

Laboratory

Captain Srinivasa Murthi Regional Ayurveda Drug Development Institute, Central Council for Research in Ayurvedic Science, Ministry of Ayush, Government of India, Arignar Anna Government Hospital Campus, Arumbakkam, Chennai, Tamil Nadu

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-5423

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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**BIOLOGICAL TESTING**

I.	AYUSH PRODUCTS			
1.	Veterinary Testing Biochemistry Serum / Plasma of Laboratory Animals	Cholesterol	SOP:CSM/BL-BIO-001 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	4.2 mg/dl to 695 mg/dl
		Bilirubin	SOP:CSM/BL-BIO-002 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	0.08 mg/dl to 23 mg/dl
		Urea	SOP:CSM/BL-BIO-003 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	11.5 mg/ml to 300 mg/ml
		Creatinine	SOP:CSM/BL-BIO-004 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	0.08 mg/dl to 18 mg/dl
		Glucose	SOP:CSM/BL-BIO-005 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	2.34 mg/dl to 500 mg/dl
		Triglyceride	SOP:CSM/BL-BIO-006 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	9.73 mg/dl to 1000 mg/dl
		Total Protein	SOP:CSM/BL-BIO-007 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	0.37 g/dl to 15 g/dl
		Albumin	SOP:CSM/BL-BIO-008 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	0.1 g/dl to 6.0 g/dl
		Aspartate	SOP:CSM/BL-BIO-009	2.5 Units/L to 500 Units/L

Sandeep Tomar  
Convenor

Pankaj Johri  
Program Manager

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		Transaminase (ASAT)	Procedure as per ERBA Kit (Issue Date: 30.11.2005)	
		10.Alanine Transaminase (ALAT)	SOP:CSM/BL-BIO-010 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	4.4 Units/L to 360 Units/L
		11.Alkaline Phosphatase (ALP)	SOP:CSM/BL-BIO-011 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	3.2 Units/L to 1080 Units/L
		Calcium	SOP:CSM/BL-BIO-012 Procedure as per ERBA Kit (Issue Date: 30.11.2005)	0.6 mg/dl to 16 mg/dl
		Sodium	SOP:CSM/BL-BIO-013 Procedure as per Liquizyme kit (Issue Date: 30.11.2005)	1.2 mmol/L to 180 mmol/L
		Potassium	SOP:CSM/BL-BIO-014 Procedure as per Ensure kit (Issue Date: 30.11.2005)	0.3 mmol/L to 7.0 mmol/L
		Protein	SOP:CSM/BL-BIO-015 Lowry OH, Rosebrough N.J, Farr A & Randall R.J. Journal of Biological Chemistry 1951, Vol. 193, p.265 (Issue Date: 28.07.2006)	10 mg/g to 250 mg/g
		Aspartate Transaminase (mg Pyruvate liberated /mg protein in 60 mts37°C	SOP:CSM/BL-BIO-016 Reitman S & Frankel S. American Journal of Clinical Pathology 1957, Vol. 28, p. 56-63	0.02 to 0.3

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			(Issue Date: 28.07.2006)	
		Alanine Transaminase (mg Pyruvate liberated /mg protein in 30 mts @37°C	SOP:CSM/BL-BIO-017 Reitman S &Frankel S. American Journal of Clinical Pathology1957, Vol. 28, p.56-63. (Issue Date: 28.07.2006)	0.02 to 0.6
		4. Alkaline Phosphatase (mg Phenol liberated/mg protein in 15 mts @ 37°C	SOP:CSM/BL-BIO-018 Kind PRN &King EJ, Journal. Clinical Pathology 1954, Vol. 7, p. 322. (Issue Date: 28. 07. 2006)	1.0 to 8.0×10 <sup>-5</sup>
		5. Acid Phosphatase (mg phenol liberated / mg protein in 60 mts @ 37°C	SOP:CSM/BL-BIO-019 Kind PRN &King EJ, J. Clinical Pathology 1954, Vol. 7, p. 322. (Issue Date: 28.07.2006)	1.0 to 7.0×10 <sup>-5</sup>
2.	<b>Ayurvedic Drugs/ Siddha Drugs</b>  <b>Plant drugs</b> <b>Single drugs &amp; Compound Formulations</b> <b>a. Curna</b> <b>b. Tablet</b>	<b>1. Macroscopic Study:</b> 1.Size & Shape 2.Texture 3. Fracture 4.Colour 5.Odour 6.Taste	SOP: CSM/BL-BOT/001 Text book of Pharmacognosy, Wallis. T.E Fifth Edition pp.571-576. Quality Control Methods for Medicinal Plant Materials WHO, Geneva, pp.10-11. API, Part I, Vol. I-IX, Dept. AYUSH, Govt. of India Quality Standards of Indian Medicinal Plants, Vol.1-15, MPU,ICMR, New Delhi	Qualitative

