QCP7

AUTOMATIC PIPET QUALITY CONTROL

1.0 PURPOSE

To describe the procedure for operational accuracy check and quality control of laboratory pipettes.

2.0 RESPONSIBILITIES

The Laboratory Manager or designee is responsible for assuring that this procedure is implemented on a quarterly basis.

Laboratory staff is responsible for following this procedure.

3.0 PROCEDURE

3.1 Equipment

3.1.1 Micro pipettes: adjustable and nonadjustable
All varieties 20 - 1,000 µL

3.1.2 Macro pipettes: adjustable
All varieties 1 -10 mL

3.1.3 Analytical balance
Mettler AG 204 analytical balance or equivalent

3.1.4 Small and medium size weighing pans

3.1.5 Pipette tips, 4 sizes

3.1.6 Reagent grade water

3.2 Nonadjustable exact micro pipette

3.2.1 Place small weighing pan on balance and tare.

3.2.2 Pipette reagent grade water into pan.

3.2.3 Record weight.

3.2.4 Repeat procedure for each pipette.

3.3 Adjustable exact micro pipette

3.3.1 Place small weighing pan on balance and tare.

3.3.2 Select pipette setting as appropriate to evaluate full adjustment
Example: P200: 50 µL, 100 µL 150 µL, 200 µL
P1000: 200 µL, 250 µL, 500 µL, 1000 µL

3.3.3 Pipette reagent grade water into pan.

3.3.4 Record weight.

3.3.5 Repeat procedure one time for each pipette setting.

3.3.6 If weight deviates >3 percent, remove from service.

3.4 Adjustable gross macro pipette

3.4.1 Place medium weighing pan on balance and tare.

3.4.2 Select pipette setting.

Note: 5 mL: 1 mL, 3 mL, 5 mL
10 mL: 5 mL, 8 mL, 10 mL

3.4.3 Pipette reagent grade water into pan.

Note: Weights are not recorded.

3.4.4 Repeat procedure one time for each pipette setting.

3.4.5 If more than 10 percent deviation, affix a tag with an explanation of this problem, and remove from service for cleaning, part replacement and/or further check.

3.4.6 Repeat check procedure after cleaning.