



सी एस आई आर - राष्ट्रीय भौतिक प्रयोगशाला  
CSIR-NATIONAL PHYSICAL LABORATORY

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्)

(Council of Scientific and Industrial Research)

राष्ट्रीय मापकी संस्थान (एनएमआई), सदस्य बीआईपीएम एवं हस्ताक्षरकर्ता सीआईपीएम - एमआरए  
(National Metrology Institute (NMI), Member BIPM and Signatory CIPM - MRA)

डॉ. के. एस. कृष्णन मार्ग, नई दिल्ली-110012, भारत

Dr. K. S. Krishnan Marg, New Delhi-110012, INDIA

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अंशिकन प्रमाण पत्र  
CALIBRATION CERTIFICATE  
Tile (White)

प्रमाण पत्र संख्या/ Certificate No.

22031522/11.04/C-344

| दिनांक/Date | अगले अंशिकन हेतु अनुशंसित तिथि<br>Recommended date for the next calibration | पृष्ठ /Page | पृष्ठों की संख्या /No. of Pages |
|-------------|-----------------------------------------------------------------------------|-------------|---------------------------------|
| 29/03/2022  | 29/03/2023                                                                  | 1           | 2                               |

- Calibrated for : Andhra Polymers Pvt. Ltd.  
Plot No. 2, Phase-V  
IDA, Jeedimetla  
Hyderabad, Telangana, India  
Pin Code: 500055  
Customer's Ref. No.: APPL/2021-22  
Dated: 25/02/2022
- Description & Identification of instruments : Tile (White)  
Make: Aerolite
- Environmental conditions : Temperature:  $(25 \pm 2)^\circ\text{C}$   
Relative Humidity:  $(50 \pm 15)\%$
- Standard(s) used with Associated uncertainty : (i) NPL Reflectance standard  
(ii) The expanded uncertainty in reflectance measurements is  $\pm 1.0\%$
- Traceability of standard(s) used : The Standard(s) used for calibration is (are) traceable to National standards which realize the units of quantities according to the International System of Units (SI).
- Principle /Methodology of calibration & calibration Procedure Number : Spectral reflectance is measured using UV-VIS Spectrophotometer

अंशिकनकर्ता

Calibrated by :

Rajat K. Mukherjee  
RAJAT K. MUKHERJEE

जांचकर्ता

Checked by :

V. K. Jaiswal  
V. K. Jaiswal

Scheme Officer

जारीकर्ता

Issued by :



Dr. Srinivasa Rao Ragam



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राष्ट्रीय मापिकी संस्थान (एनएमआई), सदस्य बीजकर्मिण एवं हस्ताक्षरकर्ता बीजकर्मिण - एमआरए  
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|-------------|------------------------------------------------------------------------------|-------------|---------------------------------|
| 29/03/2022  | 29/03/2023                                                                   | 2           | 2                               |

7. Results: Measurement of Spectral Reflectance (%) of the sample

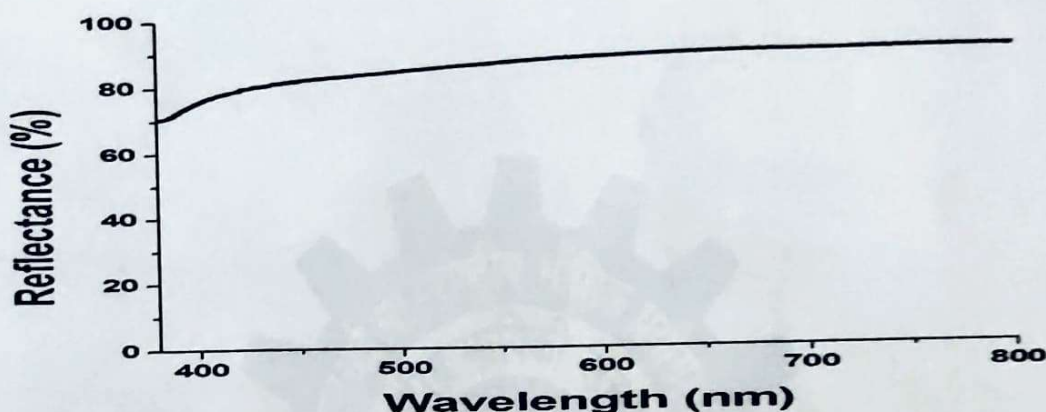


Table-I: Measurement of Spectral Reflectance of Sample

| Sl. No. | Sample Identification | Average Reflectance (%) |
|---------|-----------------------|-------------------------|
| i       | Tile (White)          | 85.4                    |

The expanded measurement uncertainty in reflectance is  $\pm 1.5\%$ .

The reported uncertainty is at coverage factor  $k=2$ , which corresponds to a coverage Probability of approximately 95% for a normal distribution.

8. Date(s) of Calibration: 28/03/2022

9. Remarks (i) The spectrometric calibration for the reflectance of supplied sample is performed for the spectral region 380-780 nm  
(ii) The average reflectance, mentioned in the observation table-I above, is average of several observations over the entire visible spectral range after stabilization.  
(iii) NPL Identification numbers for the Tile (White) is 419/OPT/2021.

अंशांकनकर्ता:

Calibrated by :

Rajat Kr. Mukherjee  
RAJAT KR. MUKHERJEE

जाँचकर्ता:

Checked by :

V. K. Jaiswal  
Mr. V.K. Jaiswal

प्रभारी वैज्ञानिक:

Scientist-in-charge:

V. K. Jaiswal  
Mr. V.K. Jaiswal

जारीकर्ता:

Issued by:



डॉ० श्रीनिवास राव रागम  
Dr. Srinivasa Rao Ragam