

INDEX

SR. NO.	TOPIC	PAGE NO
	Title Page	
	Certificate	
	Declaration	
	Acknowledgement	
	List of Tables	I-V
	List of Figures	VI-XII
	CHAPTER I. INTRODUCTION	1-26
1	INTRODUCTION	1-4
1.1	WHO guidelines for assessment of herbal medicines	4-5
1.2	Analysis of raw materials from plants	5
1.3	Quality control of herbal drugs	5-8
1.4	Standardization of herbal formulations	8
1.5	Parameters for quality control of herbal drugs	11
1.6	Adulteration of herbal drugs	17
1.7	Contamination of herbal drugs and herb-drug interactions	18
1.8	Toxicity of herbal drugs	19-20
1.9	Screening of herbal drugs	20-21
1.10	Labelling of herbal products	21-22
1.11	Policies and regulations.	22
1.12	Trends and developments	23-24
1.13	Rasashastra	24-26
	CHAPTER 2. AIMS AND OBJECTIVES	27-28
	CHAPTER 3.REVIEW OF LITERATURE	29-72
3.1	<i>Mahamrutyunjaya Rasa</i>	29
3.2	Aconite Root	30-40
3.3	Solanum Roots	41-49
3.4	Piper Species	50-59

3.4.1	Piper Longum	56-57
3.4.2	Piper nigrum	58-59
3.5	Cinnabar	60-65
3.6	Sulphur	66-69
3.7	Sodium Metaborate	70-71
	CHAPTER 4. MATERIALS AND METHODS	72-128
4.1	Plant material	72
4.2	Preparation of powdered material	72
4.3	Standardization of the plant materials as per the WHO guidelines	72-76
4.4	Isolation of marker compounds	76-77
4.5	Selection of Formulations	77
4.6	Preparation of <i>Mahamrutyunjaya Rasa</i> as per the standard text	77-78
4.7	Standardization of procedure for formulation preparation.	78-79
4.8	Physical Standardization of the three Formulations.	80-82
4.9	Chemical Standardization of the three Formulations	82-123
4.9.1	Instrumentation	82-84
4.9.2	Development of analytical methods for estimation of Aconitine in <i>Mahamrtyunjaya rasa</i>	84-95
4.9.2.1	HPLC method	84-87
4.9.2.2	HPTLC method	87-89
4.9.2.3	Spectrofluorimetric method.	90-92
4.9.2.4	Stability indicating HPLC method for determination of Aconitine.	92-95
4.9.3	Development of analytical methods for estimation of solanine in <i>Mahamrtyunjaya rasa</i>	95-100
4.9.3.1	HPLC method	95-98
4.9.3.2	HPTLC method	98-100
4.9.4	Development of analytical methods for estimation of piperine in <i>Mahamrutyunjaya rasa</i>	100-105
4.9.4.1	HPTLC Method	100-102

4.9.4.2	Stability indicating HPLC method for determination of Piperine.	103-105
4.9.5	HPLC method development for simultaneous estimation of Aconitine, Solanine and Piperine.	105-108
4.9.6	Development of HPLC method for the simultaneous estimation of Aconitine and solanine.	108-111
4.9.7	HPLC method development for simultaneous estimation of Solanine and Piperine.	111-114
4.9.8	Development of analytical methods for the estimation of Sulphur in <i>Mahamrutyunjaya rasa</i>.	114-117
4.9.9	Development of analytical methods for the estimation of Boron in <i>Mahamrutyunjaya rasa</i>.	117-123
4.9.9.1	Spectrofluorimetric method.	117-120
4.9.9.2	Voltammetric method	120-123
4.9.9.3	Estimation of Boron using Inductively coupled plasma.	123
4.9.10	Estimation of mercury using Inductively coupled plasma	123
4.10	Biological Standardization of the three Formulations	124-128
4.10.1	Materials and Methods	124
4.10.2	Acute toxicity study	124
4.10.3	Isoproterenol-induced myocardial infarction in rats (MI)	124-127
4.10.4	In vitro studies using H9c2 cell lines	127-128
	CHAPTER 5. RESULTS AND DISCUSSION	
5.1	Plant material	129
5.2	Standardization of the plant materials as per the WHO guidelines	129-139
5.3	Isolation of Marker Compounds	139-141
5.4	Standardization of procedure for formulation preparation.	141-162
5.4.1	Aconite alkaloids	141-148
5.4.2	Sulphur	149-155
5.4.3	Cinnabar	156-158
5.4.4	Sodium metaborate	159-162
5.5	Physical Standardization of the three Formulations.	163-168

5.6	Chemical Standardization of the three Formulations	168-277
5.6.1	Development of analytical methods for estimation of Aconitine in <i>Mahamrtyunjaya rasa</i>	168-195
5.6.1.1	HPLC method	168-176
5.6.1.2	HPTLC method	176-181
5.6.1.3	Spectrofluorimetric method.	181-185
5.6.1.4	Stability indicating HPLC method for determination of Aconitine.	185-195
5.6.2	Development of analytical methods for estimation of solanine in <i>Mahamrtyunjaya rasa</i>	196-208
5.6.2.1	HPLC method	196-203
5.6.2.2	HPTLC method	203-208
5.6.3	Development of analytical methods for estimation of piperine in <i>Mahamrtyunjaya rasa</i>	209-223
5.6.3.1	HPTLC Method	209-214
5.6.3.2	Stability indicating HPLC method for determination of Piperine.	214-223
5.6.4	HPLC method development for simultaneous estimation of Aconitine, Solanine and Piperine.	224-233
5.6.5	Development of HPLC method for the simultaneous estimation of Aconitine and solanine.	233-242
5.6.6	HPLC method development for simultaneous estimation of Solanine and Piperine.	243-250
5.6.7	Development of analytical methods for the estimation of Sulphur in <i>Mahamrtyunjaya rasa</i>.	251-258
5.6.8	Development of analytical methods for the estimation of Boron in <i>Mahamrtyunjaya rasa</i>.	259-275
5.6.8.1	Spectrofluorimetric method.	259-265
5.6.8.2	Voltammetric method	265-273
5.6.8.3	Estimation of Boron using Inductively coupled plasma.	273-275
5.6.9	Estimation of mercury using Inductively coupled plasma	275-277
5.7	Biological Standardization of the three Formulations	277
5.7.1	Acute toxicity study	277-279
5.7.2	Isoproterenol-induced myocardial infarction in rats (MI)	279-283

5.7.3	In vitro studies using H9c2 cell lines	284-293
	CHAPTER 6 CONCLUSION	294-305
	CHAPTER 7 SUMMARY	306-324
	CHAPTER 8 REFERENCES	325-340
	LIST OF PUBLICATIONS	