

Division of Nuclear Medicine Procedure / Protocol

LABORATORY TESTS: CALIBRATION OF PIPETTES (CLIA-88)
UPDATED: AUGUST 2011

CPT CODE: N/A

Principle: The pipettes have been calibrated at the factory with distilled water at +22°C.

Ordinarily the pipettes do not need to be calibrated but they are constructed to permit easy in-lab re-calibration if necessary. To do this an analytical balance, a small beaker, distilled water (+22°C), and the calibration tool are needed.

If the handle and/or piston have been changed the pipette must be re-calibrated. If the O-ring and /or tip cone has been changed the calibration should be checked.

Procedure:

1. Set the volume of the pipette as instructed in the table below.

Pipette	Set Volume	Permitted Value (mg)
5-50 µl	20	19.7-20.3
20-200 µl	100	99-101
100-1000 µl	500	494-505
1-5 ml	2000	1980-2020

PIPETTE	#1	#2	#3	#4	#5	Date / Init

2. Place the finntip firmly onto the end of the pipette.
3. Pipette distilled water into a pre-weighted beaker at least 5x. Record the weight to the nearest tenth of a mg. The calibration of the pipette must be changed even if only one of the results is outside the permitted range.
4. Place the calibration tool into the holes at the base of the thumb button. Turn clockwise to increase the volume, and counterclockwise to decrease it.
5. After re-calibration, check according to step (3). Calibration applies only within the specified volume range of the pipette.

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