

Johns Hopkins Bayview Medical Center	
GENERAL CLINICAL RESEARCH CENTER	Policy No.: 122 Original Date: 10/97 Previous Date: None Revised Date: None
Thermometer Calibration	

PURPOSE:

To outline the policy and procedure for assuring the accuracy of laboratory refrigerator thermometers by calibration techniques.

LOCATION:

GCRC Sample Processing Laboratory

EQUIPMENT:

Mercury thermometers and refrigerator/freezer thermometers
 Calibrated thermometer traceable to NBS Standards (may be borrowed from JHBMC Biomedical Service)
 Liquid baths - zero degree, 37 degree Centigrade, 56 degree Centigrade

STAFF RESPONSIBLE

GCRC Core Laboratory Technician

POLICY

1. Refrigerators and freezers that store heat regulated reagents and patient specimens are to be controlled only with a calibrated thermometer. Thermometer calibration is conducted to assure proper equipment function.
2. Thermometer calibration checks are performed annually.
3. Thermometer calibration is performed on initial use of a new thermometer.

PROCEDURE:

1. Calibration must be completed at the lowest temperature at which the thermometer is labeled.
2. Into a zero degree constant bath, dip the thermometer to be calibrated at least six inches deep into the liquid. Take the temperature reading from the thermometer being calibrated. Check the temperature reading by using the standardized Telethermometer. If the reading is the same or within one degree, the thermometer is satisfactory.
3. Perform the same procedure on all the thermometers to be calibrated using 37 degrees centigrade and 56 degrees centigrade liquid bath or at a temperature suitable for the thermometer range.
4. Thermometers that do not check with calibrated thermometer readings are not used.
5. Discard any thermometers that have separated mercury. Separated mercury gives inaccurate readings.

MONITORING

Annual thermometer calibration checks

DOCUMENTATION

Documentation of annual thermometer calibration checks to be maintained by the GCRC Core Laboratory staff.

Authors, Reviewers, References and Dates

Authors: Sharon Crum, JHBMC Laboratory

References: Myhre, Byron A., Quality Control in Blood Banking, 1974.

Reviewers: GCRC Clinical Nurse Specialist
GCRC Director of CORE Laboratory

Date: October 5, 1997

Pamela Ouyang, MD
Program Director, GCRC

Lisa Nummi, MSN, ARNP, RN
Director of Nursing, Emergency Dept., JHBMC