



# " clyzo " - Monograph Comparison



## AS PER CURRENT USP 2022/EP11/JP18

<b>Product Name</b>	Magnesium Sulfate 7-hydrate (USP, BP, Ph. Eur.) pure, pharma grade		<b>Issue Date</b>	March-23
<b>Product Code</b>	141404		<b>Prepared by</b>	Sr. Tech Lead
<b>CAS NO.</b>	10034-99-8		<b>Reviewed by</b>	Manager Technical
<b>Manufacturer Name</b>	PanReac AppliChem		<b>Version no.</b>	CLYZO/PAN/141404/01

Sr. No.	Test	Pharmacopeial Specifications			
		Manufacturer COA <i>Complies USP, BP, Ph. Eur.</i>	USP 2022	EP Version 11.0	JP 18
1	Description	Small white crystals	Small, colorless crystals, usually needle-like, with a cooling, saline, bitter taste. It effloresces in warm, dry air.	White or almost white, crystalline powder or brilliant, colourless crystals.	Color less or white crystals
2	Solubility	Soluble in water	Very soluble in boiling water; freely soluble in water; freely (and slowly) soluble in glycerin; sparingly soluble in alcohol.	Freely soluble in water, very soluble in boiling water, practically insoluble in ethanol (96 per cent)	Very soluble in water, and practically insoluble in ethanol. It dissolves in dilute hydrochloric acid
3	Identification 1 Magnesium	Passes the test	1. A slightly hazy precipitate should be formed when neutralized with ammonium carbonate, but on the subsequent addition of dibasic sodium phosphate, a white, crystalline precipitate, which is insoluble in 6 N ammonium hydroxide, should be formed.	1. After addition of 1 mL of dilute ammonia, a white precipitate should be formed which dissolves on addition of 1 mL of ammonium chloride solution. After addition of 1 mL of disodium hydrogen phosphate solution, a white crystalline precipitate should be formed.	1. A white, crystalline precipitate should be reproduced by addition of disodium hydrogenphosphate TS 2. After addition of NaOH TS a white, gelatinous precipitate should be formed
4	Identification 2 Sulfate	Passes the test	1. After addition of BaCl2 TS a white precipitate, which is insoluble in dilute nitric acid should be produced. 2. After addition of lead acetate TS a white precipitate, which is soluble in ammonium acetate TS should be formed 3. After addition of equal volume of dilute HCl no white turbidity should be produced (discrimination from thiosulfates),	1. After addition of BaCl2 TS a white precipitate, should be produced. 2. To the suspension obtained during reaction (1), add 0.1 mL of 0.05 M iodine, the suspension should remain yellow (distinction from sulfites and dithionites), but is decolorised by adding dropwise stannous chloride solution (distinction from iodates). Boil the mixture. No coloured precipitate should be formed (distinction from selenates and tungstates).	1. After addition of BaCl2 TS a white precipitate, which does not dissolve upon addition of dilute nitric acid should be produced. 2. After addition of lead (II) acetate TS a white precipitate, which dissolves upon addition of ammonium acetate TS should be formed 3. After addition of equal volume of dilute HCl no white turbidity should be produced (discrimination from thiosulfates), and do not evolve the odor of sulfur dioxide (discrimination from sulfites).
5	Clarity and color of solution/Appearance of solution	Passes the test	Not mentioned	Sample solution should be clear and colorless	Sample solution should be clear and colorless
6	Material insoluble in water	NMT 0.025%	Not mentioned	Not mentioned	Not mentioned
7	Acidity or Alkalinity	Passes test	Not mentioned	NMT 0.2 mL of 0.01 M HCl or 0.01 M NaOH is required to change the colour of the indicator.	Not mentioned
8	Chlorides	0.01%	NMT 0.014%	Not mentioned	NMT 0.014%
9	Iron	NMT 0.002%	NMT 20 ppm	NMT 300 ppm	Not mentioned
10	Selenium	NMT 0.0015%	NMT 30 ppm	NMT 20 ppm	Not mentioned
11	Heavy Metals	NMT 0.001%	Not mentioned	Not mentioned	NMT 10 ppm
12	Zinc	Not mentioned	Not mentioned	Not mentioned	No turbidity should be produced
13	Calcium	Not mentioned	Not mentioned	Not mentioned	NMT 0.02%
14	Arsenic	NMT 0.0002%	Not mentioned	Not mentioned	NMT 2 ppm
15	Ammonium	NMT 0.005%	Not mentioned	Not mentioned	Not mentioned

16	Phosphate	NMT 0.002%	Not mentioned	Not mentioned	Not mentioned
17	pH	Between 5.0 and 9.2	Between 5.0 and 9.2	Not mentioned	Between 5.0 and 8.2
18	Loss on drying	Between 48.0% and 52.0 %	Not mentioned	Between 48.0% and 52.0 %	Not mentioned
19	Loss on Ignition	Not mentioned	Between 48.0% and 52.0%	Not mentioned	Between 48.0% and 52.0%
20	Assay (ignited basis)	Between 99.0% and 100.5%	Between 99.0% and 100.5%	Between 99.0% and 100.5%	NLT 99.0%
21	Residual Solvents	Passes test	Not mentioned	Not mentioned	Not mentioned
22	Elemental Impurities		Not mentioned	Not mentioned	Not mentioned
	Cd	NMT 0.5 ppm			
	Pb	NMT 50 ppm			
	As	NMT 1.5 ppm			
	Hg	NMT 1.5 ppm			
	Co	NMT 5 ppm			
	V	NMT 10 ppm			
	Ni	NMT 20 ppm			
	Au	NMT 10 ppm			
	Pd	NMT 10 ppm			
	Ir	NMT 10 ppm			
	Os	NMT 10 ppm			
	Rh	NMT 10 ppm			
	Ru	NMT 10 ppm			
	Se	NMT 15 ppm			
	Ag	NMT 15 ppm			
	Pt	NMT 10 ppm			
	Li	NMT 55 ppm			
	Sb	NMT 120 ppm			
	Ba	NMT 140 ppm			
	Mo	NMT 25 ppm			
	Cu	NMT 250 ppm			
	Sn	NMT 600 ppm			
	Cr	NMT 25 ppm			
	Storage	Store away from direct sunlight	Preserve in well-closed containers.	Not mentioned	Containers—Well-closed containers

**Note** - If you need any additional testing, you may use our Additional Testing Feature on the product page or contact your Clyzo representative.

**Disclaimer** - The information above is solely for your consideration. We do not recommend or affirm the suitability for any specific end use. We suggest the users should research & verify the specifications in accordance with their intended usage.