

*of System for Grant of Ayush Quality Mark to Ayush Product Testing Laboratories***Category/Group wise mandatory testing requirements for a  
Competent Ayush Product Testing Laboratory****Group 1 General Physical and Chemical tests****(Limits and test methods as per those given in Pharmacopoeias and any other sources including importing countries requirements)**

1	Foreign Matter and Determination of Foreign matter
2	Determination of Total Ash
3	Determination of Acid Insoluble Ash
4	Determination of Water Soluble Ash
5	Determination of Alcohol soluble Extractive
6	Determination of Water Soluble Extractive
7	Determination of Ether, n-Hexane Soluble Extractive (Fixed Oil Content)
8	Determination of Moisture Content (Loss on Drying)
9	Determination of Sulphated Ash
10	Determination of Water Insoluble Matter
11	Determination of Volatile Oil in Drugs
12	Fatty Oil Estimation
13	Test for Argemone Oil (Mustard Oil)
14	Test for the Presence of Cottonseed Oil(Halphen Test)
15	Test for Clove Oil- Alkali- Soluble Matter
16	Test for Eucalyptus Oil
17	Determination of Acidity
18	Protein Estimation (Lowry et al., 1951)
19	Method for Alkaloid Estimation
20	Determination of Esters and Ester Value
21	Determination of Foaming index
22	Protein estimation (Lowry et al, 1951)
23	Isolation of Forskohlin (Shah et al., 1980)
24	Method for Alkaloid estimation
25	Limit Test for Chlorides
26	Limit Test for Sulphates
27	Determination of Calcium Oxide
28	Determination of Total Solids
29	Solubility in Water
30	Determination of Viscosity
31	Determination of Saponification Value
32	Determination of Iodine Value
33	Determination of Acid Value
34	Determination of Peroxide Value
35	Determination of Unsaponifiable Matter
36	Detection of Mineral Oil (Holde's Test)
37	Rancidity Test (Kreis Test)
38	Determination of Reichert Meissl And Polenske Value
39	Determination of Alcohol Content
40	Disintegration test for tablets
41	Uniformity of Weight of Single Dose Preparations
42	Refractive Index
43	Weight Per Millimetre and Specific Gravity
44	Determination of pH
45	Determination of Melting Range
46	Determination of Congealing Range

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47	Determination of Boiling Range
48	Determination of Optical Rotation and Specific Optical Rotation
49	Viscosity
50	Determination of Powder Fineness
51	Uniformity of Weight of Single Dose Preparations
52	Estimation of Total Phenolics
53	Estimation of Total Tannins
54	Estimation of Sugars [Spectrophotometric method]
55	Reducing Sugars
56	Total Sugars
57	Non-reducing Sugars
58	Estimation of Curcumin by TLC Densitometer
59	Estimation of Starch) [Spectrophotometric method]
60	Determination of Aluminium
61	Determination of Borax
62	Determination of Calcium
63	Determination of Iron
64	Determination of Magnesium
65	Determination of Silica
66	Estimation of Sodium and Potassium by Flame Photometry
67	Determination of Sodium chloride
68	Determination of Sulphur
69	Sodium
70	Potassium
71	Magnesium
72	Carbonates and Bicarbonates
73	Sulphates
74	Chlorides
75	Calcium
76	Sulphides
77	Boron
78	Sulphur
79	Anthraquinones
80	Test for Hingu
81	Test for absence of Arachis Oil in other Oils
82	Test for the Absence of Cotton-Seed Oil in other Oils
83	Test for the Absence of Sesame Oil in other Oils
84	Test for the Absence of Linseed Oil in other Oils
85	Test for Steroid

**Group 2 Crude Drugs/Herbs - Pharmacognosy/ microscopy related tests**

1	Systematic Study of Crude Drugs
2	Microscopic identification
3	Microscopic methods of Examining Crude Vegetable Drugs
4	Types of Stomata
5	Determination of Stomatal Index
6	Determination of Palisade Ratio
7	Determination of Vein –Islet Number
8	Determination of Stomatal Number

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(Tests as per Pharmacopoeia, Importing country regulations, International standard test methods, Validated methods)

1	Determination of Volatile Oils in Drugs
2	Special Processes used in Alkaloidal Assays
3	Continuous Extraction of Drugs
4	Tests for Complete Extraction of Alkaloids
5	Analysis/Assay through Thin Layer Chromatography (TLC)
6	Analysis/Assay through HPTLC
7	Analysis/Assay through HPLC/GLC
8	Determination of Lamda Max by U.V. Spectrophotometer

Plus others as per importing country's requirements as specified by the customer

**Group 4 Tests for residues and chemical contaminants**

(Limits and list as per those covered in API/ SPI/ UPI/ HPI and Importing countries regulations/ requirements)

**Heavy metal and other metallic residues** (Minimum requirements to be covered) through instrumental methods such as AAS, ICP:

1	Lead (Pb)
2	Arsenic (As)
3	Cadmium (Cd)
4	Mercury (Hg)
5	Copper

Plus others as per importing country's requirements as specified by the customer

**Pesticide Residues** (Minimum requirements to be covered):

1	Alachlor
2	Aldrin and Dieldrin (sum of)
3	Azinphos-methyl
4	Bromopropylate
5	Chlordane (sum of cis-, trans – and Oxythlordane)
6	Chlorfenvinphos
7	Chlorpyrifos
8	Chlorpyrifos-methyl
9	Cypermethrin (and isomers)
10	DDT (sum of p,p-'DDT, o,p-'DDT, p,p-'DDE and p,p-'TDE)
11	Deltamethrin
12	Diazinon
13	Dichlorvos
14	Dithiocarbamates (as CS <sub>2</sub> )
15	Endosulfan (sum of isomers and Endosulfan sulphate)
16	Endrin
17	Ethion
18	Fenitrothion
19	Fenvalerate

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20	Fonofos
21	Heptachlor (sum of Heptachlor and Heptachlorepoide)
22	Hexachlorobenzene
23	Hexachlorocyclohexane isomers (other than $\gamma$ )
24	Lindane ( $\gamma$ -Hexachlorocyclohexane)
25	Malathion
26	Methidathion
27	Parathion
28	Parathion-methyl
29	Permethrin
30	Phosalone
31	Piperonyl butoxide
32	Pirimiphos-methyl
33	Pyrethrins (sum of)
34	Quintozene (sum of quintozene, pentachloroaniline and methyl pentachlorophenyl sulphide)

**Plus others as per importing country's requirements or as specified by the customer**

**Test for Aflatoxins**

1	Aflatoxin B1
2	Aflatoxin G1
3	Aflatoxin B2
4	Aflatoxin G2

**Group 5 Microbial/ biological tests**

**(Limits and list as per those covered in API/ SPI/ UPI/ HPI and Importing countries regulations/ requirements)**

1	Total Aerobic Microbial Count
2	Total microbial plate count
3	Total Yeast and Mould
4	Escherichia coli
5	Staphylococcus aureus
6	Salmonella sp.
7	Pseudomonas aeruginosa
8	Test for Pyrogens
9	Tests for Sterility
10	Growth promotion test Tests for bacteriostasis and fungi stasis

**Plus others as per importing country's requirements or as specified by the customer**