

# CLL Spices Test-List



Test Parameter	Sample Qty.(Grams)	Turnaround Time (Days)	Method Reference	Technique
<b>MICROBIOLOGICAL PARAMETERS</b>				
Aerobic Spore Count	2 * 50 Grams	5 Days	IS - 5402	Culture
Bacillus Cereus	2 * 50 Grams	5 Days	IS 5887-P6	Culture
Clostridium perfringens	2 * 50 Grams	5 Days	IS 5887 (P)	Culture
Coliforms	2 * 50 Grams	3 Days	IS - 5401 (Part - 1)	Culture
Enterobacteriaceae	2 * 50 Grams	5 Days	IHP	Culture
E. coli	2 * 50 Grams	3 Days	IS - 5887 (Part - 1)	Culture
Mould (Microbiological)	2 * 50 Grams	7 Days	IS - 5403	Culture
Salmonella	2 * 50 Grams	3 Days	IS - 5887 (Part - 3)	Culture
Shigella	2 * 50 Grams	3 Days	IS - 5887 (Part - 7)	Culture
Staphylococcus aureus	2 * 50 Grams	3 Days	IS 5887(P2)	Culture
Sulphide Reducing Clostridia	2 * 50 Grams	3 Days	IS – Anex. C 13428	Culture
Thermostable bacteria	2 * 50 Grams	5 Days	IHP	Culture
Total Plate Count (TBC + Y&M)	2 * 50 Grams	7 Days	IS 5402/5403	Culture
Total Aerobic Bacteria	2 * 50 Grams	5 Days	IS - 5402	Culture
Yeast	2 * 50 Grams	7 Days	IS - 5403	Culture
Yeast & Mould	2 * 50 Grams	7 Days	IS - 5403	Culture

## PHYSICO-CHEMICAL PARAMETERS

Acid Insoluble Ash	2 * 100 Grams	1.Day	AOAC 941.12	Gravimetric
Added Colouring Matter	2 * 50 Grams	2 Days	IHP	Chemical
Aflatoxins, Total (B1+B2+G1+G2)	2 * 50 Grams	2 Days	AOAC PTM	HPLC
Aflatoxins, Total (B1+B2+G1+G2)	2 * 50 Grams	2 Days	AOAC PTM	ELISA
Aflatoxins, Individual (B1, B2, G1, G2)	2 * 50 Grams	2 Days	AOAC PTM	HPLC
Aflatoxins, Individual (B1, B2, G1, G2)	2 * 50 Grams	2 Days	AOAC PTM	ELISA
Alcohol Soluble Extract	2 * 100 Grams	2 Days	AOAC 898.03	Gravimetric
Argemone Oil – Adulterant	2 * 50 Grams	2 Days	IHP	Chemical – Qualitative
Bulk Density / Litre weight of Spices	2 * 100 Grams	1.Day	IHP	Gravimetric
Calcium, as CaO	2 * 100 Grams	1 Day	IHP	Flame Photometer
Calcium, as CaO	2 * 100 Grams	1 Day	IHP	FAAS
Capsaicin	2 * 50 Grams	2 Days	AOAC 995.03	HPLC
Chromate (Lead Chromate Test) – Qualitative	2 * 50 Grams	1 Day	SP-18	Chemical
Cold Water Soluble Extract	2 * 100 Grams	1 Day	SP-18	Chemical
Colour Value		1 Day	AOAC 971.26	
Common Salt (NaCl, Sodium Chloride)	2 * 100 Grams	1 Day	IHP	Chemical
Crocin (Saffron's Pharmacologically Active Substance)	2 * 50 Grams	2 Days	IHP	HPLC
Crude Fibre	2 * 100 Grams	2 Days	AOAC 920.169 / SP-18	Gravimetric
Curcumin	2 * 50 Grams	2 Days	IHP	Spetrophotometrically

