



**US Environmental Protection Agency  
Office of Pesticide Programs**

**Office of Pesticide Programs  
Microbiology Laboratory  
Environmental Science Center, Ft. Meade, MD**

**Standard Operating Procedure for  
Monitoring Temperature/Humidity  
of the Sample Storage Room**

**SOP Number: QC-08-04**

**Date Revised: 07-30-08**

EPA/OPP MICROBIOLOGY LABORATORY  
ESC, Ft. Meade, MD

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for  
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SOP Number: QC-08-04

Date Revised: 07-30-08

Initiated By: \_\_\_\_\_ Date: \_\_\_/\_\_\_/\_\_\_

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Print Name: \_\_\_\_\_

Branch Chief

Effective Date: \_\_\_/\_\_\_/\_\_\_

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1.0 SCOPE AND APPLICATION:

- 1.1 This protocol describes the quality control requirements for recording the temperature/humidity of the sample storage room D204 and additional storage areas in B204
- 2.0 DEFINITIONS: None
- 3.0 HEALTH AND SAFETY: Not applicable
- 4.0 CAUTIONS: None
- 5.0 INTERFERENCES: None
- 6.0 PERSONNEL QUALIFICATIONS:
  - 6.1 Personnel are required to be knowledgeable about the procedures in this SOP.
- 7.0 SPECIAL APPARATUS AND MATERIALS:
  - 7.1 Fisher Traceable Big-Digit Hygrometer/Thermometer, serial number 61970141; manufacturer claims an accuracy of  $\pm 1$ EC for thermometer and  $\pm 2\%$  RH (mid-range) or  $\pm 4\%$  RH (outside mid-range).
  - 7.2 VWR Traceable Big-Digit Hygrometer/Thermometer, serial number 72142590; manufacturer claims an accuracy of  $\pm 1$ EC for thermometer and  $\pm 2\%$  RH (mid-range) or  $\pm 4\%$  RH (outside mid-range).
  - 7.3 Control Company Digital Humidity/Temperature Meter, serial number 72520407; manufacturer claims accuracy of  $\pm 1$ EC or F for thermometer and  $\pm 2\%$  RH (mid range) or  $\pm 4\%$  RH (ends of range).
- 8.0 INSTRUMENT OR METHOD CALIBRATION:
  - 8.1 The humidity and temperature meters (section 7.0) are calibrated against a NIST traceable thermometer on an annual basis by an ISO 17025 accredited calibration laboratory.
- 9.0 SAMPLE HANDLING AND STORAGE: Not applicable
- 10.0 PROCEDURE AND ANALYSIS:
  - 10.1 The temperature and relative humidity of sample storage room D204 and the

sample storage area in room B204 (flammable storage cabinets) will be recorded once daily each working day (Monday through Friday excluding holidays and days when the ESC is closed for any reason) on the appropriate Temperature Record form (see 16.0). For the storage area (flammable storage cabinet) located in room B204, the temperature and humidity are taken from an area in close proximity to the sample storage cabinets.

10.2 On weekends, holidays and days when the ESC is closed, note the reason why the temperature is not recorded under “Maintenance and Notes” on the appropriate Temperature Record form (see 16.0).

11.0 DATA ANALYSIS/CALCULATIONS: None

12.0 DATA MANAGEMENT/RECORDS MANAGEMENT:

12.1 The temperature and relative humidity of sample storage areas (room D204 and the sample storage area in room B204) are to be recorded promptly, legibly and in indelible ink on the Sample Storage Room Temperature/Humidity Record Form (see 16.1). Completed forms are archived on a yearly basis in notebooks kept in secured file cabinets in the file room D217. Archived data is subject to OPP=s official retention schedule contained in SOP ADM-03, Records and Archives.

13.0 QUALITY CONTROL:

13.1 For quality control purposes, the required information is documented on the appropriate forms (see 16.1).

13.2 The digital temperature/ humidity meters are calibrated annually against NIST traceable thermometers by an ISO 17025 accredited laboratory. The calibration certificates of humidity/temperature meters are maintained in a notebook archived in the laboratory=s file room D217.

14.0 NONCONFORMANCE AND CORRECTIVE ACTION:

14.1 If the temperature of the sample storage room or area is not within the target temperature range (20 $\pm$ 5EC), building authorities will be contacted to initiate adjustments/repairs to the air supply system.

14.2 If the temperature of the sample storage room or area deviates significantly from target temperature range for an extended period, Office of Enforcement and Compliance Assurance (OECA) will be contacted for advice on sample retention/disposal.

15.0 REFERENCES: None

16.0 FORMS AND DATA SHEETS:

16.1 Sample Storage Room Temperature/Humidity Record Form.

### 16.1 Sample Storage Room Temperature/Humidity Record Form OPP Microbiology Laboratory

| Month/Year: ____/____ |               | Target Temperature: 20±5EC                    |          |                 |
|-----------------------|---------------|---|----------|-----------------|
| Room #: ____          |               | Thermometer ID/Correction Factor: ____/____EC |          |                 |
| Day                   | Time/Initials | Temperature                                   | Humidity | Notes /Comments |
| 1                     |               |   |          |                 |
| 2                     |               |   |          |                 |
| 3                     |               |   |          |                 |
| 4                     |               |   |          |                 |
| 5                     |               |   |          |                 |
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| 7                     |               |   |          |                 |
| 8                     |               |   |          |                 |
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