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			(Issue Number: 01 Issue Date: 30.11.2005 Revision Number: 04 Revision Date: 04.08.2016)	
		<b>2. Microscopic Tests:</b> Standardization and characterization of single drugs-Anatomy 1. Stomatal index 2. Stomatal number 3. Palisade ratio 4. Vein-islet number 5. Vein-termination number	SOP: CSM/BL-BOT/002 API, Part I, Vol. I-IX, Dept. of AYUSH, Govt. of India API, Part I, Vol. VI, pp.233-242. Khandelwal, KR, Practical Pharmacognosy, pp. 171-172. Quality Standards of Indian Medicinal Plants, Vol.1-15, MPU, ICMR, New Delhi Text book of Pharmacognosy, Wallis. T.E Fifth Edition pp.571-576. Evans, WC, Trease and Evans' Pharmacognosy 13 <sup>th</sup> Edition, pp.799-803. (Issue Number: 01 Issue Date: 30.11.2005 Revision Number: 04 Revision Date: 01.06.2016)	Qualitative
		<b>Powder Microscopic/Histochemical Tests:</b> Standardizations and characterization of single/compound drugs-powder Microscopy/Histo-	<b>SOP: CSM/BL-BOT/003</b> API, Part I, Vol. I-IX, Dept. of AYUSH, Govt. of India Quality Standards of Indian Medicinal Plants, Vol.1-15, MPU, ICMR, New Delhi. API, Part I, Vol. VI, pp.233-	Qualitative

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		chemical tests Starch grains Lignin Mucilage Tannin Calcium carbonate crystal Calcium oxalate crystal Aleurone grains Oil	242. Khandelwal, KR, Practical Pharmacognosy, pp. 171-172. Atlas Microscopy, Jackson and Snowdon, 1990 (Issue Number: 01 Issue Date: 30.11.2005 Revision Number: 04 Revision Date: 01.06.2016)	

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**CHEMICAL TESTING**

I.	AYUSH PRODUCTS			
1.	Ayurvedic Drugs Asava and Arista (AFI) (eg.) Amritarishta & Kumaryasava	pH	IP. Vol. 1, 2018; p. 215. API, Part –II, Vol-I. p. 45&46 (SOP:CSM/CL/001) (Issue Date: 28.07.2006)	2.5 to 7.0
		Specific gravity	IP. Vol. 1, 2018; p. 256-257. (SOP:CSM/CL/002) (Issue Date: 28.07.2006)	0.78 to 1.55
		Total solids	IP. Vol. 1, 2018; p. 329. (SOP:CSM/CL/003) (Issue Date: 28.07.2006)	0.2 % w/v to 45 % w/v
		Alcohol content	IP. Vol. 1, 2018; p. 158-159. (SOP:CSM/CL/004)	1.5 % v/v to 12 % v/v
		Reducing sugar	AOAC International, 2016, Chapter 44.1.15, P.8, 9 and Table 930.44. (SOP:CSM/CL/005) (Issue Date: 28.07.2006)	2.0 % w/w to 56.0 % w/w
		Total sugar	AOAC International, 2016, Chapter 44.1.15, P.8, 9 and Table 930.44. (SOP:CSM/CL/005) (Issue Date: 28.07.2006)	2.0 % w/w to 62.0 % w/w
		Test for methanol	Laboratory manual of	Qualitative

