

## Certificate of Calibration

Al Takamul Yard, North Rumailah South Iraq

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Date of Issue: April 26, 2024

Page 1 of 1

|                    |                  |                               |
|--------------------|------------------|-------------------------------|
| Loading Note No    | : By Mail        | APPROVED BY: L. AL-NADHARI QC |
| JOB NUMBER         | : QC/JN/24/00192 |                               |
| CERTIFICATE NUMBER | : QC240426-01    |                               |

### CUSTOMER DETAILS

Name : Noor Al-Hilal  
Address : North Rumiala, Basra

### EQUIPMENT IDENTIFICATION AND SPECIFICATIONS

Description : Kinematic Viscometer  
Manufacturer : CANON  
Model : Simple VIS +  
Location : Noor Al-Hilal Lab  
Serial Number : 4028-A1416  
Type : Digital  
Range : 2 to 700 mm<sup>2</sup>/s  
Readability : 0.01 mm<sup>2</sup>/s  
Accuracy : 1 %  
As found : In Tolerance  
Calibrated By : Asjad Rafiq  
Calibration Date : April 26, 2024  
**Calibration Due : 25 April 2025**



### ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : 22.0 ± 1°C Humidity : 40.0 ± 5 % RH Atm. Pressure : 1013.0 ± 10 hPa

### CALIBRATION METHOD

Above mentioned instrument has been calibrated according to ASTM D445

Calibration of above mentioned instrument has performed against Reference Standard Viscosity Solution Sample. The deviations of the measurements obtained from UUC with respect to reference standards are determined to obtain the error.

### REFERENCE EQUIPMENT USED :

| DESCRIPTION                           | MAKE           | BATCH NO. | EXPIRY DATE |
|---------------------------------------|----------------|-----------|-------------|
| Viscosity standard dynamic type N4000 | MRS Scientific | 5566733   | 2-May-25    |

### CALIBRATION TEST RESULTS

@Temperature 40 °C

| Readings on UUC    | Readings on Ref. Standard | Error              | Uncertainty (95 % C.L.) |
|--------------------|---------------------------|--------------------|-------------------------|
| mm <sup>2</sup> /s | mm <sup>2</sup> /s        | mm <sup>2</sup> /s | ± mm <sup>2</sup> /s    |
| 2.695              | 2.693                     | 0.002              | 0.02                    |
| 2.694              | 2.693                     | 0.001              | 0.02                    |
| 2.694              | 2.693                     | 0.001              | 0.02                    |
|                    |                           |                    |                         |
|                    |                           |                    |                         |

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with international practice.

DEVIATION FROM STANDARD METHOD : None

REMARK (S) : ☒ The results are as found (no adjustment done).  
☐ The results are post adjustment.