

Laboratory **Britannia Industries Limited- R & D Centre, Plot No 23, KIADB Industrial Area, Bidadi Hobli, Ramanagar Dist., Karnataka**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-6280**

Page 1 of 6

Validity **18.09.2017 to 17.09.2019**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
-----	----------------------------	-------------------------	---	--

**CHEMICAL TESTING**

<b>I.</b>	<b>FOOD &amp; AGRICULTURAL PRODUCTS</b>			
<b>1.</b>	<b>Bakery And Confectionery Products</b>			
<b>a.</b>	<b>Biscuits</b>	Moisture	IS 1011	0.1% to 50%
		Ash	IS 12711	0.1% to 10%
		Acid insoluble Ash in dil. HCl	IS 1011	0.01% to 2%
		Fat	IS 12711	0.1% to 40%
		Acidity of extracted Fat (as oleic acid)	IS 1011	0.1% to 3%
		Sugars (Total & Reducing sugar)	AOAC Chapter 44, 984.22	0.1 % to 75%
		Sugar Profiling (HPLC)		1 % to 45%
		Fructose		1 % to 45%
		Glucose		1 % to 45%
		Sucrose		1 % to 45%
		Lactose		1 % to 45%
		Maltitol		1 % to 45%
		Fatty acid profiling Saturated Mono unsaturated Poly unsaturated Trans - Elaidic	AOAC Chapter 41, 969.33	Qualitative
		Protein	AOAC Chapter 32, 920.87	1% to 35%
		Salt as Sodium Chloride	AOAC Chapter 40, 950.52	0.25% to 5%
		Total Dietary Fibre	AOAC Chapter 45, 985.29	0% to 10%
<b>b.</b>	<b>Bread</b>	Moisture	IS 12711	0.1% to 50%
		Ash		0.1% to 10%
		Acid insoluble Ash		0.01% to 2%
		Fat		0.1% to 40%

Laboratory **Britannia Industries Limited- R & D Centre, Plot No 23, KIADB Industrial Area, Bidadi Hobli, Ramanagar Dist., Karnataka**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-6280**

Page 2 of 6

Validity **18.09.2017 to 17.09.2019**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
<b>2.</b>	<b>Milk &amp; Dairy Products</b>			
<b>a.</b>	<b>Sweetened condensed milk</b>	Milk Fat	IS 1224 (Part II)	0.1% to 99%
		Milk solids	IS 11622	0.1% to 99%
		Milk protein in milk solids not fat	AOAC 920.115	0.5% to 40%
<b>b.</b>	<b>Whole milk powder, Skimmed milk powder</b>	Moisture	AOAC 927.05	0.1% to 15%
		Milk Fat	IS 1224 (Part II)	0.1% to 30%
		Milk protein in milk solids not fat	IS 1165	0.5% to 40%
		Titrateable acidity		0% to 2%
		Total ash on dry weight basis		0.1% to 10%
<b>c.</b>	<b>Butter</b>	Moisture	IS 3507	0.01% to 5%
		Milk Fat		0.1% to 99%
		Milk solids not fat common salt		0.01% and above
<b>d.</b>	<b>Whey powder</b>	Moisture	AOAC Chapter 33, 927.05	0.01% to 8%
		Milk fat	IS 1224 (Part II)	0.1% to 10%
		Milk Protein	IS 1165	1% to 40%
		Total Ash		0.1% to 10%
		pH in 10% solution		4 to 9
		Lactose content expressed as anhydrous lactose	AOAC Chapter 33, 930.28	1% to 60%
<b>3.</b>	<b>Cereals, Pulses and Cereal Products</b>			
<b>a.</b>	<b>Maida</b>	Moisture	IS 1009	0.1% to 20%
		Total Ash		0.1% to 10%
		ash insoluble in HCl		0.01% to 5%
		Gluten on dry basis		0.5% to 15%
		Alcoholic acidity as H <sub>2</sub> SO <sub>4</sub>		0.1% to 6%
		Total Dietary Fibre	AOAC Chapter 45, 20 <sup>th</sup> Edn. 2016, 985.29	1% to 10%

**Laboratory** Britannia Industries Limited- R & D Centre, Plot No 23, KIADB Industrial Area, Bidadi Hobli, Ramanagar Dist., Karnataka

**Accreditation Standard** ISO/IEC 17025: 2005

**Certificate Number** TC-6280

Page 3 of 6

**Validity** 18.09.2017 to 17.09.2019

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
<b>b.</b>	<b>Atta</b>	Moisture	IS 1155	0.1% to 20%
		Total Ash		0.1% to 15%
		Ash insoluble in HCl		0.01% to 5%
		Gluten on dry basis		0.5% to 15%
		Alcoholic acidity as H <sub>2</sub> SO <sub>4</sub>		0.1% to 6%
<b>c.</b>	<b>Rolled Oats</b>	Total Dietary Fibre	AOAC Chapter 45, 985.29	1% to 20%
		Moisture	IS 1484	0.1% to 15%
		Total Ash		0.1% to 15%
		Ash insoluble in dil HCl		0.01% to 5%
		Alcohol acidity		0.1% to 10%
<b>4.</b>	<b>Herbs, Spices &amp; Condiments</b>			
<b>a.</b>	<b>Chillies and Chilly products</b>	Moisture	IS 1797	0.1% to 20%
		Total Ash on dry basis		0.1% to 15%
		Ash insoluble in dil HCl on dry basis		0.01% to 10%
<b>b.</b>	<b>Cumin whole &amp; Cumin Powder</b>	Moisture		0.1% to 20%
		Total Ash on dry basis		0.1% to 15%
		Ash insoluble in dil HCl on dry basis		0.01% to 10%
		Volatile content on dry basis		0.1% to 5%
<b>c.</b>	<b>Coriander Powder</b>	Moisture		0.1% to 20%
		Total Ash on dry basis		0.1% to 15%
		Ash insoluble in dil HCl on dry basis		0.01% to 10%
		Volatile content on dry basis		0.1% to 5%
<b>d.</b>	<b>Pepper Powder</b>	Moisture	IS 1797	0.1% to 20%
		Total Ash on dry basis		0.1% to 15%
		Volatile content on dry basis		0.1% to 5%
		non volatile ether extract on dry basis		0.1% to 20%

