

**CERTIFICATE OF ANALYSIS # 20190412**

Customer	Date of Manufacture: <b>25.01.2019</b> Date of Expiry: <b>25.01.2021</b>	SHIPPING INFORMATION	
		Date	<i>February 13, 2019</i>
Lot #	<b>20190092</b>		
Description	<b>GOLD SEAL ZINC OXIDE</b>	Quantity	<b>24.00000</b>

**CHEMICAL CHARACTERISTICS**

Element	Specification %	Min	Max	Production Avg
As	0.0001 MAX	< 0.0001	< 0.0001	< 0.0001 ✓
Cd	0.0010 MAX	0.0002	0.0002	0.0002 ✓
Cl	0.0005 MAX	0.0004	0.0004	0.0004 ✓
Cu	0.0002 MAX	< 0.0001	< 0.0001	< 0.0001 ✓
Fe	0.0005 MAX	0.0002	0.0002	0.0002 ✓
Mn	0.0001 MAX	< 0.0001	< 0.0001	< 0.0001 ✓
Ni	0.0001 MAX	< 0.0001	< 0.0001	< 0.0001 ✓
ZnO	99.9 MIN	99.9000	99.9000	99.9000 ✓
Pb (including PbO)	0.0020 MAX	0.0009	0.0013	0.0011 ✓
S	0.0007 MAX	0.0001	0.0001	0.0001 ✓
Total Impurities	0.1 MAX	0.1000	0.1000	0.1000 ✓

**OTHER CHARACTERISTICS**

Item	Specification	Min	Max	Production Avg
Surface area BET method (m2/g)	3.5 - 7	4.5000	4.5000	4.5000
Granulometry (through # 325 mesh) (%)	99.9 MIN	99.9810	99.9810	99.9810
Moisture (%) <sup>2</sup>	0.2 MAX	0.0800	0.0800	0.0800
Volatile materials (%) <sup>1</sup>	0.2 MAX	0.1100	0.1100	0.1100
Ignition loss (%) <sup>1</sup>	0.2 MAX	0.1500	0.1500	0.1500
Specific weight (g/cm3)	5.6	5.6000	5.6000	5.6000
pH <sup>1</sup>	7.3 - 7.5	7.4000	7.4000	7.4000
Water Soluble Salts (%) <sup>1</sup>	0.10 MAX	0.0900	0.0900	0.0900
Solubility in HCl (%) <sup>1</sup>	99.9 MIN	99.9780	99.9780	99.9780

<sup>1</sup> According Norm DIN 55908 ("Methods of analyzing zinc oxide pigments")

<sup>2</sup> According Norm ASTM D 280 Method "A"

Complies with USP and European Pharmacopoeia