

r. No	CONTENTS	Page No
1.	INTRODUCTION	1
2.	MATERIALS AND METHODS	18
	2.1 Selection of Sites	18
	2.2 Survey of idol-makers	18
	2.3 Water Analysis	18
	2.3.1 Water Sampling	18
	2.3.2 Water Analysis	19
	2.4 Selection of Animal Model	20
	2.5 Distribution, Habit and Habitat	20
	2.6 Classification of Animal	20
	2.7 Collection and Maintenance of Animals	21
	2.8 Test Chemical	21
	2.9 Measurement of Toxicity	21
	2.9.1 Acute Toxicity	21
	2.9.2 Exposure	22
	2.10 Toxicity studies of PoP and Shadoo Idols	23
	2.10.1 Immersion of idols at Laboratory Conditions	23
	2.10.2 Animal Exposure and Toxicity	23
	2.11 Biochemical Studies	23
	2.11.1 Protein	23
	2.11.2 Glycogen	24
	2.11.3 Cholesterol	24
	2.11.4 Lactic Acid	24
	2.12 Enzyme Studies	25
	2.12.1 Acid Phosphatase	25
	2.12.2 Alkaline Phosphatase	26
	2.12.3 Glutamate Oxaloacetic Transaminase	26
	2.12.4 Glutamate Pyruvate Transaminase	27
	2.12.5 Adenosine Triphosphatase	27

2.12.6 Lactate Dehydrogenase	28
2.13 Atomic Absorption Spectrophotometry	28
2.14 Light Microscopy	29
2.15 Statistical Analysis	29
2.15.1 Water Analysis	29
2.15.2 Toxicity Study	29
3. OBSEVATIONS	30
3.1 Water Analysis	30
3.1.1 pH	30
3.1.2 Turbidity	32
3.1.3 Dissolved Oxygen	34
3.1.4 Total Dissolved Solids	36
3.1.5 Hardness	38
3.1.6 Biochemical Oxygen Demand	40
3.1.7 Chemical Oxygen Demand	42
3.1.8 Nitrates	44
3.1.9 Phosphates	46
3.1.10 Calcium	49
3.1.11 Magnesium	49
3.1.12 Heavy Metals	49
3.2 Acclimatization of Animals	50
3.3 Toxicity Symptoms	50
3.4 Acute Toxicity	51
3.5 Toxicity of PoP and clay Idols	52
3.5.1 Immersion of Idols	52
3.5.2 Water Analysis	52
3.6 Accumulation Study	53
3.7 Biochemical Studies	
3.7.1 Protein	54
3.7.2 Glycogen	55
3.7.3 Cholesterol	57
3.7.4 Lactic Acid	59
3.8 Enzyme Studies	61
3.8.1 Acid Phosphatase	61

3.8.2 Alkaline Phosphatase	62
3.8.3 Glutamate Oxaloacetic Transaminase	64
3.8.4 Glutamate Pyruvate Transaminase	65
3.8.5 Adenosine Triphosphatase	67
3.8.6 Lactate Dehydrogenase	69
3.9 Light Microscopy	70
3.9.1 Gills	71
3.9.2 Hepatopancreas	73
4. DISCUSSION	76
5. SUMMARY AND CONCLUSION	100
6. BIBLIOGRAPHY	105