

### Quality Evaluation Laboratory, Spices Board, Cochin.

Details of the Analysis on various parameters showing the analytical charges, minimum quantity and number of days required for completion of analysis.

SI No.	Name of Analysis	Min. Qty. Reqd. in Gm	<sup>1</sup> Charges Rs.	<sup>10</sup> No of Days Required	
<b>PHYSICO-CHEMICAL ANALYSIS</b>					
1	Agmark specifications	500	*	>	
2	ASTA specifications	500 / 250X 10 Nos ***	*	1	
3	Acid insoluble ash	250	450	3	
4	Added Starch	100	350	2	
5	Alcohol soluble extract	250	300	3	
6	Bulk density / Litre weight of spices	1000	300	1	
7	Artificial colourants in Cardamom	100	1500	5	
8	Capsaicin - HPLC method (%/SHU)	100	1800	4	
9	Calcium as Calcium Oxide	250	350	5	
10	Coumarin Content	100	1800	3	
11	Chromate test (Qualitative)	100	350	2	
12	Cold water soluble extract	100	350	4	
13	Colour value (ASTA METHOD)	100	500	3	
14	Common salt	100	450	3	
15	Crocine	10	1000	2	
16	Crude fibre	100	700	5	
17	Curcumin (ASTA METHOD)	100	600	3	
18	Excreta, mamalian	500/250	350	1	
19	Excreta, others	500/250	350	1	
20	Extraneous / foreign matter	500 / 250	350	1	
21	Filth, heavy	100	600	2	
22	Filth, light	100 #	600	5	
23	Gingerols and Shogaols	100	2400	3	
24	Insect defiled / infested	500 / 250	350	1	
25	Light berries	250	350	1	
26	Moisture (ASTA METHOD)	250	450	2	
27	Mould (Physical)	250	350	1	
28	Non - volatile ether extract	100	550	6	
29	Oleoresin (EDC extractables)	100	500	5	
30	*Oleoresin(EDC extractables in Black Pepper)[ISO 1108 Method]	100	500	5	
31	Other Seeds	100	350	1	
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32	Other Seeds in Cumin	100	350	1
33	Picrocrocine	10	1000	2
34	Piperine (ASTA METHOD)	100	1000	3
35	*Piperine content[ISO 5564 Method]	100	1000	3
36	Safranal	10	850	2
37	Starch	100	850	5
38	Sulphur dioxide	200	850	4
39	Total ash	100	450	3
40	USFDA specifications	500/250x10 nos	*	6
41	Volatile oil	200	450	3
42	Vanillin	30	1800	3
43	Vanillic acid	30	1800	3
44	P-Hydroxybenzoic acid	30	1800	3
45	P-Hydroxybenzaldehyde	30	1800	3
46	Water activity	100	850	2
47	Water soluble ash	100	550	4
48	Whole insects, dead (by count)	250	350	1
<b>RESIDUAL ANALYSIS</b>				
49	Aflatoxin(B1,B2,G1,G2) [HPLC -METHOD]	250	2700	3
50	Heavy metals (Cd, Cr, Cu, Fe, Mg, Mo, Pb & Zn )	100	500##	5
51	Heavy Metal : Arsenic	100	500	4
52	Heavy Metal : Mercury	100	500	4
53	Mineral oil in Black Pepper	500	600	2
54	Ochratoxin A [HPLC-METHOD]	250	3000	3
55	Orange II	100	2000	2
56	Organochlorine Pesticides Residues (Isomers of BHC, Endosulfan and DDT; Heptachlor, Aldrin, Dieldrin, Endrin and Endrin aldehyde)	200	3000	6
57	Organochlorine Pesticide Residue - Dicofol	200	1800	6
58	Organophosphorous Pesticides Residues - (I) (Chlorpyrifos, Dimethoate, Disulfoton, Ethion, Methyl Parathion, Phorate, Parathion and Quinalphos)	200	3000	6
59	Organophosphorus Pesticides Residues (II) ( Methyl Pirimiphos , Phosalone, Monocrotophos)	200	3000	6
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60	Pesticide Residues-III (Iprobenphos, Triazophos and Profenphos)	200	3000	6
61	Pesticide Residues-IV (Ethion, Iprobenphos, Triazophos and Profenphos)	200	4800	6
62	Pesticide Residues-V (Profenphos, Bifenthrin, Triazophos, Diethion and Endosulfan)	500	6000	6
63	Pesticide Residues-VI (Ethion, Iprobenphos, Triazophos, Profenphos, Phorate, Parathion, Chlorpyrifos, Methyl Parathion)	300	7000	6
64	* Pesticide Residues -VII (Profenfos, Triazophos, Endosulfans)	200	3800	6
65	Pyrethroid Pesticides Residues (Cypermethrin and Fenvalerate)	200	2400	6
66	Pesticide Residue-Malathion	100	1800	6
67	Pesticide Residue-Phorate	100	1800	6
68	Pesticide Residue-Etrimphos	100	1800	6
69	Pesticide Residue-Fenitrothion	100	1800	6
70	Pesticide Residue-Phosmet	100	1800	6
71	Pesticide Residue-Chlorfenvinphos	100	1800	6
72	Pesticide Residue-Parathion	100	1800	6
73	Pesticide Residue-Lambda Cyhalothrin	100	1800	6
74	Pesticide Residue-Chlorothalonil	100	1800	6
75	Pesticide Residue-Azinphos Ethyl	100	1800	6
76	Pesticide Residue-Alachlor	100	1800	6
77	Pesticide Residue- Aldicarb	100	1800	6
78	Pesticide Residue-Carbofuran	100	1800	6
79	Pesticide Residue-Methomyl	100	1800	6
80	Pesticide Residue-O Methoate	100	1800	6
81	Pesticide residues. single compound (any of the above)	200	1800	6
82	Sudan - Dye (I,II,III & IV)[HPLC METHOD]**	100	2400	2
83	Sudan - Dye (I,II,III & IV)[LC-MS/MS METHOD]	100	3000	2
84	Synthetic Dyes II (Sudan Red 7b, Sudan Orange G, Para Red, Rhodamine B and Butter Yellow (LC-MS/MS METHOD))	100	3000	2
85	Synthetic Dyes II - Single compound(any of the above)	100	1800	2
86	Sunset Yellow FCF in Sugar Coated Fennel	100	1800	2

