

Laboratory	Quality Control Laboratory of AVT McCormick Ingredients Private Limited, Plot # 225/1 A 5-7, Kaipoorikkara, Marampilly Post, South Vazhakkulam, Aluva, Ernakulam District, Kerala		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	02.01.2015
Certificate Number	T-1183	Valid Until	01.01.2017
Last Amended on	-	Page	1 of 6

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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I. FOODS & AGRICULTURAL PRODUCTS

1. Spices and condiments

a.	Whole and Ground spices, spice blends and Seasonings (Chilli, Black pepper, White pepper, Ginger, Turmeric, Fennel, Cumin, Fenugreek, Cinnamon, Cassia, Cardamom, Coriander, Star anise, Ajwain, Celery, Clove, Dill seed, Dehydrated green pepper, Nutmeg, Kalonji, Aniseed, Mace, Allspice, Onion, Garlic)	Moisture content	AOAC 2012, 19 th Edition 986.21, McCormick Method M 200, Issue Date:Sep-02	1 % to 17 %
		Volatile oil	AOAC 2012, 19 th Edition 962.17 McCormick Method M 210, Issue Date:Mar-99	0.1 % to 25 %
		Ash	ASTA Method 3 Revised 1997 McCormick Method M265, Issue Date:Dec-02	0.8 % to 11 %
		Acid insoluble ash	ASTA Method 4 revised 1997 McCormick Method M265, Issue Date:Dec-02	0.01 % to 0.6 %
		Non volatile ether extract	AOAC – 2012, 19 th edition ,940.29 McCormick Method M220, Issue Date:Sep-02	1 % to 50 %
		Granulation	ASTA Method 10, Revised 2004 McCormick Method M110, Issue Date:Mar-03	0.1 % to 100 %
		Bulk Index	ASTA Analytical Method 25.1, Revised April 2001 McCormick Method M120, Issue Date:Dec-05	(100 to 1000) cc/100 g
		Bulk Density	ASTA Analytical Method 25.1 Revised April 2001	(100 to 1000) g/L

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Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	02.01.2015
Certificate Number	T-1183	Valid Until	01.01.2017
Last Amended on	-	Page	2 of 6

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Whole and Ground spices, spice blends and Seasonings (Chilli, Black pepper, White pepper, Ginger, Turmeric, Fennel, Cumin, Fenugreek, Cinnamon, Cassia, Cardamom, Coriander, Star anise, Ajwain, Celery, Clove, Dill seed, Dehydrated green pepper, Nutmeg, Kalonji, Aniseed, Mace, Allspice, Onion, Garlic)	Water Activity	AOAC-2012, 19 th Edition, 978.18, McCormick Method M180, Issue Date: Sep-02	0.10 to 1.000
		Heavy Filth	AOAC 19 th edition 2012, 975.4, McCormick Method M602, Issue Date: Dec-02	0.01 % to 5 %
		Extraneous matter in spices (Excluding black and white pepper)	ASTA Analytical Method-14.1, Revised 1997 McCormick Method M600, Issue Date: Sep-02	0.1 % to 5.0 %
		Relative Humidity	AOAC 2012, 19 th Edition, 978.18	10 % to 100 %
		Pesticide Residues		
		Chlorfenapyr	AOAC, 2012, 19 th Edition, 2007.01	0.01 µg/g to 3 µg/g
		Chlorthalonil		0.5 µg/g to 3 µg/g
		Dimethoate		0.2 µg/g to 3 µg/g
		Mefenoxam		0.5 µg/g to 3 µg/g
		Pendimethalin		0.01 µg/g to 3 µg/g
		Lindane		0.01 µg/g to 3 µg/g
		Carbofuran		0.01 µg/g to 3 µg/g
		Profenofos		0.01 µg/g to 3 µg/g
		Hexaconazole		0.2 µg/g to 3 µg/g
	Kresoxim-Methyl		0.01 µg/g to 3 µg/g	

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Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	02.01.2015
Certificate Number	T-1183	Valid Until	01.01.2017
Last Amended on	-	Page	3 of 6

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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		Pesticide Residues		
		Dicofol		0.01 µg/g to 3 µg/g
		Propargite		0.5 µg/g to 3 µg/g
		Propiconazole		0.01 µg/g to 3 µg/g
		Fenitrothion		0.01 µg/g to 3 µg/g
		Ethion		0.01 µg/g to 3 µg/g
		Myclobutanyl		0.01 µg/g to 3 µg/g
		Malathion		0.01 µg/g to 3 µg/g
		Triazophos		0.01 µg/g to 3 µg/g
		Quinalphos		0.01 µg/g to 3 µg/g
		Chlorpyrifos Ethyl		0.01 µg/g to 3 µg/g
		Endosulfan-1		0.01 µg/g to 3 µg/g
		Endosulfan-2		0.01 µg/g to 3 µg/g
		Endosulfan sulfate		0.01 µg/g to 3 µg/g
		Cypermethrin		0.2 µg/g to 3 µg/g
		oP- DDT		0.01 µg/g to 3 µg/g
	Indoxacarb		0.5 µg/g to 3 µg/g	
	Cyhalothrin		0.2 µg/g to 3 µg/g	
	Beta BHC		0.01 µg/g to 3 µg/g	
	Carbosulfan		0.01 µg/g to 3 µg/g	
	Phosalone		0.01 µg/g to 3 µg/g	

