Suggested Heparin Flush Procedure for Bone Marrow Aspirate

1. Withdraw 2,000 units/mL* of Heparin from sterile bowl into 10mL syringe
2. Remove Stylets from Introducer Needle and Aspiration Cannula with distal end of needle inside sterile bowl
3. Connect Heparin-filled syringe to the shorter Introducer needle and inject Heparin until needle is fully rinsed (is flowing through end of needle). Aspirate Heparin back into syringe and disconnect from needle.
4. Repeat step 3 for the longer aspiration needle.
5. Rinse each stylet (3), short introducer sharp (1) and blunt (2), longer aspiration stylet (3).
6. With needle guards in place, rinse the outside of each needle by injecting Heparin into the open end of the guard.

BEGIN ASPIRATION PROCEDURE FOR IMMEDIATE USE (EX. MIXING WITH BONE GRAFT)
OR
CONTINUE FOLLOWING STEPS FOR BONE MARROW ASPIRATE INJECTION THROUGH 22 GAUGE NEEDLE

7. Rinse 22 Gauge Needle with 2,000 units of Heparin
8. Add ½ mL of Heparin into collection syringe

*It is important that the strength per mL of the Heparin rinse is at least 1,000/mL but preferably 2,000/mL and that you have adequate volume (10mL) to rinse all needles and syringes. Using a sterile bowl, add sterile Saline or PBS to dilute Heparin to 2,000 units/mL.

The tables below detail the amount of Heparin and Saline or PBS needed to dilute the Heparin to 2,000 units/mL.

### Using 5,000/mL Heparin

<table>
<thead>
<tr>
<th>mL of Heparin Required</th>
<th>mL of Saline or PBS</th>
<th>Total Heparin Units</th>
<th>Total mL</th>
<th>Heparin/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>6</td>
<td>20,000</td>
<td>10</td>
<td>2,000</td>
</tr>
</tbody>
</table>

### Using 10,000/mL Heparin

<table>
<thead>
<tr>
<th>mL of Heparin Required</th>
<th>mL of Saline or PBS</th>
<th>Total Heparin Units</th>
<th>Total mL</th>
<th>Heparin/mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>8</td>
<td>20,000</td>
<td>10</td>
<td>2,000</td>
</tr>
</tbody>
</table>