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			Organic Chemistry, 1957, p.54. (SOP:CSM/CL/006) (Issue Date: 28.07.2006)	
		Photo documentation of Single drug/ formulations by TLC	Plant drug Analysis, 1996, p.364. (SOP:CSM/CL/007) (Issue Date: 28.07.2006)	Comparison
		Finger print of Single drug/ formulations by HPTLC	HPTLC Quantitative analysis of Pharmaceutical formulations, 1996, p.18-30 (SOP:CSM/CL/008) (Issue Date: 28.07.2006)	Comparison
2.	Araka and Dravaka(AFI) (eg.) Ajamodarka & Sankhadravaka	pH	IP. Vol. 1, 2018; p. 215. API, Part –II, Vol-I. p. 45&46 (SOP:CSM/CL/001) (Issue Date: 28.07.2006)	2.5 to 6.8
		Specific gravity	IP. Vol. 1, 2018; p. 256-257. (SOP:CSM/CL/002)(Issue Date: 28.07.2006)	0.8 to 1.55
		Volatile matter /Oil	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.34-36. (SOP:CSM/CL/009) (Issue Date: 28.07.2006)	0.2 % v/w to 5 % v/w
3.	Siddha Drugs  Tinir and Tiravakam (SFI)	Photo documentation of Single drug/ formulations byTLC	Plant drug Analysis, 1996, p.364. (SOP:CSM/CL/007)(Issue Date: 28.07.2006)	Comparison

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	(eg.) Cankatiravakam	Finger print of Single drug/ formulations by HPTLC	HPTLC Quantitative analysis of Pharmaceutical formulations, 1996, p.18-30. (SOP:CSM/CL/008)(Issue Date: 28.07.2006)	Comparison
4.	Avaleha, Rasayana, Paka and Modaka (AFI)	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010)(Issue Date: 28.07.2006)	0.5 % w/w to 15 % w/w
	(eg.) Ashwagandhadi lehya, Cyavanaprasa, Kusmandaka Rasayana & Eladya Modaka	Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011)(Issue Date: 28.07.2006)	0.2 % w/w to 8.0 % w/w
		Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012)(Issue Date: 28.07.2006)	0.2 % w/w to 20 % w/w
		Fat content	AOAC International, 2016. Chapter 31.4.02, P.10. (SOP:CSM/CL/013)	0.5 % w/w to 20 % w/w
		pH	IP. Vol. I, 2018; p. 215. API, Part –II, Vol-I. p. 45&46 (SOP:CSM/CL/001) (Issue Date: 28.07.2006)	2.5 to 6.8



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5.	Siddha Drugs Padankam, Parpam, Centuram and Karuppu (SFI)	Reducing sugar	AOAC International, 2016, Chapter 44.1.15, P.8, 9 and Table 930.44. Appendix C p.37. (SOP:CSM/CL/005) (Issue Date: 28.07.2006)	5 % w/w to 65 % w/w
		(eg.) Canku Parpam, Tamra Centuram & Gandhaka Karuppu	Total sugar	AOAC International, 2016, Chapter 44.1.15, P.8, 9 and Table 930.44. (SOP:CSM/CL/005)(Issue Date: 28.07.2006)
		Water-soluble extractive	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/014) (Issue Date: 28.07.2006)	10 % w/w to 75 % w/w
		Alcohol-soluble Extractive	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/015) (Issue Date: 28.07.2006)	5 % w/w to 50 % w/w
6.	Ayurvedic /Siddha Drugs  Bhasma, Pisti, Rasayana and Parpati (AFI/SFI)	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010)(Issue Date: 28.07.2006)	1 % w/w to 99 % w/w
		(eg.) Kasisabhasma,	Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011) (Issue Date: 28.07.2006)

