

## Calibration Certificate

Client Name: \* \* \* \*  
Client Address: \* \* \* \*  
Calibration Site: Meteorological Instrument Center,  
Japan Meteorological Agency (JMA)  
Calibration Item: \* \* \* \*  
Type and Serial Number: \* \* \* \*  
Manufacturer: \* \* \* \*  
Calibration Variable: Relative humidity  
Calibration Method: As shown in page 2  
Calibration Conditions: Temperature \* \* °C - \* \* °C  
Relative humidity \* \* % - \* \* %  
Calibration Results: As shown in page 2  
Date of Application: \* \* \* \*  
Date of Performing Calibration: \* \* \* \*  
Date of issue: \* \* \* \*

The issuing authority

Head, Meteorological Instrument Center  
Observation Division, Atmosphere and Ocean Department  
Japan Meteorological Agency  
1-2 Nagamine Tsukuba-City Ibaraki, 305-0052, Japan

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This certificate is based on article 144 of the Measurement Act and indicates the result of calibration in accordance with measurement standards traceable to Primary Measurement Standards (National Standards) which realizes the physical units of measurement according to the International System of Units (SI). The accreditation symbol is attestation of which the result of calibration is traceable to Primary Measurement Standards (National Standards).  
The certificate shall not be reproduced except in full, without the written approval of the issuing laboratory.  
The calibration laboratory who issued this calibration certificate conforms to ISO/IEC 17025:2017  
This calibration certificate was issued by the calibration laboratory accredited by IAJapan who is a signatory to the Mutual Recognition Arrangement (MRA) of International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Accreditation Cooperation (APAC). This (These) calibration result(s) may be accepted internationally through ILAC/APAC MRA.

**Calibration method**

The calibration item was calibrated with the following reference standards and instruments;

Chilled Mirror Hygrometer (Sensor): \* \* \* \*

Chilled Mirror Hygrometer (Indicator): \* \* \* \*

Thermometer (Sensor): \* \* \* \*

Thermometer (Indicator): \* \* \* \*

Reference humidity values were derived from dew points and temperature using the equation of Sonntag. The procedure used in the calibration was the standard operating procedure manual No.13 of Meteorological Instrument Center, JMA.

**Calibration results**

| Nominal humidity (%) | Reference humidity (A) (%) | Indication of the Calibration item (humidity) (B) (%) | Deviation (B) - (A) (%) | Expanded uncertainty (%) |
|----------------------|----------------------------|-------------------------------------------------------|-------------------------|--------------------------|
| 20                   | 20.00                      | * * * *                                               | * * *                   | * * * *                  |
| 40                   | 40.00                      | * * * *                                               | * * *                   | * * * *                  |
| 60                   | 60.00                      | * * * *                                               | * * *                   | * * * *                  |
| 80                   | 80.00                      | * * * *                                               | * * *                   | * * * *                  |
| 95                   | 95.00                      | * * * *                                               | * * *                   | * * * *                  |

\* Temperature in the calibration chamber during calibration: \* \* °C - \* \* °C

**Notes**

- 1) The reported expanded uncertainty is stated as the combined standard uncertainty multiplied by the coverage factor  $k = 2$ , which for a normal distribution corresponds to a coverage probability of approximately 95 %.
- 2) The values of humidity of the calibration item were the digital output data collected by computer.
- 3) The calibration was performed at the calibration points in order from the lowest to the highest and in the reverse order. This process was repeated three times. At each calibration point, the deviation is the average of the six data.
- 4) Each of six humidity values of the reference standards was within  $\pm 3$  % from the nominal value and the average of them was within  $\pm 1$  % from the nominal value.

-End of the Certificate-