

# C O N T E N T S

	Page
ACKNOWLEDGEMENTS ..	(I)
SUMMARY ..	(III)
<b>A SHORT REVIEW OF THE METHODS OF PREPARATION, PROPERTIES AND STRUCTURAL ASPECTS OF ORGANOTIN COMPLEX COMPOUNDS.</b>	
Introduction ..	1
Organotin adducts ..	6
Organotin derivatives of oximes and Schiff bases ..	12
Organotin dithizonates ..	15
Organotin oximates ..	17
Organotin tropolonates, kojates, dithiocarbamates and acetyl acetonates ..	23
Organotin derivatives of pyridine, carboxylic acids and other ligands ..	26
Hydroxamic acids ..	32
Organotin hydroxamates ..	54
<b>SCOPE AND OBJECT OF THE PRESENT INVESTIGATION</b> ..	39
<b>EXPERIMENTAL AND DISCUSSIONS OF THE PRESENT INVESTIGATION</b>	
<b>OXALYL BIS-N-PHENYL HYDROXAMIC ACID AND OXALYL BIS-N-p-TOLYL HYDROXAMIC ACID</b>	
Preparation of oxalyl bis-N-phenyl hydroxamic acid ..	44

	Page
Preparation of oxalyl bis- <i>n</i> - <i>p</i> -tolyl hydroxamic acid	46
I.R. spectral data of oxalyl bis- <i>n</i> -phenyl and oxalyl bis- <i>n</i> - <i>p</i> -tolyl hydroxamic acid	47
Mass spectral data:	
Table : 2                    ..	50
Table : 3                    ..	52
Mass fragmentation pattern            ..	55
Coloured reaction of the ligands with metal cations:	
Table : 4                    ..	60
<b>PREPARATION OF SEABING MATERIALS</b>	
1. Preparation of stannic chloride	61
2. Preparation of tetra phenyl tin	62
3. Preparation of triphenyl tin chloride	62
4. Preparation of bis-(triphenyltin) oxide	62
5. Preparation of diphenyl tin dichloride	62
6. Preparation of diphenyl tin oxide	63
7. Preparation of tetra para tolyl tin	63
8. Preparation of di para tolyl tin dichloride	64
9. Preparation of tri benzyl tin chloride	64
10. Preparation of bis-(tribenzyl tin) oxide	64
11. Preparation of dibenzyl tin dichloride	65

12. Preparation of dibutyl tin dithiocyanate	65
13. Preparation of dimethyl tin dithiocyanate	66
14. Preparation of <i>m</i> -phenyl- <i>p</i> -chloro benzo hydroxamic acid	66
15. Preparation of <i>m</i> -phenyl- <i>p</i> -nitro benzo hydroxamic acid	67
16. Preparation of dibutyl tin bis-( <i>m</i> -phenyl- <i>p</i> -chloro benzohydroxamate)	67

## ORGANOTIN HYDROXAMATES

1. Preparation of bis-(triphenyl tin) oxalyl bis- <i>m</i> -phenyl hydroxamate	68
2. Preparation of bis-(tributyl tin) oxalyl bis- <i>m</i> -phenyl hydroxamate	68
3. Preparation of diphenyl tin oxalyl bis- <i>m</i> -phenyl hydroxamate (polymeric)	69
4. Preparation of dibutyl tin oxalyl bis- <i>m</i> -phenyl hydroxamate (polymeric)	69
5. Preparation of dimethyl tin oxalyl bis- <i>m</i> -phenyl hydroxamate (polymeric)	70
6. Preparation of dimeric bis-(di- <i>p</i> -tolyl chlorotin)oxalyl bis- <i>m</i> -phenyl hydroxamate	70
7. Attempted preparation of dibenzyl tin oxalyl bis- <i>m</i> -phenyl hydroxamate	71
8. Reaction of some triorganotin chlorides with oxalyl bis- <i>m</i> -phenyl hydroxamic acid	72
9. Preparation of bis-(triphenyl tin) oxalyl bis- <i>m</i> - <i>p</i> -tolyl hydroxamate	72
10. Preparation of bis-(tributyl tin) oxalyl bis- <i>m</i> - <i>p</i> -tolyl hydroxamate	73

