



## STEM CELL LABORATORY (STCL)



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**DOCUMENT TITLE:**

Sysmex XN-450 Hematology Analyzer Dilution Protocol

**DOCUMENT NOTES:**

### Document Information

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## **STCL-EQUIP-023 JA3 SYSMEX XN 450 HEMATOLOGY ANALYZER DILUTION PROTOCOL**

### **PROTOCOL FOR ALL DILUTIONS**

1. Labeling dilution test tubes: Label the test tube (in which the dilution is prepared) with the product assigned to the ISBT barcode. Add a dash and the dilution factor number (-2 or -3), etc., as appropriate for the dilution.
2. Calculations: Record all calculations directly on the analyzer print-out so that the reported value is recorded there.
3. Minimize dilutional error: (1) Prepare all dilutions using aliquots of the original specimen. NEVER prepare dilutions from other dilutions. (2) Use the smallest dilution factor that will arrive at a diluted value within the linear range of the analyzer. On extremely high values, make a dilution that should bring the value to the middle of the reportable range.

### **PROPER USE OF A PIPETTE:**

#### **ALWAYS:**

1. Aspirate and expel liquids - do not prime pipette tips and do not use “reverse” pipetting
2. Make sure there are no bubbles
3. Hold the pipette upright and the tube at an angle being sure to touch the tip to an inner wall of the test tube
4. Use a different pipette tip with each different fluid being pipetted

### **DILUENT:**

1. Use Cellpack DCL as the diluent for all dilutions.
2. Aseptically remove an aliquot of Cellpack DCL from the reagent cube in use. Label the container with the contents, lot number, open expiration date, tech initials and the date.

### **DILUTION SAMPLE VOLUMES NEEDED FOR TESTING**

The final sample volume of each prepared dilution must be at least 300 µL to avoid “short sampling”.

### **TESTING SAMPLE DILUTIONS**

When samples generate results that require dilutions prior to repeating/reporting, the prepared dilution may be analyzed immediately after preparation and thorough mixing with one exception; all diluted samples must be tested within 30 minutes of preparation (if testing is not immediate).

**Signature Manifest****Document Number:** STCL-EQUIP-023 JA3**Revision:** 01**Title:** Sysmex XN-450 Hematology Analyzer Dilution Protocol**Effective Date:** 20 Mar 2025

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**Document Release**

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