



" clyzo " - Monograph Comparison



AS PER CURRENT USP 2022/EP11/JP18

Product Name	Zinc Sulfate 7-hydrate (USP, BP, Ph. Eur.) pure, pharma grade	 PanReac AppliChem ITW Reagents	Issue Date	March-23
Product Code	141787		Prepared by	Sr. Tech Lead
CAS NO.	7446-20-0		Reviewed by	Manager Technical
Manufacturer Name	PanReac AppliChem		Version no.	CLYZO/PAN/141787/01

Sr. No.	Test	Manufacturer COA	Pharmacopeial Specifications		
		<i>Complies USP, Ph. Eur., BP</i>	<i>USP 2022</i>	<i>EP Version 11.0</i>	<i>JP 18</i>
1	Description	Small white crystals	Colorless, transparent prisms, or small needles. May occur as a white, granular, crystalline powder. Is odorless and is efflorescent in dry air. Its solutions are acid to litmus.	White or almost white, crystalline powder or colourless, transparent crystals, efflorescent.	Colorless crystals or white crystalline powder. It is efflorescent in dry air
2	Solubility	Soluble in water	Very soluble in water and in glycerin; practically insoluble in alcohol.	Very soluble in water, practically insoluble in ethanol (96 %).	Very soluble in water, and very slightly soluble in ethanol (99.5).
3	Identification 1	passes test	In assay test, the retention time of the zinc peak of the Sample solution corresponds to that of the Standard solution	Should comply by a flocculant white precipitate formation	1. With addition of ammonium sulfide TS or sodium sulfide TS a white precipitate should be formed. 2. Should form a white precipitate with potassium hexacyanoferrate (II) TS.3. Should form a a white precipitate, when 1 or 2 drops of pyridine and 1 mL of potassium thiocyanate TS are added.
4	Identification 2	passes test	1. With barium chloride TS a white precipitate, which is insoluble in HCl and HNO3. 2. After addition of lead (II) acetate TS a white precipitate should be formed. 3. With equal volume of HCl no precipitate should be formed (discrimination from thiosulfates)	1. With addition of dilute HCl and BaCl2 a white precipitate should be formed. 2. In the suspension obtained in identification (1) add iodine,suspension remains yellow (distinction from sulfites and dithionites), but should be 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. With barium chloride TS a white precipitate, which does not dissolve upon addition of dilute HNO3 should be formed. 2. After addition of lead (II) acetate TS a white precipitate should be formed. 3. With equal volume of HCl no white turbidity should be formed (discrimination from thiosulfates), and do not evolve the odor of sulfur dioxide (discrimination from sulfites).
5	Identification 3	passes test	Not mentioned	It should comply with the limits of the assay.	Not mentioned
6	Appearance of solution	passes test	Not mentioned	Sample solution should be clear and colourless	Sample solution should be clear and colorless
7	Acidity	passes test	The sample solution should not colored pink by methyl orange TS.	Not mentioned	Not mentioned
8	pH	Between 4.4 and 5.6	NA	Between 4.4 and 5.6	Between 4.4 qmd 6.0
9	Alkalies and alkali earth	NMT 0.5%	NMT 0.9 %	Not mentioned	NMT 0.5%
10	Arsenic	NMT 0.0001 %	NMT 14 ppm	Not mentioned	NMT 2 ppm
11	Iron	NMT 0.005%	NA	NMT 100 ppm	Not mentioned
12	Heavy metals (Lead)	NMT 0.00005 %	NMT 20 ppm	Not mentioned	NMT 10 ppm
13	Chlorides	NMT 0.03%	NA	NMT 300 ppm	Not mentioned
14	Nitrogen compounds	NMT 0.005%			
15	Calcium	NMT 0.02%			
16	Loss on drying	Not mentioned	Not mentioned	Not mentioned	Between 35.5% and 38.%
17	Assay (as zinc sulfate monohydrate)	Between 99.0% and 104.0%	Between 99.0% and 107.8%	Between 99.0% and 104.0 %	Between 99.0% and 102.0%
	Elemental Impurities		Not mentioned	Not mentioned	Not mentioned

18	Cd	NMT 0.5 ppm			
	Pb	NMT 0.5 ppm			
	As	NMT 1 ppm			
	Hg	NMT 1.5 ppm			
	CO	NMT 5 ppm			
	V	NMT 10 ppm			
	Ni	NMT 20 ppm			
	Tl	NMT 0.8 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				
19	Residual solvents	passes test	Not mentioned	Not mentioned	Not mentioned
	Storage	Keep container tightly closed in a dry and well-ventilated place.	Preserve in tight containers.	In a non-metallic, airtight container.	Tight containers
Note - If you need any additional testing, you may use our Additional Testing Feature on the product page or contact your Clyzo representative.					
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