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Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	02.01.2015
Certificate Number	T-1183	Valid Until	01.01.2017
Last Amended on	-	Page	4 of 6

S. No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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		Spiromesifen		0.4 µg/g to 3 µg/g
		Pesticide Residues		
		Thiametoxam		0.2 µg/g to 3 µg/g
		Difenthiuron		0.01 µg/g to 3 µg/g
		Fipronil		0.01 µg/g to 3 µg/g
		Dieldrin		0.01 µg/g to 3 µg/g
		Triadimefon		0.01 µg/g to 3 µg/g
		Hexachlorobenzene		0.01 µg/g to 3 µg/g
		Aflatoxin- B1,B2, G1&G2	AOAC 2012 19 th edition 991.31 Method no- DCQ-1129G, Issue Date:Sep-04	0.5 ng/g to 500 ng/g
	Ochratoxin A	AOAC 2012 19 th edition 991.44 Method no- DCQ- 1183K, Issue Date:Sep-04	2.5 ng/g to 500 ng/g	
b.	Whole and Ground spices and spice blends-Chilli	Methyl parathion	AOAC2012, 19 th Edition 995.03 McCormick Method M 401, Issue Date:Dec-02	0.01 µg/g to 3 µg/g
		ASTA colour	ASTA method - 20.1 revised 2004 McCormick Method M310, Issue Date:Sep-02	10 ASTA to 250 ASTA

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Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	02.01.2015
Certificate Number	T-1183	Valid Until	01.01.2017
Last Amended on	-	Page	5 of 6

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	Whole and Ground spices and spice blends-Chilli	Seed / Pod	Method AMPH 1008/ Laboratory developed method Issue Date:Sep-02	1 % to 70 %
		Ethoxyquin	AOAC2012 19th edition , 996.13 By HPLC	0.01 µg/g to 100 µg/g
c.	Whole and Ground spices and spice blends-Ginger, White pepper, Cinnamon,Cassia	Sulfite residue	AOAC 2012 19 th edition 990.28 . McCormick Method M290, Issue Date:Mar-99	5 µg/g to 1000 µg/g
d.	Whole and Ground spices and spice blends-Chilli, Turmeric	Color	ASTM E308 McCormick Method M322, Issue Date:Feb-96	(-) 50 to 100
		Foreign Iron	Euroma Analytical Method WILC027, Issue Date:Sep-02	1 µg/g to 20 µg/g
		Dyes		
		a) Sudan I	ASTA Method No 28 Revised Aug-2005	1 µg/g to 100 µg/g
		b) Sudan II		1 µg/g to 100 µg/g
		c) Sudan III		1 µg/g to 100 µg/g
		d) Sudan IV		1 µg/g to 100 µg/g
e.	Whole & ground Black Pepper, White pepper & Green pepper	Light Berries & Extraneous matter	ASTA Analytical Method 14.0 McCormick Method M629, Issue Date: Sep-02	0.1 % to 10 %
		Piperine	AOAC 2012 19th Edition 987.07 McCormick Method M300, Issue Date: Sep-02	0.2 % to 8 %

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Accreditation Standard ISO/IEC 17025: 2005

Discipline Chemical Testing **Issue Date** 02.01.2015

Certificate Number T-1183 **Valid Until** 01.01.2017

Last Amended on - **Page** 6 of 6

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f.	Whole and Ground spices-Turmeric	Curcumin	ASTA Method –18, 2004 revision McCormick Method M320, Issue Date:Dec-05	0.5 % to 8 %
g.	Whole and Ground spices-Chilli, Turmeric, Cinnamon, Fenugreek	Light filth	AOAC2012, 19thEdition, 978.22; McCormick Method M0604, M0614, M615,M613, M623, M606, M617, Issue Date:Sep-02	(1 to 200) nos
h.	Whole and Ground spices-Cinnamon, Cassia	Coumarin	A.W.Archer,J. Chromatog.447(1) 272-276(1988) McCormick Method M429, Issue Date:Dec-05	20 µg/g to 2000 µg/g 2000 µg/g to 40000 µg/g

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