

<b>ARGOS EXPORT S.A</b> Office Address: Calle Juan del Mar y Bernedo 1359 Chacra Rios Sur, Lima, Peru Tel: +511 337 5809 Email: sales@argosperu.com	<b>ANALYSIS CERTIFICATE N° 238 - 0723</b>  <b>Tara Gum - HV</b> Peruvian Carob Gum, E-417 CAS N° : 39300-88-4	N° Spec.: 001-23 Version: 05 -US Last Update: 02.07.2024
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Product Name : Tara Gum Powder HV - Food Grade  
 Batch Number : TG01070424 - 4 (Pallet #4)  
 Production Order Number : OP 308 - 0624  
 Purchase Order Number : 45005 - 1  
 Quantity : 1 TM (40 Bags)  
 Production Date : 04/07/24  
 Expire Date : 04/07/26  
 Evaluation Date : 05/07/24

ORGANOLEPTIC DATA	SPECIFICATION	RESULTS
Appearance	White or yellowish -white fine powder	Conforms
Odor	Characteristic, odorless	Conforms
PHYSICAL ANALYSIS	SPECIFICATION	RESULTS
Hot Viscosity Brookfield RV-DV-E (1% Solution, 85°C, read 25 °C, Spindle #4, 20 rpm)	Min. 5000 cps	6080 cps
Particle size (100 mesh)	≥ 95 %	97.8 %
CHEMYCAL ANALYSIS	SPECIFICATION	RESULTS
Loss on drying (105 °C)	<12 %	8.58 %
Galactomannans	Min. 85 %	Conforms
Protein (Nx5.7)	1.8 - 3.5 %	1.99 %
Fat	<1.0 %	0.38 %
Total ash (550 °C)	0.6 - 1.5 %	0.71 %
pH (1 % Solution, 25 °C)	5.0 - 8.0	6.4
Starch	Not detectable	Conforms
Acid insoluble matter	< 1.5 %	1.16 %
Lead (Pb)	< 2 ppm	Conforms
Arsenic (As)	< 3 ppm	Conforms
Mercury (Hg)	< 1 ppm	Conforms
Cadmium (Cd)	< 1 ppm	Conforms
MICROBIOLOGICAL ANALYSIS	SPECIFICATION	RESULT
Total plate count	< 5000 CFU/g	15x10 <sup>2</sup> CFU/g
Yeasts and mould	< 600 CFU/g	<100 CFU/g
<i>E. coli</i>	Neg./1 g	Neg./1 g
<i>Salmonella</i>	Neg./25 g	Neg./25 g
Coliforms	Neg./1 g	Neg./1 g
OTHER DATA	SPECIFICATION	RESULT
Pesticide	Absent	Conforms
Aflatoxins (B1, B2, G1, G2)	Absent	Conforms
Ethylene oxide	Absent	Conforms
Radiation	Negative	Conforms

Regulation: The compliance with the EU Commission Regulation No 231/2012 – Specifications for Food Additives

**METHOD: COLD VISCOSITY** Brookfield RV-DV-E (1%, 20 RPM with Spindle N° 4, 25°C) **HOT VISCOSITY** Brookfield RV-DV-E (1%, 20 RPM with Spindle N° 4, 85 °C, read 25°C) cps = 1 mPa.s **LOSS ON DRYING:** Food Chemicals Codex p. 1173, 12<sup>th</sup> Ed. 2020. Tara Gum. Loss on drying **GALACTOMANNANS:** Food Chemicals Codex p. 1173, 11<sup>th</sup> edition 2018 Tara Gum. Galactomannans **PROTEIN:** Food Chemicals Codex. 12<sup>th</sup> Ed. 2020 Tara Gum Protein p.1173 **FAT:** AOAC 963.15 C31, 18<sup>th</sup> Ed. 2005 Soxhlet extraction method. **ASHES:** Food Chemicals Codex p. 1173, Appendix II-C p. 1302, 11th edition 2018 Tara Gum. Ash (Total) **pH:** pH Meter method **ACID INSOLUBLE MATTER:** Food Chemicals Codex p. 1173, 11<sup>th</sup> edition 2018 Tara Gum. Acid Insoluble Matter **HEAVY METALS LEAD, ARSENIC, MERCURY and CADMIUM:** Test Method for determination Cadmium, Arsenic, Lead, Copper, Tin, Iron, Zinc and Mercury in Food, Drinking and purified water by atomic absorption spectrometry. **HEAVY METALS/Method II Heavy Metals TOTAL PLATE COUNT:** AOAC 990.12 Aerobic Plate Count in Foods, Dry Rehydratable Film Methods. **MOULDS and YEASTS:** AOAC 997.02 Yeast and Moulds counts in Foods, Dry Rehydratable Film Methods. **SALMONELLA (detection):** ICMSF 2da Ed. 1983, Vol. 1 part II, P. 172 - 176 10 (a) y (c) 177-178 III. reprint 2000, Editorial Acribia. *Salmonella* **PESTICIDES:** P-ME-Q 04 GC-MS/MS **AFLATOXINS:** HPLC-MS/MS **ETHYLENE OXIDE:** Method determination sum of ethylene oxide and 2 chloroethanol (GC-MS/MS)



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