Zinc Oxide

SUNJIN BEAUTY SCIENCE AUG. 2020 Ver 2.0

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SUNJIN Youtube





https://www.youtube.com/watch?v=BcgMqJO_1dU&t=7s

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FDA Inspection

Inspection Site: Janghang Factory

Inspection Date: 09/16/2019 – 09/19/2019

Inspection Result:

"No action indicated" ('NAI').

Based on this inspection, this facility is considered to be **in an acceptable state** of compliance with regards to current good manufacturing practice (**CGMP**).

U.S. FOOD & DRUG

ADMINISTRATION

Via UPS Return Receipt Requested

11/04/2019

Mr. Choi Jae Young Sunjin Beauty Science CO.,LTD (Chang-hang site) 79-15, Jangcheon-Ro 186 beon-Gil, Janghang-eup, Scocheon-gun, Chungcheongnam-do, 33658, Republic of Korea

Dear Mr. Choi Jae Young:

The U.S. Food and Drug Administration (FDA) conducted an inspection at SUNJIN BEAUTY SCIENCE CO., LTD, FEI:3015665736, located at 79 15 Jangcheon-Ro 186beon-Gil, Seocheon, Chungnam KR from 09/16/2019 - 09/19/2019. FDA has determined that the inspection classification of this facility is "no action indicated" ('NAI')¹. Based on this inspection, this facility is considered to be in an acceptable state of compliance with regards to current good manufacturing practice (CGMP).

This letter is not intended as an endorsement or certification of the facility. It remains your responsibility to ensure continued compliance with CGMP.

An inspection classification of NAI for CGMP compliance will not directly negatively impact FDA's assessment of any pending marketing application referencing this facility. Please note, however, that application approval will depend on a product- and application-specific facility assessment conducted by the appropriate CDER or CVM review office. This letter does not address or reflect FDA's decision making with respect to any potential non-CGMP compliance issues.

FDA has concluded that this inspection is "closed" under 21 CFR 20.64(d)(3), and we are enclosing a copy of the narrative portion of the Establishment Inspection Report (EIR). It may reflect redactions made by FDA in accordance with the Freedom of Information Act (FOIA) and 21 CFR part 20. This, however, does not preclude you from requesting additional information under FOIA.

If you have any questions regarding this letter, you may contact CDR Paul C. Mouris via telephone at 914-682-2826 ext. 13 or email at Paul.Mouris@FDA.HHS.GOV.

Sincerely,

Paul C. Mouris -S5 Determined and the set of the set of

CDR Paul C. Mouris Supervisory Consumer Safety Officer Pharma Division I, Investigations Branch II

See Inspection Classification Definitions, at https://www.fda.gov/ICECI/Inspections/ucm223231.htm.

Office of Pharmaceutical Quality Operations Division 1 10 Waterview Blvd, 3rd Floor Parsippany, NJ 07054 www.fda.gov

NDC: National Drug Code

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NDC Package 🔺 Code	Strength ≑	Dosage Form 🔶	Labeler Name 🗘	Nonproprietary Name 🗘	Substance Name	Start Marketing \$	End Marketing Date	Market Category 🔶	Package Description 🗘	DEA \$	Listing Record Certified Through:
71028-1101-1	1 kalka	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Zinc Oxide	ZINC OXIDE	12/10/2019	N/A	BULKINGREDIENT	20 kg in 1 BOX (71028- 1101-1)	N/A	12/81/2020
71028-1102-2	1 kg/kg	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Zinc Oxide	ZINC OXIDE	12/10/2019	N/A	BULKINGREDIENT	20 kg in 1 BOX (71028- 1102-2)	NA	12/81/2020
71028-1109-1	1 kalka	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Zinc Oxide	ZINC OXIDE	12/10/2019	N/A	BULK INGREDIENT	20 kg in 1 BOX (71028- 1103-1)	N/A	12/81/2020
71028-1104-1	1 kg/kg	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Zinc Oxide	ZINC OXIDE	01/20/2020	N/A	BULKINGREDIENT	20 kg in 1 BOX (71028- 1104-1)	NA	12/81/2021
71028-1201-2	1 koʻko	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	12/10/2019	N/A	BULKINGREDIENT	25 kg in 1 BOX (71028- 1201-2)	NA	12/31/2020
71028-1901-4	17 kg/20kg	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	12/10/2019	N/A	DRUG FOR FURTHER PROCESSING	20 kg in 1 BOX (71028- 1901-4)	NA	12/31/2020
71028-1902-5	15.7 kg/20kg	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	12/10/2019	N/A	DRUG FOR FURTHER PROCESSING	20 kg in 1 BOX (71028- 1902-5)	NGA	12/31/2020
71028-1903-7	15.8 kg/20kg	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	12/10/2019	N/A	DRUG FOR FURTHER PROCESSING	20 kg in 1 BOX (71028- 1905-7)	NA	12/31/2020
71028-1904-6	15.7 kg/20kg	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	12/10/2019	N/A	DRUG FOR FURTHER PROCESSING	20 kg in 1 BOX (71028- 1904-6)	NA	12/31/2020
71028-1905-8	16 kg/20kg	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	12/10/2019	N/A	DRUG FOR FURTHER PROCESSING	20 kg in 1 BOX (71028- 1905-8)	NA	12/81/2020
71028-1906-9	10.625 kg/25kg	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	12/10/2019	N/A	DRUG FOR FURTHER PROCESSING	25 kg in 1 BOX (71028- 1906-9)	N/A	12/81/2020
71028-1907-1	1 kg/kg	POWDER	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	01/20/2020	N/A	BULKINGREDIENT	20 kg in 1 BOX (71028- 1907-1)	NA	12/81/2021
71028-9001-1	12.4 kg/20kg	LIQUID	SUNJIN BEAUTY SCIENCE Co., Ltd.	Zinc Oxide	ZINC OXIDE	12/10/2019	N/A	DRUG FOR FURTHER PROCESSING	20 kg in 1 BOX (71028- 9001-1)	NA	12/81/2020
71028-9002-1	9.5 kg/20kg	LIQUID	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	12/10/2019	N/A	DRUG FOR FURTHER PROCESSING	20 kg in 1 BOX (71028- 9002-1)	NA	12/31/2020
71028-9003-1	9.5 kg/20kg	LIQUID	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	12/10/2019	N/A	DRUG FOR FURTHER PROCESSING	20 kg in 1 BOX (71028- 9003-1)	NGA	12/31/2020
71028-9004-1	9.35 kg/20kg	LIQUID	SUNJIN BEAUTY SCIENCE Co., Ltd.	Titanium Dioxide	TITANIUM DIOXIDE	01/80/2020	N/A	DRUG FOR FURTHER PROCESSING	20 kg in 1 BOX (71028- 9004-1)	N/A	12/81/2021

