

C O N T E N T S

	Page
ACKNOWLEDGEMENT	
SUMMARY	(1)
CONTENTS	(iv)
A BRIEF DISCUSSION OF ORGANOTIN CO-ORDINATION COMPOUNDS.	
Introduction	1
Bonding in Organotin Compounds	2
Organotin Adducts	5
Organotin Acetyl acetonates and other β -diketonates	13
Organotin Oximates and Hydroxamates	17
Organotin Oxinates	22
Organotin Tropolonates, Kojates, Dithiocarbamates and Xanthates	27
Organotin derivatives of (Aryl azo) benzoic acids and Schiff bases	29
Mixed Organotin Chelates	31
Some structural aspects of Organotin Complexes	32
SCOPE, OBJECT AND RESULTS OF THE PRESENT INVESTIGATIONS	50
EXPERIMENTS AND DISCUSSIONS OF THE PRESENT INVESTIGATION.	
1. Preparation of stannic chloride	53
2. Preparation of stannic bromide	53

(v)

3. Preparation of stannic iodide	54
4. Preparation of Tetraphenyl tin	54
5. Preparation of Tetra-para-tolyl tin	54
6. Preparation of Triphenyl tin chloride	55
7. Preparation of Tribenzyl tin chloride	55
8. Preparation of Tri-para-tolyl tin chloride	55
9. Preparation of bis-(tripropyl tin) oxide	56
10. Preparation of bis-(triphenyl tin) oxide	56
11. Preparation of Diphenyl tin dichloride	56
12. Preparation of Diparatolyl tin dichloride	56
13. Preparation of Dibenzyl tin dichloride	57
14. Preparation of Diphenyl tin dibromide	57
15. Preparation of Dipropyl tin oxide	57
16. Preparation of Diphenyl tin oxide	57
17. Preparation of Dibenzyl tin oxide	58
18. Preparation of Dibutyl tin oxide	58
19. Preparation of Dimethyl tin oxide	58
20. Preparation of Diparatolyl tin oxide	58
21. Preparation of Diphenyl tin diiodide	59
22. Preparation of Dibutyl tin dithiocyanate	59
23. Preparation of Dimethyl tin dithiocyanate	59
24. Preparation of N-phenyl benzohydroxamic acid	60
25. Preparation of N-orthotolyl benzohydroxamic acid	60
26. Preparation of Diphenyl tin bis-(N-phenyl benzohydroxamate)	60

(vi)

27. Preparation of Diphenyl tin bis-(<i>N</i> -ortho tolyl benzohydroxamate)	61
28. Preparation of Diphenyl Chlorotin <i>N</i> -phenyl benzohydroxamate	61
29. Preparation of Diphenyl Iodo tin <i>N</i> -phenyl benzohydroxamate	61
30. Preparation of Diphenyl Chloro tin <i>N</i> -ortho tolyl benzohydroxamate	61
31. Preparation of Phenyl (chloro) methoxy tin <i>N</i> -phenyl benzohydroxamate	62
32. Preparation of phenyl (iodo) methoxy tin <i>N</i> -phenyl benzohydroxamate	62
33. Preparation of phenyl (chloro) methoxy tin <i>N</i> -ortho tolyl benzohydroxamate	62
34. Tripropyl tin dithizonate	62
35. Tributyl tin dithizonate	63
36. Triphenyl tin dithizonate	64
37. Dimethyl tin bis-dithizonate	65
38. Dipropyl tin bis-dithizonate	66
39. Dibutyl tin bis-dithizonate	66
40. Diphenyl tin bis-dithizonate	67
41. Diparatolyl tin bis-dithizonate	68
42. Dibenzyl tin bis-dithizonate	69
43. Dimethyl Chloro tin dithizonate	70
44. Dimethyl thiocyanato tin dithizonate	71
45. Dibutyl Chloro tin dithizonate	72

(vii)

46. Dibutyl iodo tin dithizonate	72
47. Dibutyl thiocyanato tin dithizonate	73
48. Diphenyl Chloro tin dithizonate	73
49. Diphenyl bromo tin dithizonate	74
50. Diphenyl iodo tin dithizonate	74
51. Diphenyl thiocyanato tin dithizonate	75
52. Diparatolyl Chloro tin dithizonate	76
53. Diparatolyl iodo tin dithizonate	76
54. Diparatolyl thiocyanato tin dithizonate	77
55. Dibenzyl Chloro tin dithizonate	78
56. Dibenzyl iodo tin dithizonate	78
57. Phenyl Chloro tin (N-phenyl benzohydroxamate) dithizonate	79
58. Phenyl iodo tin-(N-phenyl benzohydroxamate) dithizonate	79
59. Phenyl Chloro tin-(N-phenyl benzohydroxamate) oxinate	80
60. Phenyl iodo tin (N-phenyl benzohydroxamate) oxinate	81
61. Phenyl chloro tin (N-orthotolyl benzohydroxamate) oxinate	81
62. Reaction of Triphenyl tin dithizonate with $HgCl_2$	82
63. Reaction of Diphenyl tin bis-dithizonate with $HgCl_2$	82
64. Reaction of Dimethyl tin bis-dithizonate with Silver nitrate	83
65. Reaction of Diphenyl chloro tin dithizonate with silver acetate and sodium acetate	84

(viii)

IR SPECTRAL DATA OF THE COMPOUNDS UV AND VISIBLE SPECTRAL DATA:	85
TABLE I	92
TABLE II	93
TABLE III	93
TABLE IV	94
TABLE V	94
ANTIFUNGAL ACTIVITY OF ORGANOTIN DITHIONATES	95
RESULTS AND DISCUSSIONS	100