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	<b>Pravalapisti, Muktapisti, Makaradhvaja, Rasasinndura &amp; Pancarmrita Parpati</b>	Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012) (Issue Date: 28.07.2006)	0.2 % w/w to 2 % w/w
		Assay for Calcium (Titrimetric method)	Analytical uses of Ethylenediamine tetra acetic acid, 1965, p.110-111. (SOP:CSM/CL/016) (Issue Date: 28.07.2006)	10 % w/w to 45 % w/w
		Assay for Copper (Titrimetric Method)	A Text Book of Quantitative Inorganic analysis, 1961, p.348 and 358. (SOP:CSM/CL/017) (Issue Date: 28.07.2006)	5 % w/w to 65 % w/w
		Assay for Iron (Titrimetric method)	A Text Book of Quantitative Inorganic analysis, 1961, p.307-310. (SOP:CSM/CL/018) (Issue Date: 28.07.2006)	5 % w/w to 50 % w/w
7.	<b>Ayurvedic /Siddha Drugs</b>	Fineness of particle	IP. Vol. 1, 2018; p. 310-314. (SOP:CSM/CL/021) (Issue Date: 28.07.2006)	Coarse powder Moderately coarse, Moderately fine & Fine powder
	<b>Curna andKvathaCurna (AFI/SFI)</b>  <b>(eg.) Avipattikaracurna,</b>	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, Pp.28. (SOP:CSM/CL/010) (Issue Date: 28.07.2006)	0.2 % w/w to 70 % w/w

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	<b>Amritottara kvathaurna</b>	Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011)(Issue Date: 28.07.2006)	0.2 % w/w to 50 % w/w
		Water-soluble Extractive	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/014)(Issue Date: 28.07.2006)	3 % w/w to 75 % w/w
		Alcohol-soluble Extractive	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/015) (Issue Date: 28.07.2006)	3 % w/w to 50 % w/w
		Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012) (Issue Date: 28.07.2006)	1 % w/w to 12 % w/w
		pH	IP. Vol. I, 2018; p. 215. API, Part –II, Vol-I. p. 45&46 (SOP:CSM/CL/001) (Issue Date: 28.07.2006)	2.5 to 6.8
		Photo documentation of Single drug/ formulations by TLC	Plant drug Analysis, 1996, p.364. (SOP:CSM/CL/007) (Issue Date: 28.07.2006)	Comparison
		Finger print of Single	HPTLC Quantitative	Comparison

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		drug/ formulations by HPTLC	analysis of Pharmaceutical formulations, 1996, p.18-30 (SOP:CSM/CL/008) (Issue Date: 28.07.2006)	
8.	<b>Ayurvedic/ Siddha Drugs</b>  <b>Taila, Ney and Ghritha (AFI/SFI)</b>  <b>(eg.) Narayanataila, Triphalaghrita, Biraminey &amp; VellaiEennai</b>	Loss on drying at 105° C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012) (Issue Date: 28.07.2006)	0.2 % w/w to 10 % w/w
		Refractive index	IP. Vol. 1, 2018; p. 251-252. (SOP:CSM/CL/022) (Issue Date:28.07.2006)	1.33 to 1.55
		Acid value	IP. Vol. 1, 2018; p. 142-143. (SOP:CSM/CL/023) (Issue Date:28.07.2006)	0.5 to 10
		Saponification value	IP. Vol. 1, 2018; p.151-152. (SOP:CSM/CL/024) (Issue Date:28.07.2006)	130 to 260
		Iodine value	IP. Vol. 1, 2018; (Method A) p. 144-145. (SOP:CSM/CL/025) (Issue Date: 28.07.2006)	8.0 to 175
		Fat content	AOAC International, 2016. Chapter 31.4.02, P.10 (SOP:CSM/CL/013) (Issue Date:28.07.2006)	1 % w/w to 25 % w/w
		Peroxide value	IP. Vol. 1, 2018; p.151. (SOP:CSM/CL/026)(Issue Date: 28.07.2006)	0.2 to 30