Laboratory **Britannia Industries Limited- R & D Centre, Plot No 23, KIADB Industrial Area, Bidadi Hobli, Ramanagar Dist., Karnataka**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-6280**

Page 4 of 6

Validity **18.09.2017 to 17.09.2019**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection			
e.	<b>Turmeric Powder</b>	Moisture	IS 3576	0.1% to 20%			
		Total Ash on dry basis		0.1% to 15%			
		Ash insoluble in dil HCl on dry basis		0.01% to 10%			
f.	<b>Ajwain</b>	Test for lead chromate	IS 1797	Qualitative			
		Moisture		0.1% to 15%			
g.	<b>Amchur Powder (Dried Mango Powder)</b>	Volatile content on dry basis	IS 13242	0.1% to 5%			
		Moisture		0.1% to 20%			
		Total ash (salt free basis)		0.1% to 15%			
		Ash insoluble in dil HCl		0.01% to 10%			
5.	<b>Edible Oils &amp; Fats</b>	Acidity as anhydrous tartaric acid	IS 548 (Part I)	12% to 26%			
		a.		<b>Palm Oil, Palmolein, IE Vegetable Fat</b>	Moisture	0.01% to 5%	
					Refractive index at 40 deg Celsius	1.30 to 1.70	
					Melting point , open tube capillary slip method		20 to 80 deg celsius
					Acid value		0.01 to 20
Iodine value (Wij's method)	5 to 150						
<b>6. Coffee &amp; Cocoa Products</b>							
a.	<b>Chocolates</b>	Total Fat	IS 1163	0.1% to 25%			
		Acid insoluble ash		0.01% to 5%			
b.	<b>Low and high fat cocoa powder</b>	Total Ash	IS 1164	0.1% to 15%			
		Ash insoluble in dil HCl		0.01% to 5%			
		Alkalinity of total ash		0.1% to 10%			
		Cocoa butter		1% to 15%			
<b>7. Sugar &amp; sugar Products</b>							
a.	<b>Sugar</b>	Moisture	IS 15279	0.1% to 2%			
		Sucrose		99 to 105			

Laboratory **Britannia Industries Limited- R & D Centre, Plot No 23, KIADB Industrial Area, Bidadi Hobli, Ramanagar Dist., Karnataka**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-6280**

Page 5 of 6

Validity **18.09.2017 to 17.09.2019**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
<b>8.</b>	<b>Honey &amp; Honey Products</b>			
a.	<b>Honey</b>	Specific gravity at 27deg celsius	IS 4941	1.35 to 1.40
		Moisture		1% to 30%
		Total Reducing sugars		60% to 90%
		Sucrose		2% to 5%
		Ash		0.1% to 5%
<b>9.</b>	<b>Vegetables &amp; Vegetable Products</b>			
a.	<b>Dehydrated vegetables</b>	Total Ash	IS 13846	1% to 20%
		Ash insoluble in dil HCl		0.01% to 2%
<b>10.</b>	<b>Coconut &amp; Coconut Products</b>			
a.	<b>Grated dessicated coconut</b>	Moisture	IS 966	0.1% to 10%
		Total Ash		0.1% to 10%
		Acidity of extracted fat expressed as Lauric acid		0.1% to 3%
<b>11.</b>	<b>Nuts &amp; Nut Products</b>			
a.	<b>Pista, Almond, Cashew</b>	Ash	AOAC Chapter 40, 950.49	0.1% to 10%
		Moisture	IS 10619	0.1 % to 10%
		Acidity of extracted fat expressed as oleic acid		0.01 & above
<b>12.</b>	<b>Food Additives &amp; Preservatives</b>			
a.	<b>Sorbic acid (Preservative)</b>	Assay	Food Chemicals Codex - Tenth edition	99% to 105%
b.	<b>Citric acid</b>	Assay	Food chemicals codex – Tenth edition	99% to 105%

Laboratory Britannia Industries Limited- R & D Centre, Plot No 23, KIADB  
Industrial Area, Bidadi Hobli, Ramanagar Dist., Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6280

Page 6 of 6

Validity 18.09.2017 to 17.09.2019

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
-----	----------------------------	-------------------------	---	--

**MECHANICAL TESTING**

I.	PLASTIC & POLYMERS			
1.	Plastic Films	Seal Strength	ASTM F88-F88M 15	200 to 3000 (g/25mm width)
		Bond Strength	ASTM F 904 - 16	40 to 210 (g/25mm width)
		Oxygen Transmission rate	ASTM D3985-05 (Reapproved 2010)	0.5 to 3000 (cc/square meter/24hrs)
		Water Vapour Transmission Rate	ASTM E 398 - 13	0.2 to 10 (g/square meter/24 hrs)

---

Vinay Kumar Tyagi  
Convenor

---

N. Venkateswaran  
Program Director