

# REFERENCE MATERIALS CERTIFICATE

74, Seoicheon-ro 578b eon-gil, Majang-myeon, Iche on-si, Gyeonggi-do, Rep. of KOREA  
TEL : +82-31-645-6900, FAX : +82-31-645-6969



Certificate No : HCTCRM-2022-0003

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## 1. Reference Materials Information

- Reference Materials Code : HCT-CRM-P1000
- Reference Materials Name : 1000 nm Polystyrene Sphere Latex
- Certification Characteristics : Mean Diameter
- Lot Number : PSL\_001000.004
- Bottle Type : Polystyrene Dropping Bottle
- Volume : 15 ml / 1 bottle
- Application : Particle counter calibration and performance test, moisture counter evaluation, other object tests

## 2. Certification Method

ISO 13320 : 2020 (Particle size analysis -- Laser diffraction methods)

## 3. Traceability

The above reference materials were measured using certified reference materials(CRM, No.111-21674) with traceability from METAS and the following measuring instruments with traceability from national standards organization

List of used standards/specifications

Description	Manufacturer / Model	Serial Number	Due date of Calibration	Calibration Lab
ELECTROSTATIC CLASSIFIER	TSI/3082	3082021612001	2023/07/21	NPL
LONG DIFFERENTIAL MOBILITY ANALYZER	TSI/3081A	3081A1606001	2023/07/21	NPL
CONDENSATION PARTICLE COUNTER	TSI/3772	3772162202	2023/05/12	HCT Co., Ltd.

## 4. Certification Result

Reference Materials Name	Certification Date	Expiration Date	Certified Diameter	Uncertainty
1000 nm Polystyrene Sphere Latex	2022.11.30	2024.08.21	1065.0 nm	31.4 nm

(approximate 95% confidence level,  $k = 2$ )

## 5. How to use : Refer to "Reference materials Information sheet" on page 2

Approved by

Title **Technical Manager**

Name **김 은 희**

(signature)

The above certificate is the result of the standard material certified by the Korea Accreditation Organization (KOLAS) by KS A ISO 17034.

**2022. 11. 30**

Accredited by KOLAS, Republic of KOREA

**President, HCT Co., Ltd.**



※ The original certificate is printed on forgery-resistant paper with the HCT hologram on the top, and is marked as a copy when copying the original.

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### 1. Physical and chemical characteristics

- It is a colorless or white odorless suspension and is chemically stable when stored under the recommended conditions.
- If excessive heat is avoided, dangerous reactions are unlikely.

### 2. Storage Caution

- Store in an airtight container at room temperature between 4 °C and 30 °C.

### 3. Safety and handling precautions

- Be careful not to get the product in contact with your eyes, skin and other mucous membranes, and wash your hands with clean water after use.
- Take care not to inhale the material when spraying.
- Although the material is not classified as an environmental pollutant, its environmental characteristics have not been fully investigated, so direct discharge into the air or sewage is prohibited.

### 4. Safety management

- Flammability: None
- Corrosive: None
- Toxicity : No information known