

## **BIOLOGICAL TESTING IN AYUSH PRODUCTS**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
1.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	Plate Count for fungi/g	United States Pharmacopoeia, USP 40(61) Microbiological Tests: 2018	20 grams	1500.00
2.		Plate Count for Bacteria/g		20 grams	1500.00
3.		Test for specified microorganism Staphylococcus aureus/g		20 grams	1500.00
4.		Test for specified micro-Organisms Pseudomonas aeruginosa/g		20 grams	1500.00
5.		Test for specified micro-Organisms Salmonella sp./g		20 grams	1500.00
6.		Test for specified microOrganismsEsherichia coli/g		20 grams	1500.00

## **HEAVY METAL ANALYSIS IN AYUSH PRODUCTS**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
1.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	Cadmium as Cd	API Vol. IX (Part I) Section 3.1.2: 2016	10 gram	1000.00
2.		Mercury as Hg			1000.00
3.		Arsenic as As			1000.00
4.		Lead as Pb			1000.00

**RESIDUAL PESTICIDE ANALYSIS IN AYUSH PRODUCTS**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
1.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	2,4' DDT Pesticide residue analysis	USP<561> articles of botanical origin: 2014	30 grams	7500.00
2.		2,4' DDT Pesticide residue analysis			
3.		2,4'-DDD Pesticide residue analysis			
4.		2,4'-DDE Pesticide residues analysis			
5.		4, 4'DDT Pesticide residue analysis			
6.		4, 4'DDD Pesticide residue analysis			
7.		Alachor Pesticide residue analysis			
8.		Aldrin Pesticide residue analysis			
9.		alpha-Endosulphan Pesticide residues analysis			
10.		Alpha--HCH Pesticide residues analysis			
11.		Atrazine-diethyl pesticide residue analysis			
12.		Beta-Endosulphan Pesticide residues analysis			
13.		Endrin Pesticide residue analysis			
14.		Fonofos Pesticide residue analysis			
15.		Gamma--HCH Pesticide residues analysis			
16.		Heptachlor pesticide residue analysis			
17.		Heptachlor-Cis Pesticide residues analysis			
18.		Heptachlor-trans			

**RESIDUAL PESTICIDE ANALYSIS IN AYUSH**  
**PRODUCTS CONTD.....**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
19.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	Isobenzan Pesticide residues analysis	USP<561> articles of botanical origin: 2014		
20.		Isodrin Pesticide residues analysis			
21.		beta--HCH residual pesticide analysis			
22.		Ethion pesticide residue analysis			
23.		Hexachlorobenzene residual pesticide analysis			
24.		Phosalone pesticide residue analysis			
25.		Primiphos- methyl pesticide residue analysis			
26.		Terbutryn pesticide residue analysis			
27.		Trietazine pesticide residue analysis			
28.		Aldicarb Pesticide residue analysis			
29.		Aldicarb sulfone Pesticide residue analysis			
30.		3-hydroxycarbofuran Pesticide residue analysis			
31.		Aldicarb sulfoxide Pesticide residue analysis			
32.		Alpha-cypermethrin pesticide residue analysis			
33.	Atrazine pesticide residue analysis				
34.	Azinphos -ethyl pesticide residue analysis				

**RESIDUAL PESTICIDE ANALYSIS IN AYUSH**  
**PRODUCTS CONTD.....**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
35.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	Azinphos -methyl pesticide residue analysis	USP<561> articles of botanical origin: 2014		
36.		Bromopropylate RT Pesticide residue analysis			
37.		carbaryl Pesticide residue analysis			
38.		Carbofuran Pesticide residue analysis			
39.		carbophenothion pesticide residue analysis			
40.		Chlorfenvinphos pesticide residue analysis			
41.		chloropyrifos pesticide residue analysis			
42.		cyfluthrin pesticide residue analysis			
43.		Diazinon pesticide residue analysis			
44.		Dichlorovos RT pesticide residue analysis			
45.		Dieldrin residue pesticide analysis			
46.		Dimethioate RT Pesticide residue analysis			
47.		Disulfoton Pesticide residue analysis			
48.		flumethrin pesticide residue analysis			
49.		Malathion RT Pesticide residue analysis			
50.		Methiocarb Pesticide residue analysis			