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		Rancidity	The Chemical Analysis of Foods, 1962, p411. (SOP:CSM/CL/027) (Issue Date: 28.07.2006)	Qualitative
		Photo documentation of Single drug/ formulations by TLC	Plant drug Analysis, 1996, p.364. (SOP:CSM/CL/007) (Issue Date: 28.07.2006)	Comparison
		Finger print of Single drug/ formulations by HPTLC	HPTLC Quantitative analysis of Pharmaceutical formulations, 1996, p.18-30. (SOP:CSM/CL/008) (Issue Date: 28.07.2006)	Comparison
9.	Guggulu (AFI) (eg.) Goksuradiguggulu	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010) (Issue Date: 28.07.2006)	0.2 % w/w to 50 % w/w
		Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011) (Issue Date: 28.07.2006)	0.2 % w/w to 36 % w/w
		Water-soluble extractive	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/014) (Issue Date: 28.07.2006)	15 % w/w to 60 % w/w
		Alcohol-soluble	Quality Control Methods for	8 % w/w to 45 % w/w

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		extractive	Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/015) (Issue Date: 28.07.2006)	
		Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012)(Issue Date: 28.07.2006)	8 % w/w to 24 % w/w
		pH	IP. Vol. 1, 2018; p. 215. API, Part –II, Vol-I. p. 45&46 (SOP:CSM/CL/001) (Issue Date: 28.07.2006)	2.5 to 6.8
		Resin content	AOAC International, 2016, Chapter 43.1.15, P. 5 (SOP:CSM/CL/028) (Issue Date: 28.07.2006)	3 % w/w to 15 % w/w
		Photo documentation of Single drug/ formulations by TLC	Plant drug Analysis, 1996, p.364. (SOP:CSM/CL/007) (Issue Date: 28.07.2006)	Comparison
		Finger print of Single drug/ formulations by HPTLC	HPTLC Quantitative analysis of Pharmaceutical formulations, 1996, p.18-30. (SOP:CSM/CL/008) (Issue Date: 28.07.2006)	Comparison

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
10.	Ksara and Lavana (AFI)  (eg.) Apamargaksara & Narikela lavana	pH	IP. Vol. 1, 2018; p. 215. API, Part –II, Vol-I. p. 45&46 (SOP:CSM/CL/001) (Issue Date:28.07.2006)	2.5 to 11.5
		Assay for Sodium (Flame Photometric Method)	AOAC International, 2016, Chapter 3.3.13, P.13. (SOP:CSM/CL/020) (Issue Date: 28.07.2006)	0.1 % w/w to 40 % w/w
		Assay for Potassium (Flame Photometric Method)	AOAC International, 2016, Chapter 3.3.13, P.13. (SOP:CSM/CL/019) (Issue Date: 28.07.2006)	0.1 % w/w to 40 % w/w
11.	LauhaMandura, Karpam and Cunnam(AFI)  (eg.) Saptamritalauha, Punarnavadi Mandura, Pavanakatukai & Vetiyuppue Cunnum	Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012) (Issue Date:28.07.2006)	1 % w/w to 10 % w/w
		Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010) (Issue Date: 28.07.2006)	1 % w/w to 70 % w/w
		Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011) (Issue Date: 28.07.2006)	0.2 % w/w to 25 % w/w
		Assay for Iron (Titrimetric Method)	A Text Book of Quantitative Inorganic analysis, 1961,	5 % w/w to 55 % w/w

