



SPECIFICATION

Product : **GLUTARDIALDEHYDE-BIS-SODIUM BISULPHITE** **Page 1 / 2**

Product no. : **0216201000** **Version 4** **valid from:07/07**

Manufacturer : **UNA-Synth GmbH, Uetersen, Germany**

Synonym : **Glutardialdehyd-bis-Natriumhydrogensulfit; Glutardialdehyd-bis-Sodiumhydrogensulfite**

CAS-No. : **7420-89-5** **Formula** : **C₅H₁₀Na₂O₈S₂**

EINECS : **231-043-5** **Mol.-weight** : **308,24**

Controls	Spezification	Methods **
Appearance	White powder	visual
Odour	unobtrusive	olfactoric
Solubility in water	285 g/l	visual
Appearance of solution	colourless, clear	visual
Loss on drying (5g, 1h, 105 °C)	< 3 %	gravimetric
Sodiumhydrogensulfit*	≤ 1,5 %	Iodometric **
Sulfat as Na ₂ SO ₄	max. 3 %	Limit-Test as per PH.EUR. - 2.4.13
Fe	max. 50 mg/kg	photometric
Heavy Metals as Pb	max. 20 mg/kg	Limit-Test as per PH.EUR. - 2.4.8
Assay*	> 95 %	Iodometric **

*) calculated on dried substance

Primary packing	: 25 kg paperbags with PE-inlet
Storage	: In airtight containers, protected from light, store dry and not exceed 25°C. Material is hygroscopic.
Durability	: 3 years

Use : Layer hardening for X-ray films

Analysis** : **methods see page 2**

METHODS OF ANALYSING

Product : **GLUTARDIALDEHYDE-BIS-SODIUM HYDROGEN-SULPHITE** **Page 2 / 2**
Product no. : **0216201000** **Version 4** **valid from:07/07**

Loss on drying : 5 g for 1 hour at 105 ° C

Sodium Hydrogensulfite : Reagents:
0,01 N Iodine-solution
Acetic acid glacial
Starch-solution as indicator

Performance : Accurately weight 5-6mg Glutardialdehyde-bis-Sodiumbisulfite in a 250ml volumetric flask and fill up with water. 3ml glacial acetic acid is added to 50ml of this solution and titrated with 0,01N iodine solution quickly to a blue final point (starch solution as indicator).

Calculation :
$$\% \text{NaHSO}_3 = \frac{\text{ml 0,01 N Iodine-sol.} * \text{Factor Iodine-sol.} * 5,2 * 5}{\text{weight in gramm} * 100}$$

Content : 0,9-1g exactly weighed to 0,1mg into a 250 ml round flask, dilute in 100 ml water, add 2-2,5 g Na hydroxide (Merck Nr. 6498), cook 1 hour with reflux. Cool to room temperature, fill into a 250 ml in measuring flask and fill up. Mix 25 ml with 100 ml water and 25 ml 0,1N Iodine solution, store in darkness for 15 min, add 5 ml glacial acetic acid (Merck Nr.63), store again in darkness for 10 min. The surplus of Iodine is titrated with 0,1M Sodium thio sulfate solution against a solution of starch (ml A). In the same way the blind value is determined (ml B).

$$\frac{(B - A) * F * 7,7}{\text{weighed portion (g)}} = \% \text{ Glutardialdehyde-bis-Sodiumbisulfite}$$