**RESIDUAL PESTICIDE ANALYSIS IN AYUSH**  
**PRODUCTS CONTD.....**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
51.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	Methomyl Pesticide residue analysis	USP<561> articles of botanical origin: 2014		
52.		Methylparathion Pesticide residue analysis			
53.		Mevinphos Pesticide residue analysis			
54.		Oxyamyl Pesticide residue analysis			
55.		Parathion(ethyl parathion) Pesticide residue analysis			
56.		phorate Pesticide residue analysis			
57.		Piperonyl butaoxide pesticide residue analysis			
58.		propazine pesticide residue analysis			
59.		Propoxur Pesticide residue analysis			
60.		Sebuthylazine pesticide residue analysis			
61.		Simazine pesticide residue analysis			
62.		Triazophos Pesticide residue analysis			
63.		Atrazine-desisopropyl pesticide residue analysis			
64.		Fenitrothion pesticide residue analysis			
65.		Fenthion pesticide residue analysis			
66.		Terbuthylazine pesticide residue analysis			
67.		4,4'-DDE Pesticide residues analysis			

Test Parameters and Charges for AYUSH Product & Essential Oil Analysis  
CSIR-CIMAP, Lucknow-226015

## GENERAL PARAMETERS IN AYUSH PRODUCTS

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
1.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	Acid insoluble ash	API VOL IX (PART 1):2016	10 gram	1000.00
2.		Alcohol soluble extractive value	API Vol. IX (Part 1)Section 2.1.8: 2016	10 gram	1000.00
3.		Loss on drying	API Vol. IX (Part I)Section 2.1.4: 2016	10 gram	1000.00
4.		Macroscopic & Microscopic Identification	API VOL IX (PART 1)Section 2.1.1: 2016	10 gram (Fresh or dried sample)	3000.00
5.		Total Ash	API VOL IX (PART 1)Section 2.1: 2016	5 gram	1000.00
6.		Water soluble extractive value	API, Vol. IX, Section2.1.9: 2016	10 gram	1000.00
7.		Foreign Matter	API VOL IX (PART 1) :2016	200 gram	1000.00

## MARKER CONTENT ANALYSIS IN AYUSH PRODUCTS BY HPLC/HPTLC

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
1.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	Analysis for total withanolides in Withania somnifera by HPLC	API Vol. VIII (Part I): 2010	5 gram	8000.00
2.		Analysis of Curcumin in Curcuma longa by HPTLC	USP32–NF27 pp1077: 2008	2 gram	6000.00

**AFLATOXIN ANALYSIS IN AYUSH PRODUCTS BY UPLC**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
1.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	Aflatoxin B1 Analysis by UPLC	USP 561 Articles of Botanical Origin, Tests for Aflatoxin, Method III: 2014	50 gram	4000.00
2.		Aflatoxin B2 Analysis by UPLC			
3.		Aflatoxin G1 Analysis by UPLC			
4.		Aflatoxin G2 Analysis by UPLC			

**CHEMICAL FINGERPRINTING OF AYUSH PRODUCTS BY HPLC/HPTLC**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
5.	Ayurvedic Crude Drugs (Root/ stem/ leaf/ bark/ fruit/seeds and extracts) & Ayurvedic Formulations	Qualitative Analysis/ Finger Print Analysis (HPTLC/HPLC)	API	5 gram	3000.00
6.		Qualitative Analysis/ Finger Print Analysis (HPTLC/HPLC)	API	5 gram	5000.00

**MARKER CONTENT ANALYSIS IN ESSENTIAL OILS  
AND AROMA CHEMICALS**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
8.	Essential oils and Aroma Chemicals	Characterization & Estimation of 1,8 Cineole in Cardamom oil by GC	IS:326, Method of sampling and test for natural and synthetic perfumery materials, Pt. 19, RA 2002: 1998	1.0 mL	2000.00
9.		Characterization & Estimation of a Terpinyl Acetate in Cardamom oil by GC		1.0 mL	2000.00
10.		Characterization & Estimation of 1,8 Cineole in Eucalyptus globules oil by GC		1.0 mL	2000.00
11.		Characterization & Estimation of Citronellol in Geranium oil by GC		1.0 mL	2000.00
12.		Characterization & Estimation of Geraniol in Geranium oil by GC		1.0 mL	2000.00
13.		Characterization & Estimation of Citronellol, in Rose oil by GC		1.0 mL	2000.00
14.		Characterization & Estimation of Geraniol in Rose oil by GC		1.0 mL	2000.00
15.		Characterization & Estimation Phenyl ethyl alcohol in Rose oil by GC		1.0 mL	2000.00
16.		Characterization & Estimation of Linalool in Lavender oil by GC		1.0 mL	2000.00
17.		Characterization & Estimation of Linalyl Acetate in Lavender oil by GC		1.0 mL	2000.00
18.	Characterization & Estimation of thymol in Ajowain oil by GC	1.0 mL	2000.00		