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Curcumin	2 * 50 Grams	2 Days	IHP	HPLC
Excreta, mammalian	2 * 250 Grams	1 Day	AOAC 981.22	Visual / Microscopic
Excreta, others	2 * 250 Grams	1 Day	AOAC 945.84	Visual / Microscopic
Extraneous / Foreign Matter	2 * 250 Grams	1 Day	AOAC 960.41	Visual / Microscopic
Foreign Edible Matter	2 * 250 Grams	1 Day	IHP	Visual / Microscopic
Filth, Heavy	2 * 250 Grams	1 Day	AOAC 975.49	Visual / Microscopic
Filth, Light	2 * 250 Grams	1 Day	AOAC 975.49	Visual / Microscopic
Gingerols & Shogaols (Pungent Compounds)	2 * 100 Grams	2 Days	IHP	HPLC
Hydrocyanic Acid	2 * 100 Grams	2 Days	IHP	Chemical
Insect Defiled / Infested Matter	2 * 250 Grams	1 Day	SP-18	Visual / Microscopic
Light Berries	2 * 250 Grams	1 Day	IHP	Visual / Microscopic
Mineral Oil (Coating) – Adulterant	2 * 100 Grams	3 Days	IHP	Extraction+Grav.
Moisture	2 * 100 Grams	1 Day	AOAC986.21/941.11	Gravimetric
Mould (Physical)	2 * 100 Grams	1 Day	AOAC 984.29	Physical
Nitrogen	2 * 100 Grams	2 Days	IHP	Kjeldhal Method
Non-Volatile Ether Extract	2 * 100 Grams	2 Days	SP-18	Chemical
Off Odours	2 * 100 Grams	1 Day	IHP	Physical
Oleoresins	2 * 100 Grams	2 Days	IHP	Spectrophotometrically
Oleoresins (three capsaicin oleoresins)	2 * 50 Grams	2 Days	IHP	HPLC
Picrocrocin (Saffron's Pharmacologically Active Substance)	2 * 50 Grams	2 Days	IHP	HPLC
Piperine	2 * 50 Grams	2 Days	IHP	Spectrophotometrically
Piperine	2 * 50 Grams	2 Days	AOAC 987.07	HPLC
Residual Solvent (any one as per manufacturer's requirement)	2 * 50 Grams	2 Days	SP-18	GC-Headspace
Residual Solvent (complete scan as per USFDA requirement) – 6 Solvents		2 Days	USP	
Saffranal	2 * 100 Grams	2 Days	CLL-TP-	HPLC
Starch	2 * 50 Grams	2 Days	AOAC 920.168	Spectrophotometrically
Sudan I	2 * 50 Grams	1 Day	IHP	HPLC
Sudan I, II, III, IV	2 * 50 Grams	1 Day	IHP	HPLC
Sulphur Dioxide, SO <sub>2</sub>	2 * 100 Grams	2 Days	IHP	Chemical
Total Ash	2 * 100 Grams	2 Days	AOAC 941.12	Chemical
Volatile Oils	2 * 100 Grams	2 Days	AOAC 962.17	Chemical
Vanillin	2 * 100 Grams	2 Days	AOAC 966.12	HPLC
Water Soluble Ash	2 * 100 Grams	1 Day	AOAC 941.12	Chemical
Whole Insects (Dead), by count	2 * 250 Grams	1 Day	SP-18	Visual / Microscopic

**HEAVY / TOXIC ELEMENTS**

Arsenic, As	2 * 50 Grams	2 Days	IHP	GFAAS
Cadmium, Cd	2 * 50 Grams	2 Days	AOAC 982.23	FAAS
Chromium, Cr	2 * 50 Grams	2 Days	AOAC 999.10	FAAS
Copper, Cu	2 * 50 Grams	2 Days	AOAC 999.10	FAAS
Iron, Fe	2 * 50 Grams	2 Days	AOAC 999.10	FAAS
Magnesium, Mg	2 * 50 Grams	2 Days	IHP	FAAS
Mercury, Hg	2 * 50 Grams	2 Days	AOAC977.15	CV-AAS
Molybdenum, Mo	2 * 50 Grams	2 Days	IHP	FAAS
Lead, Pb	2 * 50 Grams	2 Days	AOAC 982.23	FAAS

Test Parameter	Sample Qty.(Grams)	Turnaround Time (Days)	Method Reference	Technique
Tin, Sn	2 * 50 Grams	2 Days	CFIA	FAAS
Zinc, Zn	2 * 50 Grams	2 Days	AOAC 999.10	FAAS
Heavy Metals (As, Cu, Pb, Sn, Zn) – Limit Test, Each	2 * 50 Grams	2 Days	SP-18	Limit Test

**AGROCHEMICAL / PESTICIDE RESIDUES**

OrganoChlorine Residues (CLL SPICESCAN#1)	2 * 50 Grams	3 Days	AOAC / PAM / IHP	GC-ECD/MS
OrganoPhosphorous Residues (CLL SPICESCAN#2)	2 * 50 Grams	3 Days	AOAC / PAM / IHP	GC-TID/MS
Organosulphur Residues	2 * 50 Grams	3 Days	AOAC / PAM / IHP	HPLC / LC-MS
Organoacids Residues	2 * 50 Grams	3 Days	AOAC / PAM / IHP	HPLC / LC-MS
Organotins (as Sn) Residues	2 * 50 Grams	3 Days	AOAC / PAM / IHP	AAS / GC-ECD (post-Derivitization)
Inorganic Bromides	2 * 50 Grams	3 Days	AOAC / PAM / IHP	IC / EDXRF / Qualitative
Triazines	2 * 50 Grams	3 Days	AOAC / PAM / IHP	GC-MS
Synthetic Pyrethroids (CLL SPICESCAN#3)	2 * 50 Grams	3 Days	AOAC 970.52	GC-ECD/MS

**BANNED DYES**

Sudan Dyes – Sudan Dyes (I, II, III, IV)	2 * 50 Grams	3 Days	FSA (UK) / IHP	LC, LC-MS
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**BANNED SOLVENTS**

Residual Solvent (any one as per manufacturer's requirement)	2 * 50 Grams (Factory Sealed Packs)	3 Days	USFDA	GC-Headspace
<b>CLEANLINESS SPECIFICATIONS</b>	2 * 500 Grams	3 Days	Country Specific / ASTA	Microscopic / Macroscopic