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			p.307-310. (SOP:CSM/CL/018) (Issue Date: 28.07.2006)	
		Photo documentation of Single drug/ formulations by TLC	Plant drug Analysis, 1996, p.364. (SOP:CSM/CL/007) (Issue Date: 28.07.2006)	Comparison
		Finger print of Single drug/ formulations by HPTLC	HPTLC Quantitative analysis of Pharmaceutical formulations, 1996, p.18-30. (SOP:CSM/CL/008) (Issue Date: 28.07.2006)	Comparison
12.	<b>Siddha Drugs</b>  <b>Lepa, Kulambu and PuraMaruntukal (SFI) (eg.) Sothaghnalepa &amp; Akasthiyarkulambu</b>	pH	IP. Vol. 1, 2018; p. 215. API, Part –II, Vol-I. p. 45&46 (SOP:CSM/CL/001) (Issue Date: 28.07.2006)	2.5 to 6.5
		Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998p.28. (SOP:CSM/CL/010)(Issue Date: 28.07.2006)	0.2 % w/w to 25 % w/w
		Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011)(Issue Date: 28.07.2006)	0.2 % w/w to 10 % w/w
		Loss on drying at 105°C	Quality Control Methods for	2 % w/w to 10 % w/w



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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012) (Issue Date: 28.07.2006)	
		Photo documentation of Single drug/ formulations by TLC	Plant drug Analysis, 1996, p.364. (SOP:CSM/CL/007) (Issue Date: 28.07.2006)	Comparison
		Finger print of Single drug/ formulations by HPTLC	HPTLC Quantitative analysis of Pharmaceutical formulations, 1996,p.18-30. (SOP:CSM/CL/008) (Issue Date: 28.07.2006)	Comparison
13.	Rasayoga(AFI) (eg.) Anandabhairava rasa & Karpurarasa	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010 ) (Issue Date: 28.07.2006)	3 % w/w to 99 % w/w
		Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011) (Issue Date: 28.07.2006)	0.2 % w/w to 45 % w/w
		Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012)(Issue Date: 28.07.2006)	1 % w/w to 10 % w/w
		Water-soluble	Quality Control Methods for	5 % w/w to 80 % w/w

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		extractive	Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/014)(Issue Date: 28.07.2006)	
		Alcohol-soluble extractive	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/015) (Issue Date: 28.07.2006)	1 % w/w to 50 % w/w
14.	<b>Ayurvedic Drugs Sattva(AFI)</b>  (eg.) <b>Guducisattva</b>	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010)(Issue Date: 28.07.2006)	0.2 % w/w to 10 % w/w
		Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011) (Issue Date: 28.07.2006)	0.2 % w/w to 10 % w/w
		Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012) (Issue Date: 28.07.2006)	1 % w/w to 10 % w/w
		Water-soluble extractive	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/014)(Issue Date: 28.07.2006)	5 % w/w to 65 % w/w

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
15.	Varti, Anjana and NetraBindu (AFI) (eg.)	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010)(Issue Date: 28.07.2006)	0.5% w/w to 55 % w/w
	Candrodayavartti & ElanirKuzhambu	Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011) (Issue Date: 28.07.2006)	0.2% w/w to 9 % w/w
		pH	IP. Vol. 1, 2018; p. 215. API, Part –II, Vol-I. p. 45&46 (SOP:CSM/CL/001) (Issue Date: 28.07.2006)	5.0 to 10.0
		Photo documentation of Single drug/ formulations by TLC	Plant drug Analysis, 1996, p.364. (SOP:CSM/CL/007) (Issue Date: 28.07.2006)	Comparison
		Finger print of Single drug/ formulations by HPTLC	HPTLC Quantitative analysis of Pharmaceutical formulations, 1996, p.18-30 (SOP:CSM/CL/008) (Issue Date: 28.07.2006)	Comparison
16.	Vati, Gutika and Mattirai (AFI) (eg.) Eladigutika,	Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.33. (SOP:CSM/CL/012) (Issue Date: 28.07.2006)	1 % w/w to 15 % w/w

