

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 | ¹ Charges Rs. | ¹⁰ No of Days Required |
|----------------------------------|---------------------------------------|--------------------------|-----------------------------|--------------------------------------|
| PHYSICO-CHEMICAL ANALYSIS | | | | |
| 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 | Other Seeds | 100 | 350 | 1 |
| 31 | Other Seeds in Cumin | 100 | 350 | 1 |
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|-------------------------------|---|--------------------------|--------------------------|-----------------------------------|--|
| 32 | Picrocrocine | 10 | 1000 | 2 | |
| 33 | Piperine (ASTA METHOD) | 100 | 1000 | 3 | |
| 34 | Safranal | 10 | 850 | 2 | |
| 35 | Starch | 100 | 850 | 5 | |
| 36 | Sulphur dioxide | 200 | 850 | 4 | |
| 37 | Total ash | 100 | 450 | 3 | |
| 38 | USFDA specifications | 500/250x10 nos | * | 6 | |
| 39 | Volatile oil | 200 | 450 | 3 | |
| 40 | Vanillin | 30 | 1800 | 3 | |
| 41 | Vanillic acid | 30 | 1800 | 3 | |
| 42 | P-Hydroxybenzoic acid | 30 | 1800 | 3 | |
| 43 | P-Hydroxybenzaldehyde | 30 | 1800 | 3 | |
| 44 | Water activity | 100 | 850 | 2 | |
| 45 | Water soluble ash | 100 | 550 | 4 | |
| 46 | Whole insects, dead (by count) | 250 | 350 | 1 | |
| RESIDUAL ANALYSIS | | | | | |
| 47 | Aflatoxin(B1,B2,G1,G2) [HPLC -METHOD] | 250 | 2700 | 3 | |
| 48 | Heavy metals (Cd, Cr, Cu, Fe, Mg, Mo, Pb & Zn) | 100 | 500## | 5 | |
| 49 | Heavy Metal : Arsenic | 100 | 500 | 4 | |
| 50 | Heavy Metal : Mercury | 100 | 500 | 4 | |
| 51 | Mineral oil in Black Pepper | 500 | 600 | 2 | |
| 52 | Ochratoxin A [HPLC-METHOD] | 250 | 3000 | 3 | |
| 53 | Orange II | 100 | 2000 | 2 | |
| 54 | Organochlorine Pesticides Residues (Isomers of BHC, Endosulfan and DDT; Heptachlor, Aldrin, Dieldrin, Endrin and Endrin aldehyde) | 200 | 3000 | 6 | |
| 55 | Organochlorine Pesticide Residue - Dicofol | 200 | 1800 | 6 | |
| 56 | Organophosphorous Pesticides Residues - (I) (Chlorpyrifos, Dimethoate, Disulfoton, Ethion, Methyl Parathion, Phorate, Parathion and Quinalphos) | 200 | 3000 | 6 | |
| 57 | Pesticide Residues-III (Iprobenphos, Triazophos and Profenphos) | 200 | 3000 | 6 | |
| 58 | Organophosphorus Pesticides Residues (II) (Methyl Pirimiphos , Phosalone, Monocrotophos) | 200 | 3000 | 6 | |
| 59 | Pesticide Residues-IV (Ethion, Iprobenphos, Triazophos and Profenphos) | 200 | 4800 | 6 | |
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| 60 | Pesticide Residues-V (Profenphos, Bifenthrin, Triazophos, Diethion and Endosulfan) | 500 | 6000 | 6 | |
| 61 | Pyrethroid Pesticides Residues (Cypermethrin and Fenvalerate) | 200 | 2400 | 6 | |
| 62 | Pesticide Residue-Malathion | 100 | 1800 | 6 | |
| 63 | Pesticide Residue-Phorate | 100 | 1800 | 6 | |
| 64 | Pesticide Residue-Etrimphos | 100 | 1800 | 6 | |
| 65 | Pesticide Residue-Fenitrothion | 100 | 1800 | 6 | |
| 66 | Pesticide Residue-Phosmet | 100 | 1800 | 6 | |
| 67 | Pesticide Residue-Chlorfenvinphos | 100 | 1800 | 6 | |
| 68 | Pesticide Residue-Parathion | 100 | 1800 | 6 | |
| 69 | Pesticide Residue-Lambda Cyhalothrin | 100 | 1800 | 6 | |
| 70 | Pesticide Residue-Chlorothalonil | 100 | 1800 | 6 | |
| 71 | Pesticide Residue-Azinphos Ethyl | 100 | 1800 | 6 | |
