

SUNY DOWNSTATE MEDICAL CENTER
DEPARTMENT OF PATHOLOGY
POLICY AND PROCEDURE

☒ CLINICAL LABORATORIES

☒ BAY RIDGE

Subject: QUALITY CONTROL OF
THERMOMETERS PROTOCOL

Policy No.: LAB-45

No. of Pages (including this page): 3

Prepared by: Steven Kang, M.D.
Laboratory Supervisors

Original Issue Date: 08/01

Reviewed by: Alix R. Laguerre
Maria I. Mendez
Carmencita Yudis, M.D.

Supersedes: 02/10

Effective Date: 02/11

Approved by: Peter J. Howanitz, M.D.

NYS CLEP Standards:

CAP Standards:

JC Standards:

Issued by: Pathology

Review Date	Revisions		Director	Designee	Comments / Revisions
	No	Yes			

Discontinuation Date: _____

I. PURPOSE:

To insure the accuracy of temperature readings of all thermometers.

MATERIALS REQUIRED:

37°C water bath

Ertco reference thermometer

A container large enough to hold several thermometers which will also contain a 10% glycerol solution.

10% glycerol solution

In a large enough container, mix 450 mL of tap water with 50 mL of glycerin.

II. PROCEDURE:

1. **Incubator Thermometers**

A. Place all incubator thermometers, including the water bath thermometer in a 37°C water bath along with the reference thermometer.

B. Record temperatures on the *Quality Control of Thermometers* (incubator/water baths) form.

Acceptable Temperature Limits: $\pm 1^{\circ}\text{C}$ of the reference thermometer.

2. **Refrigerator Thermometers**

A. Place a container filled with 10% glycerol solution in a refrigerator (temperature 2-6°C) for approximately one hour so the solution can reach the temperature of the refrigerator.

B. Place all the refrigerator thermometers into this container along with the reference thermometer.

C. Record temperatures on the *Quality Control of Refrigerators and Freezers* form.

Acceptable Temperature Limits: $\pm 1^{\circ}\text{C}$ of the reference thermometer.

3. **Freezer Thermometers**

A. Place all freezer thermometers, along with the reference thermometer, in a freezer with the temperature below—18°C for 5 minutes.

B. Record temperatures on the *Quality Control of Refrigerators and Freezers* forms.

C. Acceptable Temperature Limits: $\pm 1^{\circ}\text{C}$ of the reference thermometer.

D. Any thermometer that reads outside of acceptable limits or shows any irregularity must be brought to the attention of the Supervisor and discarded.

4. **Reference Thermometer**

A. The reference thermometer is calibrated annually using measurement standards traceable to the National Institute of Standards and Technology (NIST). A Certificate of Calibration is generated as proof of proper function.

B. The reference thermometer is sent to the company annually listed below for calibration.

**State Technology Inc.
510 Heron Drive, P.O. Box 266
Bridgeport, NJ 08014**

**1-856-467-8009
FAX: 1-856-467-9481**

5. Broken Mercury Thermometers

Broken thermometers are to be disposed of in a safe manner. Call extension 2395; Environmental Health and Safety personnel will come to discard the thermometers properly.

REFERENCE:

AABB Technical Manual Fifteenth Edition, 2005, method 7.2 p.821-822.

CAP Transfusion Medicine Checklist, 9/07

AABB Standards, Twenty-Fifth Edition, 2008.