	Original Creation Date: 07/16/2013	Publication Date: 02/01/2023
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	Category: Labs AHC	
	Education: Level 2	

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ID-MTS Biohit Pipettor Use

Printed copies are for reference only. Please refer to the electronic copy for the latest version.

I.   PURPOSE

Describe proper use and handling of electronic multi program pipettor.

II.   SCOPE

Use for applying sample and testing reagent to MTS Card Test System.

III.   STATEMENTS/REQUIREMENTS

A. SPECIMEN REQUIREMENTS

Color	Anticoagulant	Patient Age	Minimum Volume Required
Lavender	EDTA	Less than 4 years	2 x 0.5 mL microtainers
		4-12 years	1 x 6 mL tube preferred 1 x 3 mL tube accepted
		13 years and older	1 x 6 mL tube
Red top or pink top (EDTA) tubes (3 or 6 ml) may also be accepted if they are correctly labeled.			
NOTE: A change in sample volume may be requested depending on the patient's age, the patient's hematocrit, and/or the presence of atypical antibodies.			

IV.   DEFINITIONS

AABB: Association for the Advancement of Blood & Biotherapies

V.   EQUIPMENT/RESOURCES

Ortho ID-MTS BIOHIT Pipettor with dispense tips.

VI.   PROCEDURE

A. QUICK GUIDE FOR MTS-BIOHIT PIPETTOR (MTS710142, Single Channel Electronic Pipettor 10-300µL)

1. **CAUTION: NEVER STRIKE tip cone against tip tray when mounting tips as this can damage several internal components.**

2. To select Preset program:

   a. Starting display

      ◄**E**

   b. Click Start button TWICE.

   c. Previous program will display fill µl volume.

   d. To change program, Press (**M**) key then.

   e. Press **UP (△)** or **Down(▽)** to select desired program **P.**

   f. Program Number is displayed in left side of Window.

   g. Press (**E**) to activate displayed Program #

   h. Pipettor is now ready to use.

B. To use Pipettor: (Always keep on charging Stand – NEVER lay down on counter)

1. Seal Tip to pipet.	
2. START	Click Start button TWICE. Previous program will display fill µl volume.
3. SELECT	Program # 1, 2, 4, 5 or 6.
4. FILL	Immerse tip into sample, Click START button to fill. ` NOTE:◄ or ▶ ▶ (= aspirate) ◄ (= dispensing) Indicates direction piston moves.
5. WASTE	Programs 2, 4, 5; Click Start button to eject waste 10µl. Program 6; Click to add airgap 15µl .
6. DISPENSE	Position tip over Microtube, holding vertically, Click Start button to dispense (do not touch microtube).
7. PURGE	After dispensing, position tip over initial sample tube or waste container to purge remaining sample from the pipettor.
8. EJECT	Press tip Ejector (DO NOT REMOVE TIP by HAND).
9. RETURN	To Charging STAND.

BIOHIT – PRESET DISPENSING/MIXING PROGRAMS:

Program #	P1	P2	P3	P5	P6 Mix Program
Fill Volume	▶ **50 µL** 0.8%cells	▶ **300 µL** (fill 325 µL) 0.8%cellsPI	▶ **75 µL** (fill 100 µL) Plasma/Serum	▶ **300 µL** (fill 325 µL) Plasma/Serum	1 **100 µL** Diluent 2
Waste	None	◀ *waste 10 µL*	◀ *waste 10 µL*	◀ *waste 10 µL*	None
Dispense	◀ **50 µL**	◀ **6 50 µL** ◀ **5 50 µL** ◀ **4 50 µL** etc. 50 µL x 6	◀ **3 25 µL** ◀ **2 25 µL** ◀ **1 25 µL** 25 µL x 3	◀ **12 25 µL** ◀ **11 25 µL** ◀ **10 25 µL** etc. 25 µL x 12	Fill ▶ **A** *15 µL Air Gap* Fill ▶ **2 10 µL** *EDTA-PRC*
Purge Waste	No	◀ **E** (= Purge Waste) Yes	◀ **E** (= Purge Waste) Yes	◀ **E** (= Purge Waste) Yes	◀ **110 µL** Purge All ▶ * Mix 3 x 80 µL ◀ **E** (= Purge Waste)
Application	0.8 % RBC (One dispense)	0.8 % RBC (Six dispenses)	Plasma/Serum (Three dispenses)	Serum/Plasma (12 dispenses)	0.8 % RBC
Protocols	**IAT DAT Reverse**	**IAT Reverse**	**IAT**	**IAT Panel**	**DAT Cell Prep 0.8% RBC Suspension**