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<b>MICROBIOLOGICAL ANALYSIS</b>				
87	Aerobic Plate Count	100	600	3
88	Aerobic Spore Count	100	600	4
89	Bacillus cereus	100	1000	5
90	Bacillus cereus (AOAC Performance Tested )	100	1200	2
91	Clostridium perfringens	100	2500	5
92	Coliforms	100	550	5
93	Coliforms (AOAC Performance Tested )	100	900	2
94	Enterobacteriaceae	100	600	5
95	Enterobacteriaceae(AOAC Performance Tested )	100	1000	2
96	E.coli	100	900	8
97	E.coli(AOAC Method)	100	900	2
98	Mould	100	500	6
99	Salmonella (FDA BAM)	375	1700	8
100	Salmonella(AOAC OMA Method)	375	1700	3
101	Staphylococcus aureus	100	900	5
102	Staphylococcus aureus (AOAC Performance Tested )	100	1000	2
103	Sulphite Reducing Clostridia	100	2500	5
104	Thermostable Bacteria	100	600	3
105	Total Viable Count(AOAC Method)	100	900	2
106	Yeast	100	500	6
107	Yeast and Mould	100	500	6
108	Yeast and Mould (AOAC Performance Tested )	100	1200	3
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**Note:-**

- \* 1. Form no 75 Revised as on 13-03-2018 with addition of Parameters given under \*.
2. Microbiological parameters by AOAC method/AOAC Performance tested TEMPO method (Automated, fast analytical, validated methods which are internationally accepted). For further technical details on AOAC Method, please contact email ID sbqel@indianspices.com
3. Analytical Charges revised with effect from 01-08-2017  
Service tax @18.0% will be charged extra as per Government norms.
4. > Depends on the number of parameters for individual spices and number of samples.
5. \* Charges based on the parameter specified for each spice.
6. \*\*Turmeric is analysed for Sudan I-IV by HPLC Method unless otherwise specified.
7. \*\*\*In the case of analysis for ASTA / USFDA parameters, sample size should be a minimum of 500 g for heavier items like pepper, ginger, turmeric etc. and 250 g sample for low density items like chilli and seed spices.
8. # Quantity for light filth analysis for Tamarind concentrate by AOAC method should be a minimum of 600g.
9. ## Analytical charges Rs. 500/- per element.
10. @ In the case of analysis of oleoresin samples of spices for the above parameters a minimum of 50 g sample size is required and in case of coriander and herbs a sample size of 300 g is required.
11. The days required for the analysis will increase depending on the inflow of samples for analysis.

The samples may be sent to the Scientist D & Head, Quality Evaluation Laboratory, Spices Board, Sugandha Bhavan, Palarivattom, Kochi -682 025, Kerala, along with analytical charges in the form of D.D. drawn in favour of Secretary, Spices Board, Kochi-25.

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