

CERTIFICATE OF ANALYSIS # 20201971

Customer **CCS UK LTD
ENGLAND**

Lot # **20201100**

Description **ZINC OXIDE**

Date of manufacture: **15.09.2020**
Date of expiry: **15.09.2022**

SHIPPING INFORMATION

Date **September 23 2020**
VESSEL **CARTAGEN EXPRESS**
Our Invoice # **FO01-000006579**
Your PO.#

Quantity **24.00000**

CHEMICAL CHARACTERISTICS

Element	Specification %	Min	Max	Production Avg
As	0.0001 MAX	< 0.0001	< 0.0001 ✓	< 0.0001
Cd	≤ 0.001 0	0.0002	0.0002 ✓	0.0002
Cl	0.0005 MAX	0.0004	0.0004 ✓	0.0004
Cu	≤ 0.0002	< 0.0001	0.0001 ✓	0.0001
Fe	0.0005 MAX	0.0002	0.0002 ✓	0.0002
Mn	≤ 0.0001	< 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	0.0008	0.0015 ✓	0.0012
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 (m ² /g)	3.5 - 7	4.4000	4.4000 ✓	4.4000
Granulometry (through # 325 mesh) (%) ¹	99.9 MIN	99.9740 ✓	99.9750	99.9740
Moisture (%) ²	0.2 MAX	0.0900	0.0900 ✓	0.0900
Volatile materials (%) ¹	0.2 MAX	0.1100	0.1100 ✓	0.1100
Ignition loss (%) ¹	0.2 MAX	0.1500	0.1500 ✓	0.1500
Specific weight (g/cm ³)	5.6	5.6000	5.6000 ✓	5.6000
pH ¹	7.3 - 7.5	7.4000	7.4000 ✓	7.4000
Water Soluble Salts (%) ¹	0.10 MAX	0.0900	0.0900 ✓	0.0900
Solubility in HCl (%) ¹	99.9 MIN	99.9610 ✓	99.9610	99.962

¹ According Norm DIN 66908 ("Methods of analyzing zinc oxide pigments")

² According Norm ASTM D 200 Method "A"

Complies with USP and European Pharmacopoeia

1. Sep 2020