**MARKER CONTENT ANALYSIS IN ESSENTIAL OILS  
 AND AROMA CHEMICALS Contd....**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR	
19.	Essential oils and Aroma Chemicals	Characterization & Estimation of Citronellal in Citronella oil by GC	Identification of Essential oil Components by Gas Chromatography/ Mass Spectrometry, 4th Edition by Dr. Robert P. Adams.: 2007	1.0 mL	2000.00	
20.		Characterization & Estimation of Geraniol in <i>Palmarosa</i> oil by GC		1.0 mL	2000.00	
21.		Characterization & Estimation of Linalool in <i>Ocimum</i> oil by GC		1.0 mL	2000.00	
22.		Characterization & Estimation of Patchouli Alcohol in Patchouli oil by GC		1.0 mL	2000.00	
23.		Characterization & Estimation of total Citral in Lemon Grass oil by GC		1.0 mL	2000.00	
24.		Characterization & Estimation of Menthol in <i>Mentha arvensis</i> oil by GC		Indian standard: oil of peppermint, <i>Mentha piperita</i> (Indian type)-pecification BIS 2016 (Doc No.: PCD 18 (2678). BIS, New Delhi 110002, (ICS71.100.60). : 2016	1.0 mL	2000.00

**GENERAL PARAMETERS IN ESSENTIAL OILS AND  
 AROMA CHEMICALS**

Sl. No.	Sample Matrix	Test	Test Method	Sample Size Required	Testing Charges in INR
1.	Essential oils and	Miscibility in ethanol IS	326 (Part 6): 2004 109	4.0 mL	500.00
2.	Aroma Chemicals	Oil Content in plant material	Verma et al. Industrial Crops and Products, 91, 152–160: 2016 110	200-500 gram	1000.00
3.		Optical Rotation	IS 326 (Part 4): 2005	4.0 mL	500.00
4.		Refractive Index	IS 326 (Part 5): 2006	2.0 mL	500.00
5.		Relative Density	IS 326 (Part 3): 2006	15 mL	500.00

**General terms and conditions:**

- Laboratory does not carry out on site sampling of substances, materials or products for the respective testing.
- The analytical report will be provided for research/development and quality purposes. These cannot be used as a certificates in legal disputes as evidence in the court of law and should not be used in any advertising media without written permission from CSIR-CIMAP authority.
- Decision rule and/or Interpretation of results are not a part of sample analysis.
- Please send the samples in quantity as mentioned above or enquire before submission.
- The test results will pertain only to the samples tested and applicable parameters.
- Results will relate only to the sample as analysed as received by the analyst only not whole batch.
- Remaining sample(s) will be retained for 7 days (in case of perishable items) and one year for all other samples or unless otherwise specified.
- Samples are not recovered and remaining will not be sent back.
- In all correspondence related to analysis our reference number must be mentioned.
- Radio-active samples should not be sent on violation service seeker will be responsible.
- Unstable and explosive compounds should not be sent for analysis.
- Acknowledgement of services in the all outcome of the results, e.g., thesis, patent, process, publication etc. is to be ensured by the user.
- Parameters wise charges are mentioned in the above list.

## Test Parameters and Charges for AYUSH Product & Essential Oil Analysis CSIR-CIMAP, Lucknow-226015

14. As per Govt. Rules, Service Tax (18%) will be charged extra (Rates are subject to change).
15. Samples are analysed after receiving the payment.
16. Payment and service charges are payable in advance by **demand draft in favour of "Director, CSIR-CIMAP, Lucknow"** payable at Lucknow or **through online transfer.**

Bank Detail for online transfer

Account No.: 30267691783

Account holder: Director, CIMAP, Lucknow

Bank Address: State Bank of India, Main Branch, Hazaratganj, Lucknow

Branch code: 000125

IFSC code: SBIN0000125

MICR code: 226002002

SWIFT code: SBININBB157

GSTIN: 09AAATC2716R7Z7

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