	Page
11. Preparation of bis-(tricyclohexyl tin) oxalyl bis- <i>H-p</i> -tolyl hydroxamate	73
12. Preparation of trimeric diphenyl tin oxalyl bis- <i>H-p</i> -tolyl hydroxamate	74
13. Preparation of dimeric dibenzyl tin oxalyl bis- <i>H-p</i> -tolyl hydroxamate	75
14. Preparation of dimeric bis-(di- <i>p</i> -tolyl chloro tin) oxalyl bis- <i>H-p</i> -tolyl hydroxamate	75
15. Preparation of bis-(benzyl chloro tin) oxalyl bis- <i>H-p</i> -tolyl hydroxamate	76
16. Preparation of tetrameric dibutyl tin oxalyl bis- <i>H-p</i> -tolyl hydroxamate	77
17. Preparation of dimethyl tin oxalyl bis- <i>H-p</i> -tolyl hydroxamate (polymeric)	78
18. Disproportionation reaction of bis-(di- <i>p</i> -tolyl chlorotin) oxalyl bis- <i>H-p</i> -tolyl hydroxamate and di- <i>p</i> -tolyl tin di chloride	78
19. Reaction of bis-(benzyl chlorotin)oxalyl bis- <i>H-p</i> -tolyl hydroxamate and dibenzyl tin dichloride	79
20. Reaction of some triorganotin chlorides with oxalyl bis- <i>H-p</i> -tolyl hydroxamic acid	79
21. Preparation of dibutyl chloro tin <i>H</i> -phenyl- <i>p</i> -chloro benzohydroxamate	80
22. Preparation of dibutyl bromotin <i>H</i> -phenyl- <i>p</i> -chloro benzohydroxamate	80
23. Preparation of butyl iodotin bis-( <i>H</i> -phenyl- <i>p</i> -chloro benzohydroxamate)	81
24. Preparation of dibutyl thiocyanate tin <i>H</i> -phenyl- <i>p</i> -chloro benzohydroxamate	82

	Page
25. Preparation of dibutyl acetatotin H-phenyl-p-chloro benzhydroxamate	83
26. Preparation of dimethyl tin bis-(H- phenyl-p-chloro benzhydroxamate)	84
27. Preparation of dimethyl chlorotin H- phenyl-p-chloro benzhydroxamate	85
28. Preparation of methyl bromotin bis-(H- phenyl-p-chloro benzhydroxamate)	85
29. Reaction of dimethyl chlorotin H-phenyl- p-chloro benzhydroxamate and potassium iodide	86
30. Preparation of dimethyl thiocyanate tin H-phenyl-p-chloro benzhydroxamate	87
31. Reaction of dimethyl chloro tin-H-phenyl- p-chloro benzhydroxamate and potassium thiocyanate	87
32. Preparation of dimethyl acetatotin H- phenyl-p-chloro benzhydroxamate	88
33. Preparation of dibutyl tin bis-(H-phenyl- p-nitro benzhydroxamate)	89
34. Preparation of dibutyl chloro tin H-phenyl- p-nitro benzhydroxamate	89
35. Preparation of dibutyl bromotin H-phenyl- p-nitro benzhydroxamate	90
36. Preparation of dibutyl iodotin H-phenyl- p-nitro benzhydroxamate	91
37. Preparation of dibutyl thiocyanate tin H-phenyl-p-nitro benzhydroxamate	91
38. Preparation of dimethyl tin bis-(H-phenyl- p-nitro benzhydroxamate)	92
39. Preparation of dimethyl chlorotin H-phenyl- p-nitro benzhydroxamate	92

