	INCA GUM	VERSION: 01
	TECHNICAL SPECIFICATION PERUVIAN TARA SEED INCI: CAESALPINIA SPINOSA GUM	January 2022
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PRODUCED BY: C.D. Wätjen		

I. DESCRIPTION

Obtained by grinding the endosperm of the seeds of *Caesalpinia spinosa* (Fam. Leguminosae); consists chiefly of polysaccharides of high molecular weight composed mainly of galactomannans. The principal component consists of a linear chain of (1, 4)-beta-D-mannopyranose units with alpha-D-galacto- pyranose units attached by (1 6) linkages; the ratio of mannose to galactose in tara gum is 3:1.

Ingredients: 100% Peruvian Tara seed endosperm.

II. ORIGIN/INCI/CAS/EINECS/FOOD ADDITIVE

Caesalpinia spinosa (Molina) Kuntze of Perú

INCI Name: *Caesalpinia Spinosa Gum*

CAS No.: 39300-88-4

Food Additive: E 417

EINECS /ELINCS No.: 254-409-6


III. TECHNICAL SPECIFICATION

3.1 PHYSICOCHEMICAL CHARACTERISTICS

IDENTIFICATION		SPECIFICATION:			
Solubility¹:		Soluble in water, insoluble in ethanol			
Gel test¹:		To an aqueous solution of the sample add small amounts of sodium borate; a gel is formed			
PURITY		SPECIFICATION:			
Loss on drying:	(by lot)	≤ 12%			
Galactomanans:	(each 15 days)	≥ 85%			
Proteins (N x 5.7):	[annual]	≤ 3,0%			
Fats:	[annual]	≤ 0,75%			
Ashes¹:	(each 15 days)	≤ 1,5%			
Insolubles in acid¹:	(each 15 days)	≤ 2.00%			
pH (Solution at 1%) :	(by lot)	5 - 7,5			
STARCHES¹:		Not detectable			
		To a 1 in 10 solution of the sample, add a few drops of iodine TS. No blue colour is produced.			
VISCOSITY AFTER HEAT (Solution at 1%, 25 °C, 20RPM, spindle #4)	(by lot)	5200 – 6000 cps			
COLD VISCOSITY (Solution at 1%, 25 °C, 20RPM, spindle #4)	(by lot)	3000 – 4000 cps			
PARTICLE SIZES		Mesh	200	150	100
		Micrometer	75	105	150
		% Of passing through mesh	40%	93%	>98%

Methods: Moisture: Internal method TA-014 Moisture determination; Proteins: NTP ISO 5983: 2002 (revised 2013) 2002 FOODS FOR ANIMALS. Determination of nitrogen content and calculations of crude protein content. Kjeldahl method; Fats: AOAC 920.39, C, Online, 20th. Edition 2016 Fat (crude) or Ether extract in animal feed; Ashes: Internal method TA-004 Determination of ashes; Insolubles: Internal method TA-023 Determination of insolubles in acid medium; pH: Internal method TA-018 Determination of pH; Viscosity: Internal method TA-028 Determination of viscosity; Particle size: Internal method TA-001 Determination of particle size

¹ Prepared at the 30th JECFA (1986), published in FNP 37 (1986) and in FNP 52 (1992). Metals and arsenic specifications revised at the 57th JECFA (2001). An ADI 'not specified' was established at the 30th JECFA (1986)

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3.2 CHEMICAL CHARACTERISTICS OF SAFETY

		SPECIFICATION
Lead²:	(annual)	Max. 2 mg / Kg
Arsenic:	[annual]	Max. 3 mg / Kg
Mercury:	[annual]	Max. 0,1 mg / Kg
Cadmium:	[annual]	Max. 1 mg / Kg
Total heavy metals (Cu + Zn):	[annual]	Max. 20 mg / Kg

Methods: Lead: AOAC 972.23, On line 20th Ed. 2016. Lead in Fish. Atomic Absorption Spectrophotometric Method; Arsenic: AOAC 952.13 20th. Ed. 2016. Arsenic in Food Diethylidithiocarbamate Method; Mercury: NCh 2667. Of2001. Procedure B.2001. Hydrobiological products. Determination of mercury; Cadmium: NOM-117-SSA1 (1994) Goods and services. Test method for the determination of Cadmium, Arsenic, Lead, Tin, Copper, Iron, Zinc and Mercury in food, drinking water and purified water by Atomic Absorption Spectrometry; Heavy metals: USP 35 pag. 156 Heavy metals 231. Heavy metals.

3.3 MICROBIOLOGICAL CHARACTERISTICS

		SPECIFICATION
Total Plate Count:	(each 15 days)	≤ 100 ufc/g
Moulds and Yeast:	(each 15 days)	< 50 ufc/g
Escherichia Coli- Coliforms:	(each 15 days)	Absence / g
Salmonella:	[annual]	Negative in 25 g

Methods: E. coli and Coliforms: AOAC (991.14 Coliform count and E. coli in food, rehydratable dry film); Mesophilic Aerobics: AOAC (990.12 Mesophilic Aerobic Count in food, rehydratable dry film); Molds and yeasts: AOAC (997.02 Count of molds and yeasts in food, rehydratable dry film); Salmonella: ISO 6579: 2002 / Cor 1: 2004 / Amd 1: 2007 2002 Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Salmonella spp. AMENDMENT 1: Annex D: Detection of Salmonella spp. In animal faeces and in environmental samples from the primary production stage.

3.4 SENSORY PRODUCT CHARACTERISTICS

		SPECIFICATION
Color:	(by lot)	White
Flavor:	(by lot)	Inspid
Odor:	(by lot)	Free of odor
Appearance:	(by lot)	Fine powder, free of impurities and blackheads

IV. CHARACTERISTICS CONFERRED TO THE PROCESS

It is obtained by grinding premium endosperm (rigorously selected) from the Peruvian Tara seed.

V. OMG FREE DECLARATION


We declare that INCA GUM "PERUVIAN TARA SEED" is not produced from genetically modified raw materials within the scope of the EU regulations relating to GM (genetically modified) Food and Feed EU 1829/2003 and GM Traceability and Labelling EU 1830/2003.

VI. EXPECTED USE

Manufacture of cosmetics thickening agent, texture agent

² Prepared at the 30th JECFA (1986), published in FNP 37 (1986) and in FNP 52 (1992). Metals and arsenic specifications revised at the 57th JECFA (2001). An ADI 'not specified' was established at the 30th JECFA (1986)

³ Internal Specification

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VII. PACKAGING AND PRESENTATION

Primary packaging: Polyethylene bag
Secondary packaging: Paper bags

VIII. PACKING AND DISTRIBUTION METHOD

Packaging: for the dispatch of each batch proceed as follows: palletised, enzymatic and plasticized.

Distribution: the product must be handled and transported in clean, exclusive and protected units, to avoid contamination or alteration.

IX. USEFUL LIFE AND STORAGE

24 months from the date of production, stored in sealed containers, at room temperature and in a cool, dry and ventilated place.

X. CONTENTS OF THE LABEL

Product name, batch number, date of manufacture, expiration date, gross weight, net weight.

XI. LOT IDENTIFICATION

Example: 2702230317	Description
<u>27</u> <u>02</u> <u>230317</u>	<u>N° Lot</u> <u>N° Pallet</u> <u>Production date (dd/mm/aa)</u>

* analysis frequency: internal (), external []


INCA GUM®
The Natural Thickener