

Contents

<i>Item</i>	<i>Page</i>
Chapter I: Introduction	
Introduction	1
1. Literature survey for the determination of sulfamethoxazole	2-11
2. Literature survey for the determination of lincomycin HCl	12-16
3. Literature survey for the determination of mebeverine HCl	17-21
Aim of the work	22
Chapter II: Experimental	
I- Studies on solutions:	23
1. Chemicals	23
1.1 Drugs	23-24
1.2 Drug solutions	25
1.3 Reagents	25-26
1.4 Buffer solutions	26
2. Working procedure	27
2.1 Equipments	27
2.2 Effect of pH	27
2.3 Determination of $\lambda_{\max}$ of complex	27
2.4 Effect of sequence of addition	28
2.5 Effect of time and temperature	28
2.6 Effect of reagent concentration	28
2.7 Mole ratio method	28
2.8 Continuous variation method	29
2.9 Analytical application	29-30
2.10 Pharmacopeial and official methods of analysis	31

2.11 Preparation of solution for conductometric titration	32
II. Studies on solid complexes	33
1. Preparation of solid complexes	33
2. Elemental analysis	33
3. Absorption spectra of solid complexes	33
4. IR spectra of solid complexes	34
5. Melting point	34

Chapter III: Results and discussion

Spectrophotometric studies of drug complexes in solution	35
<i>I. Absorption spectra of sulfamethoxazole with reagents I, II and IV</i>	35
1. Effect of pH	35
2. Determination of $\lambda_{\max}$ of complex	36
3. Effect of time and temperature	36
4. Effect of sequence of addition	37
5. Effect of reagent concentration	37
6. Stoichiometry of complexes	38
7. Stability constants of complexes	39
8. Validity to Beer's law	40
9. Interference	40-41
10. Accuracy and precision	41
11. Analytical application	42
<i>II. Absorption spectra of lincomycin HCl with reagents II, III and IV</i>	43
1. Effect of pH	43
2. Determination of $\lambda_{\max}$ of complex	43-44
3. Effect of time and temperature	44
4. Effect of sequence of addition	44
5. Effect of reagent concentration	44
6. Stoichiometry of complexes	45
7. Stability constants of complexes	46

8. Validity to Beer's law	47
9. Interference	47
10. Accuracy and precision	47
11. Analytical application	48
III. Absorption spectra of mebeverine HCl with reagents II, III and IV	49
1. Effect of pH	49-50
2. Determination of $\lambda_{\max}$ of complex	50
3. Effect of time and temperature	50
4. Effect of sequence of addition	50
5. Effect of reagent concentration	50-51
6. Stoichiometry of complexes	51
7. Stability constants of complexes	52
8. Validity to Beer's law	53
9. Interference	53
10. Accuracy and precision	54
11. Analytical application	54
*Conductometric titration studies	55-56
*Studies on solid complexes	57
I-Elemental analysis	57
II- Electronic absorption spectra of CT complexes	58-60
III-Equilibrium studies and methods of calculation	61-62
IV-IR spectral studies of drug complexes	63-67
Summary & conclusion	68-75
References	76-81
Arabic summary	