
