

SUNY DOWNSTATE MEDICAL CENTER
UNIVERSITY HOSPITAL OF BROOKLYN
POLICY AND PROCEDURE

Subject: QUALITY CONTROL OF
THERMOMETERS PROTOCOL

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The CAP Standards: _____

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I. PURPOSE:

To insure the accuracy of temperature readings of all thermometers.

MATERIALS REQUIRED:

37C 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 37C water bath along with the reference thermometer.
- B. Record temperatures on the *Quality Control of Thermometers* (incubator/water baths) form.

Acceptable Temperature Limits: ± 1 C of the reference thermometer.

2. **Refrigerator Thermometers**

- A. Place a container filled with 10% glycerol solution in a refrigerator (temperature 2-6C) 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: ± 1 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—18C for 5 minutes.
- B. Record temperatures on the *Quality Control of Refrigerators and Freezers* forms.
- C. Acceptable Temperature Limits: ± 1 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.

Date Reviewed	Revision Required (Check One)		Responsible Staff Name and Title
05/08	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Irena Swiderski, Supervisor, Blood Bank
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