https://www.accessdata.fda.gov/scripts/cder/ndc/dsp_searchresult.cfm

Zinc Oxide Overview



Zinc Oxide Overview

	SUNZnO-NAS	SUNZnO-AS	SUNZnO- 200AS	SUNZNO- OLEO200	SUNZNO-SA
ZnO Purity %	97%	97%	97%	96%	95%
ZnO Coating	Triethoxycaprylyl silane	Triethoxycapryly silane	Triethoxycaprylyl silane	Cetyl Alcohol	Stearic Acid
Particle size	30nm	150nm	200nm	200nm	150nm
Shape (Morphology)	Round	Round	Rod	Rod	Round
Transparency by White index	40.66			34.74	51.05
Remarks	SCCS Compliant Nano ZnO	Non-nano	Non-nano	Non-nano COSMOS RSPO	Non-nano COSMOS RSPO

SUNZnO-NAS



1.8MT/batch



SUNZnO-OLEO200

World-First **Rod Shape** Zinc Oxide with **Cetyl Alcohol** Coating Non-Nano



Patent #: 1017687720000 / Korean Intellectual Property Office (KIPO)

Why Rod Shape?

- 1. Better Transparency
- 2. Better UV performance
- 3. More Creamy Feeling
- 4. Better Spread

Why Cetyl Alcohol Coating?

- 1. Natural
- Ether bond formation more stable than ester bonding



Why Rod Shape?





- More creamier
- Better spread

<u>Agglomeration</u> by physical interaction of primary particles <u>Aggregation</u>, new formed particle by primary particles.

Why Cetyl Alcohol?





Conventionally the most common natural coating material has been fatty acid but ester functional group is susceptible to hydrolysis

SUJIN is the first company introducing fatty alcohol coating to Inorganic UV filters

No Bad odor



No Yellowing



Zinc Oxide Overview

by SEM





Transparency by White Index

Tested Znic Oxide #1. SUNJIN #3. SUNJIN #2. SUNJIN ZnO-NAS ZnO-OLEO200 ZnO-OLEO200 #1 **Company SUNJIN** Product : SUNZnO-NAS #2 **Company : SUNJIN** Product : SUNZnO-OLEO200 Lot: 19086001 #3 **Company : SUNJIN** Product : SUNZnO-OLEO200 38.24 38.08 39.23 Lot: 200262001 #4 Company : "E" Product : "Z" #4. Company "E" #6. Company "B" #5. Company "D" #5 Product "Z" Product "Z" **Product "P"** Company : "D" Product : "P" #6 Company : "B" Product : "Z" 36.36 45.32 48.43

NIPPON DENSHOKU COLOR METER ZE 2000 The Higher Wh

The Higher White index, the less transparent

In vivo result from W/O formula

Test Result	SUNZNO-NAS	SUNZNO- OLEO200 Lot: 19086001	SUNZNO- OLEO200 Lot: 200262001	Company "E" Product "Z"	Company "D" Product "P"	Company "B" Product "Z"
in vivo SPF	30.00	30.00	30.00	30.00	30.00	29.40
Determine			P # 43	17 22 ml		
in vivo PA	9.20	10.57	10.57	9.20	9.20	10.57
Determine	*		2 11 3			Marine B
Panel condition						
Name	LYJ					
Age	25					
Sex	F					
Skin type	П					

Hydrophobicity Result

Tested Znic Oxide

#1 **Company SUNJIN** Product : SUNZnO-NAS #2 **Company : SUNJIN** Product : SUNZnO-OLEO200 Lot: 19086001 #3 **Company : SUNJIN** Product : SUNZnO-OLEO200 Lot: 200262001 #4 Company : "E" Product : "Z" #5 Company : "D" Product : "P" #6 Company : "B" Product : "Z"