| 72 | Pesticide Residue-Alachlor | 100 | 1800 | 6 | |
| 73 | Pesticide Residue- Aldicarb | 100 | 1800 | 6 | |
| 74 | Pesticide Residue-Carbofuran | 100 | 1800 | 6 | |
| 75 | Pesticide Residue-Methomyl | 100 | 1800 | 6 | |
| 76 | Pesticide Residue-O Methoate | 100 | 1800 | 6 | |
| 77 | *Pesticide Residues-VI(Ethion, Iprobenphos, Triazophos, Profenophos, Phorate, Parathion, Chlorpyriphos, Methyl Parathion) | 300 | 7000 | 6 | |
| 78 | Pesticide residues. single compound (any of the above) | 200 | 1800 | 6 | |
| 79 | Sudan - Dye (I,II,III & IV)[HPLC METHOD]** | 100 | 2400 | 2 | |
| 80 | Sudan - Dye (I,II,III & IV)[LC-MS/MS METHOD] | 100 | 3000 | 2 | |
| 81 | Synthetic Dyes II (Sudan Red 7b, Sudan Orange G, Para Red, Rhodamine B and Butter Yellow(LC-MS/MS METHOD)) | 100 | 3000 | 2 | |
| 82 | Synthetic Dyes II - Single compound(any of the above) | 100 | 1800 | 2 | |
| 83 | Sunset Yellow FCF in Sugar Coated Fennel | 100 | 1800 | 2 | |
| MICROBIOLOGICAL ANALYSIS | | | | | |
| 84 | Aerobic Plate Count | 100 | 600 | 3 | |
| 85 | Aerobic Spore Count | 100 | 600 | 4 | |
| 86 | Bacillus cereus | 100 | 1000 | 5 | |
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| 87 | * Bacillus cereus (AOAC Performance Tested) | 100 | 1200 | 2 |
| 88 | Clostridium perfringens | 100 | 2500 | 5 |
| 89 | Coliforms | 100 | 550 | 5 |
| 90 | * Coliforms (AOAC Performance Tested) | 100 | 900 | 2 |
| 91 | Enterobacteriaceae | 100 | 600 | 5 |
| 92 | *Enterobacteriaceae(AOAC Performance Tested) | 100 | 1000 | 2 |
| 93 | E.coli | 100 | 900 | 8 |
| 94 | E.coli(AOAC Method) | 100 | 900 | 2 |
| 95 | Mould | 100 | 500 | 6 |
| 96 | Salmonella (FDA BAM) | 375 | 1700 | 8 |
| 97 | Salmonella(AOAC OMA Method) | 375 | 1700 | 3 |
| 98 | Staphylococcus aureus | 100 | 900 | 5 |
| 99 | * Staphylococcus aureus (AOAC Performance Tested) | 100 | 1000 | 2 |
| 100 | Sulphite Reducing Clostridia | 100 | 2500 | 5 |
| 101 | Thermostable Bacteria | 100 | 600 | 3 |
| 102 | Total Viable Count(AOAC Method) | 100 | 900 | 2 |
| 103 | Yeast | 100 | 500 | 6 |
| 104 | Yeast and Mould | 100 | 500 | 6 |
| 105 | * Yeast and Mould (AOAC Performance Tested) | 100 | 1200 | 3 |

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Note:-

* 1. Form no 75 Revised as on 02-02-2018 with addition of the Microbiological parameters by AOAC method/AOAC Performance Tested TEMPOMethod (Automated, fast analytical, validated methods which are internationally accepted) .

For further technical details on AOAC Method, please contact email ID sbqel@indianspices.com

Analytical Charges revised with effect from 01-08-2017

Service tax @18.0% will be charged extra as per Government norms.

2. > Depends on the number of parameters for individual spices and number of samples.

3. * Charges based on the parameter specified for each spice.

4. **Turmeric is analysed for Sudan I-IV by HPLC Method unless otherwise specified.

5. ***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.

6. # Quantity for light filth analysis for Tamarind concentrate by AOAC method should be a minimum of 600g.

7. ##Analytical charges Rs. 500/- per element.

8. @ 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.

9. 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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