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	<b>Sanjivanivati &amp; Ilavankati mattirai</b>	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010) (Issue Date: 28.07.2006)	0.2 % w/w to 80 % w/w
		Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011) (Issue Date: 28.07.2006)	0.2 % w/w to 20 % w/w
		Disintegration test	IP. Vol. 1, 2018, p.299-302. (SOP:CSM/CL/029) (Issue Date: 28.07.2006)	Not applicable
		Uniformity of weight	IP. Vol. 1, 2018, p.308. (SOP:CSM/CL/030) (Issue Date: 28.07.2006)	Not applicable
17.	<b>Herbal Formulations</b> <b>Plant Metirials (AFI/SFI)</b>  <b>(eg.)</b> <b>Root/ Root bark,</b> <b>Rhizome,</b> <b>Stem/ Stem bark,</b>	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010) (Issue Date: 28.07.2006)	0.1 % w/w to 15 % w/w
		Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011) (Issue Date: 28.07.2006)	0.2 % w/w to 8 % w/w

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Leaf, Flower, Fruit/Seed, Exudate/Gum, Whole plant, Aerial parts & Heart wood	Water-soluble extractive	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/014) (Issue Date: 28.07.2006)	1 % w/w to 75 % w/w
		Alcohol-soluble extractive	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.30. (SOP:CSM/CL/015) (Issue Date: 28.07.2006)	1 % w/w to 50 % w/w
		Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998,p.33. (SOP:CSM/CL/012) (Issue Date: 28.07.2006)	1 % w/w to 12% w/w
		Photo documentation of Single plant material/ formulations by TLC	Plant drug Analysis, 1996, p.364. (SOP:CSM/CL/007) (Issue Date: 28.07.2006)	Comparison
		Finger print of Single plant materials / formulations by HPTLC	HPTLC Quantitative analysis of Pharmaceutical formulations, 1996, p.18-30 (SOP:CSM/CL/008) (Issue Date: 28.07.2006)	Comparison
18.	Other  Metal/Element in Raw Material & Formulations	Ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/010) (Issue Date: 28.07.2006)	1 % w/w to 99 % w/w

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Iron (Fe), Copper (Cu), Calcium (Ca), Potassium(K), Sodium (Na), Cadmium (Cd) & Lead (Pb)	Acid-insoluble ash	Quality Control Methods for Medicinal Plant Materials, WHO, 1998, p.28. (SOP:CSM/CL/011) (Issue Date: 28.07.2006)	0.2 % w/w to 60 % w/w
		Loss on drying at 105°C	Quality Control Methods for Medicinal Plant Materials, WHO, 1998p.33. (SOP:CSM/CL/012)(Issue Date: 28.07.2006)	0.2 % w/w to 10% w/w
		Assay for Calcium (Titrimetric Method)	Analytical uses of Ethylenediamine tetra acetic acid, 1965, p.110-111. (SOP:CSM/CL/016) (Issue Date: 28.07.2006)	5 % w/w to 60% w/w
		Assay for Copper (Titrimetric Method)	A Text Book of Quantitative Inorganic analysis, 1961, p.348& 358. (SOP:CSM/CL/017)(Issue Date: 28.07.2006)	5 % w/w to 65 %w/w
		Assay for Iron (Titrimetric Method)	A Text Book of Quantitative Inorganic analysis, 1961, p.307-310. (SOP:CSM/CL/018) (Issue Date: 28.07.2006)	5 % w/w to 60 % w/w
		Assay for Potassium (Flame Photometric Method)	AOAC International, 2016, Chapter 3.3.13, P.13 (SOP:CSM/CL/019) (Issue Date: 28.07.2006)	0.1 % w/w to 40 % w/w

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Assay for Sodium (Flame Photometric Method)	AOAC International, 2016, Chapter 3.3.13, P.13 (SOP:CSM/CL/020) (Issue Date: 28.07.2006)	0.1 % w/w to 40 % w/w
		Cadmium (Cd) (AAS Method)	AOAC International, 2016, Chapter 9.1.09 P.19-21 & Chapter 9.2.22, P.41&42. (SOP:CSM/CL/031) (Issue Date: 28.07.2006)	0.01 mg/kg to 20 mg/kg
		Lead (Pb) (AAS Method)	AOAC International, 2016, Chapter 9.1.09 P.19-21 & Chapter 9.2.22, P.41&42. (SOP:CSM/CL/031) (Issue Date: 28.07.2006)	0.1 mg/kg to 20 mg/kg

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