

**TRAINING UPDATE**

**Lab Location:** SGMC and WOMC      **Date Implemented:** 9.6.2019  
**Department:** Blood Bank      **Due Date:** 9.15.2019

**DESCRIPTION OF PROCEDURE REVISION**

**Name of procedure:**

Preparation of Phosphate Buffered Solution for Use with Capture Methodologies

**Description of change(s):**

We are now required to QC the pH paper when taking the pH of the PBS solution.

- Use 7.0 pH buffer
- Acceptable range = 6.8-7.2
- Document on the new form

Adventist HealthCare  
 Site: Shady Grove Medical Center, White Oak Medical Center

Title: Preparation of Phosphate Buffered Solution for Use  
 with Capture Methodologies

Non-Technical SOP

<b>Title</b>	<b>Preparation of Phosphate Buffered Solution for Use with Capture Methodologies</b>	
<b>Prepared by</b>	Stephanie Codina	Date: 6/15/2011
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<b>Laboratory Approval</b>		
<b>Print Name and Title</b>	<b>Signature</b>	<b>Date</b>
<i>Refer to the electronic signature page for approval and approval dates.</i>		
<b>Local Issue Date:</b>		<b>Local Effective Date:</b>

<b>Review:</b>		
<b>Print Name</b>	<b>Signature</b>	<b>Date</b>

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**1. PURPOSE**

pHix is a concentrated solution of dissolved monopotassium and dipotassium salts. pHix is added to unbuffered saline to bring the pH to a range of 6.5 – 7.5 for use in Capture and hemagglutination antibody detection assays.

**2. SCOPE**

This procedure applies to the preparation of PBS (Phosphate Buffered Solution) for use with the Galileo Echo and Manual Capture test methodologies.

**3. RESPONSIBILITY**

All blood bank staff members must prepare and quality control PBS per this procedure.

**4. DEFINITIONS**

PBS (Phosphate Buffered Solution or Phosphate Buffered Saline) - A buffered saline with a pH in the range of 6.5 – 7.5 prepared by adding pHix to unbuffered saline.

**5. PROCEDURE**

Step	Action
1	pHix is ordered from Immucor (manufacturer’s number 5070 or equivalent) and stored at room temperature.
2	Remove the packaging from one bottle of pHix.
3	Check the concentrate for evidence of crystallization. If crystals are present in the container, warm the concentrate to 35-40°C until they have dissolved.
4	Obtain a cube of unbuffered saline. Add 10mL of pHix for every 1L of unbuffered saline. A. Add a full bottle of pHix to a 20L cube of saline. B. Add 100mL of pHix to a 10L cube of saline.

Step	Action
5	Gently mix the contents of the saline by tilting the container back and forth for approximately one minute.
6	Perform quality control on the pH paper. A. Use a 7.0 pH buffer. B. The acceptable range is 6.8 - 7.2.
7	Check the pH of the saline. A. The expected pH range is 6.5 – 7.5. B. Do not use the saline if the pH is outside of this range. Document disposition of the PBS on the back of the “Phosphate Buffered Solution Tracking Sheet.”
8	Document preparation of the PBS on the “Phosphate Buffered Solution Tracking Sheet.” A. Tech code B. Lot number and expiration date of saline C. Lot number and expiration date of pHix D. Lot number and expiration date of pH paper E. Lot number and expiration date of the pH standard F. Expiration date (30 days from date prepared or expiration date of saline/pHix, whichever is sooner) G. pH of both the pH standard and the prepared PBS H. Determination of whether the PBS is acceptable for use
9	Write the following information on the saline cube. A. “pHix Added” on <i>list date</i> B. Expires <i>list date</i> C. pH = <i>list pH</i>
10	PBS should not be used to prepare enzyme solutions of ficin or papain. PBS should not be used to prepare cell suspensions that will be tested using reagents prepared in acidic diluents.

**6. RELATED DOCUMENTS**

Form: Phosphate Buffered Solution Tracking Sheet (AG.F126)

**7. REFERENCES**

pHix Phosphate Buffer Concentrate Manufacturer’s Instructions, Insert code 324-8, Rev 10/07, ImmucorGamma, Norcross, GA.

## 8. REVISION HISTORY

Version	Date	Reason for Revision	Revised By	Approved By
000	6.1.16	Section 5: Added a requirement to document the expiration dates of saline, PBS, and pH paper on the form. Sections 6 & 9: Moved appendix to related documents area Footer: version # leading zero's dropped due to new EDCS in use as of 10/7/13.	SCodina	NCacciabeve
1	5.11.18	Header: Added WAH	LBarrett	NCacciabeve
2	8.13.19	Header: Updated parent facility, replaced WAH with WOMC Section 5: Added requirement to QC the pH paper using a 7.0 pH standard	SCodina	NCacciabeve

## 9. ADDENDA AND APPENDICES

NA

