

## BD Microtainer Tube Blood Collection

(Revised 7/26/2009)

### 1. Prevent hemolysis (destroy blood cells):

- a. **Top of microtainer should not touch the skin.** Avoid scraping skin surface to collect blood sample. Blood will freely flow to bottom of tube.
- b. **Do not squeeze the puncture site.** "Milking" of skin puncture site may cause hemolysis and adversely affect test result accuracy.

### 2. Prevent clotting (Triggered immediately upon skin puncture, and represents the greatest obstacle in collecting quality specimens.)

#### a. **Optimize blood flow**

- i. Obtain hemoglobin **after** 4 hours of age.
- ii. Visually inspect intended capillary collection site.
- iii. Warm heel for 5 to 10 minutes **prior** to the procedure.
- iv. Hold infant's foot in downward position.

#### b. **Avoid scraping skin surface to collect blood sample.** Blood should flow freely to bottom of microtainer tube.

#### c. **Collect all blood samples within 2 minutes.** Specimen collection that takes more than 2 minutes will frequently result in poor-quality specimens, and higher incidence of micro-clotting in additive tubes.

#### d. **Activate anticoagulant in microtainer tube.**

- i. Hematology (Lavender) and Plasma (Green) tubes contain the optimum amount of additive to anticoagulate the specified volume of skin puncture blood. These tubes need to be mixed with the anticoagulant to ensure the specimen does not clot.
- ii. During difficult or slow collections using EDTA (Lavender) tubes, try to rotate the collector tube after every 3 drops. This will hasten the contact of the blood with EDTA while collecting.
- iii. Invert hematology (lavender) and plasma (green) tubes 10 times to assure anticoagulation.







#### e. **Fill microtainer tubes to required volume.**

- i. Blood fill quantity must be within the specified range in tubes showing fill lines to ensure satisfactory anticoagulation and test results.
- ii. Fill plasma (Green) and hematology (Lavender) tubes **between** fill marks. Over or underfilling of tube may result in clotting and/or erroneous test results.
- iii. Fill serum (Yellow) tubes to required volume (**Refer to Page 2**).



Fill  
between  
the  
marks

### 3. Microtainer Tubes

	<u>Plug Color</u>	<u>Additive</u>	<u>Fill Volume</u>
<u>Hematology tube:</u>	Lavender 	(K2) EDTA	250 - 500 µl
<u>Plasma tubes:</u> a) Plasma	Green 	Lithium Heparin	200 - 400 µl
b) Plasma Separator Tube (PST™)	Lt. Green 	Lithium Heparin and Gel for plasma separation	400 - 600 µl
<u>Serum tubes:</u> a) Serum Separator Tube (S ST™)	Gold 	Polymer Gel	As required
b) Amber SST™ ( used for light sensitive analyte testing e.g., bilirubin tests)			
c) No - additive	Red 	None	As required

#### Order of Draw\*

1. EDTA
2. Other Additive Tubes
3. Serum Tubes

\*NCCLS-recommended Standards, according to NCCLS Document H4 - A4