

Product:	REFINED GLYCERIN		
Register M.A.¹/M.S.²:	Product dispensed of Registration according to RDC n° 27 of August 6th, 2010.		
Obtention:	Glycerin obtained after the process of distillation of crude glycerin (this last is obtained from the transesterification of vegetable oil). Vegetable product. Produced in Brazil.		
Raw Material:	Soybean.		
Application:	Food and/or Chemistry industry. Product ready for use, without the need for preparation.		
Allergen(s):	Contains soybean derived. Gluten-free.		
Shelf life:	12 months, in Plastic drums/IBCs properly sealed or in a stainless-steel tank, clean and sanitized. Monitoring of food safety criteria will determine its use during the expiration date.		
Packaging:	Bulk. It must be stored in a stainless-steel tank, clean and sanitized. Plastic drums/IBCs: clean and dry material.		
Transport:	Truck with tank of stainless-material, clean, dry and sanitized, with a confirmation report meeting the criteria Caramuru Alimentos S.A. Plastic drums/IBCs: can be transported in duly cleaned and approved inspection trucks.		
Code(s):	1561		
CHARACTERISTICS			
INTERNAL MONITORING ANALYSIS			
Physical-Chemical			
Analysis (s)	Parameter (s)	Methodology	Applicable legislation:
Identification A - Infrared	Check	USP 43/EP10th ed	Internal Standard.
Identification B - Ethylene and Diethylene	Ethylene glycol Max. 0.1% m/m Diethylene glycol Max. 0.1% m/m	USP 43/EP10th ed	
Identification C – CG	Check	USP 43/EP10th ed	
Glycerol Assay	Min. 99,6%	USP 43/EP10th ed	
Inorganic impurities - Chlorides	Max 10 ppm	USP 43/EP10th ed	
Inorganic impurities – Sulfates	Max 10 ppm	USP 43/EP10th ed	
Inorganic impurities – Ignition Waste	Max 0,01%	USP 43/EP10th ed	
Water content	Max. 0,2%	USP 43/EP10th ed	
Appearance and solubility	Liquid in syrup, unctuous to the touch, colorless or almost colorless, clear, very hygroscopic.	Internal Method	

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	Miscible with water and ethanol (96%), slightly soluble in acetone, practically insoluble in fatty oils and essential oils.		
Refractive index	1,4700 – 1,4750	EP 10th Ed	Internal Standard.
Relative density	1,2580 – 1,2680 g/cm ³	EP 10th Ed	
Acidity or alkalinity	Max. 0,2 mL NaOH 0,1M	EP 10th Ed	
Aldehydes	Max 10 ppm	EP 10th Ed	
Esters	Min. 8,0 mL HCl 0,1 M	EP 10th Ed	
Halogenated compounds	Max. 35 ppm	EP 10th Ed	
Color	Max. 10 APHA	ASTM D1209	
Odor	Odorless	Internal Method	
EXTERNAL MONITORING ANALYSIS			
Physical-Chemical			
Analysis (s)	Parameter (s)	Methodology	Applicable legislation:
Heavy metals - Cadmium	Max 0,5 µg/g	USP 43	Internal Standard.
Heavy metals - lead	Max 0,5 µg/g	USP 43	
Heavy metals - Arsenic	Max 1,5 µg/g	USP 43	
Heavy metals - Mercury	Max 3 µg/g	USP 43	
Heavy metals - Cobalt	Max 5 µg/g	USP 43	
Heavy metals - Vanadio	Max 10 µg/g	USP 43	
Heavy metals - Nickel	Max 20 µg/g	USP 43	
Residual Solvent - Methanol	< 0,1 %	MP 1054	
Residual Solvent - Hexane	Max 30 mg/kg	MP 1054	
Residual Solvent - Benzene	Max 5 µg/L	MP 1054	
Radionuclides Cs134 + Cs137	Max 1200 Bq/kg	PT-5.54-00	
Sr-90 Radionuclides	Max 160 Bq/kg	PT-5.54-00	

¹ M.A. = Ministry of Agriculture

² M.S. = Ministry of Health

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