

Contents

Page

CHAPTER I: Introduction

1.1.Knowledge of the studied drugs	1
1.1. General introduction	2
1.1.2. Investigation of the studied drugs	4
1.1.2.1. Fexofenadine hydrochloride	4
1.1.2.2. Fluoxetine hydrochloride	5
1.1.2.3. Azithromycine	6
1.2. Literal review	8
1.2.1. High –performance liquid chromatography	8
1.2.2 - liquid Chromatographic methods	14
1.2.3 - high-pressure liquid chromatography methods	17
1.2.4 - gas chromatography-mass spectrometry methods	18
1.2.5. Spectrophotometric methods	25
1. 3. Spectrophotometric determination of some drugs using acid dyes technique	29
1. 3. 1. Structure of the studied acid dyes	29
1.4.The official method for the determination of the drugs	32
1.4..A. The official method for the determination of Fexofenadine hydrochloride allerfen tablets	32
1.4.B. he official method for the determination of Fluoxetine hydrochloride Flutine tablets	33
1.4.C. A.The official method for the determination of Azithromycine in zesrocine tablets	34

Aim of the work	35
-----------------	----

CHAPTER II: Experimental

2. Experimental	36
2.1. Drugs	36
2.1.1. Fexofenadine hydrochloride	36
2.1.1.A. Pure sample	36
2.1.2. Fluoxetine hydrochloride	36
2.1.2 A. Pure sample	36
2.1.3. Azithromycine	37
2.1.3. A. Pure sample	37
2.2. Dyes	37
2.3. Reagent, solvent and buffer solution	37
2.4. Market sample	38
2. 5. Apparatus	40
2.6. Working procedure	40

2.6.1. Determination of the composition	40
2.6.1.A. The molar ratio method	40
2.6.1. B. The continuous variation method	40
2.7. Spectrophotometric determination of the drugs under investigation using ion – pair complex formation with acid dyes	41
2.7.1. Procedure for the determination of the studied drugs in authentic powder using BPB	41
2.7.2. Procedure for the determination of the studied drugs in authentic powder using BCG	42
2.7.3. Procedure for the determination of the studied drugs in authentic powder using BTB	42
2.7.4. Procedure for the determination of the studied drugs in authentic powder using BCP	43
2.8. Dosage forms	44
2.8.1. procedure for the determination Fexofenadine Hydrochloride in Allerfen tablets	44
2.8.2. procedure for the determination Fluoxetine Hydrochloride in Flutine tablets	44
2.8.3. procedure for the determination Azithromycine in zesrocine tablets	44
Chapter (III): Results and Discussion	46
3. Results and Discussion	46
3. 1. Determination of the studied drugs by complex formation with acid dye	46
3. 1. 1. Absorption spectra of the studied drugs with BPB	46
3. 1. 1. 1. Effect of pH	46
3. 1. 1. 2. Effect of time	46
3. 1. 1. 3. Effect of the extracting solvent	47
3. 1. 1. 4. Effect of reagent concentration	47
3. 1. 1. 5. Composition of the ion-pair complex and the stability constant of it	48
3. 1. 1. 6. Suggested mechanism	48
3. 1. 1. 7. Interference	48
3. 1. 1. 8. Evaluation of the stability constants of the ion - pair complexes	49
3. 1. 1. 9. Statistical analysis	49
3. 1. 1. 10. Validity to beer's law	51
3. 1. 1. 11. Accuracy and precision	52
3. 1. 1. 13. Analytical applications	52
3. 1. 2. Absorption spectra of the studied drugs with BCG	68

3. 1. 2. 1. Effect of pH	68
3. 1. 2. 2. Effect of time	68
3. 1. 2. 3. Effect of the extracting solvent	69
3. 1. 2. 4. Effect of reagent concentration	69
3. 1. 2. 5. Composition of the ion-pair complex and the stability constant of it	70
3. 1. 2. 6. Suggested mechanism	70
3. 1. 2. 7. Validity to beer's law	70
3. 1. 2. 8. Accuracy and precision	71
3. 1. 2. 9. Analytical applications	71
3. 1.3. Absorption spectra of the studied drugs with BTB	87
3. 1. 3. 1. Effect of pH	87
3. 1. 3. 2. Effect of time	87
3. 1. 3. 3. Effect of the extracting solvent	88
3. 1. 3. 4. Effect of reagent concentration	88
3. 1. 3. 5. Composition of the ion-pair complex and the stability constant of it	88
3. 1. 3. 6. Suggested mechanism	89
3. 1. 3. 7. Validity to beer's law	89
3. 1. 3. 8. Accuracy and precision	90
3. 1. 3. 9. Analytical applications	90
3. 1. 4. Absorption spectra of the studied drugs with BCP	106
3. 1. 4. 1. Effect of pH	106
3. 1. 4. 2. Effect of time	106
3. 1. 4. 3. Effect of the extracting solvent	107
3. 1. 4. 4. Effect of reagent concentration	107
3. 1. 4. 5. Composition of the ion-pair complex and the stability constant of it	108
3. 1. 4. 6. Suggested mechanism	108
3. 1. 4. 7. Validity to beer's law	109
3. 1. 4. 8. Accuracy and precision	109
3. 1. 4. 9. Analytical applications	110
3. 1. 4. 10. Infrared spectra of solid complexes	111
Conclusion	126
Summery	128
References	133
Arabic Summery	