C.   For Program 6 (mixing):

   1.   Measure 1.0 mL MTS Diluent 2 into a Patient ID labeled 12x75 test tube.

   2.   From this tube, aspirate 100 µL Diluent 2, using Program # 6 on BIOHIT Pipettor.

   3.   Purge and mix the remaining suspension into this tube.
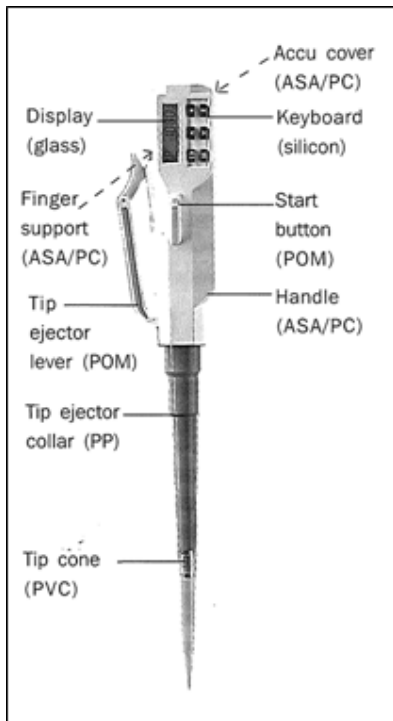
D.   User Recommendations:

   1.   Hold pipette VERTICAL angle for dispensing.

   2.   Following final purge, lift pipette tip out of liquid prior to releasing trigger to prevent aspiration.

   3.   Do *Not* use Programs #: 0, 4, 7, 8, 9, 10, 11.

E.   Usage Overview:

   1.   Pipetting Start Button: Single dispense= Quick Click

   2.   Position Vertical angle for Aspirating and Dispensing.

   3.   Tip Ejector Lever: **Never** remove Tip by Hand.

   4.   Filling: "TAP" inside of tube after Fill.

   5.   ALWAYS place pipettor in charging stand when not in use.

   6.   AVOID leaving pipettor on its side with liquid in the tip which might seep into mechanism.

   7.   **Pre-Established MTS Programs (1**, **2**, **3, 5 & 6) are selected by pressing** (**M**).

   8.   Press **UP (▲)** or **Down(▼)** to select desired program **P.**

9. Press (**E**) to activate displayed Program #.

Accu cover (ASA/PC)
Display (glass)
Keyboard (silicon)
Finger support (ASA/PC)
Start button (POM)
Tip ejector lever (POM)
Handle (ASA/PC)
Tip ejector collar (PP)
Tip cone (PVC)

10. After Program # is selected each press of the Start Button will perform the next step as indicated in the Program listings.

F. CLEANING:

1. Do not use Bleach or other cleaning solvents.

2. Clean with a Soft Cloth moistened with Isopropyl Alcohol.

VII. CLINICAL SIGNIFICANCE/SPECIAL CONSIDERATONS

None

VIII. REFERENCES

AABB Technical Manual, current edition

AABB Standards, current edition

MTS Biohit Pipettor Instruction Manual, Biohit Plc. Laippatie 1, 00880 Helsinki, Finland, Distributed by Ortho-Clinical Diagnostics, Support call 1-800-421-3311.

Quality System, AABB/IU Health.

IX. FORMS/ APPENDICIES

None

X. APPROVAL BODY

None

PROCEDURE #:

BBT – 053