



STEM CELL LABORATORY (STCL)



DOCUMENT NUMBER: STCL-SOP-049 JA2

DOCUMENT TITLE:

Performing Daily Control of ABO/Rh Reagents JA2

DOCUMENT NOTES:

Document Information

Revision: 03

Vault: STCL-Processing-rel

Status: Release

Document Type: STCL

Date Information

Creation Date: 12 Apr 2021

Release Date: 07 Jun 2021

Effective Date: 07 Jun 2021

Expiration Date:

Control Information

Author: WATER002

Owner: WATER002

Previous Number: STCL-SOP-049 JA2 Rev 02 **Change Number:** STCL-CCR-516

STCL-SOP-049 JA2

PERFORMING DAILY CONTROL OF ABO/RH REAGENTS

1 PURPOSE

- 1.1 The purpose of this procedure is to provide instructions to the staff for performing daily quality controls of ABO/Rh reagents.

2 INTRODUCTION

- 2.1 Reagents must be tested daily if recipient/donor specimens are being tested. This will ensure that the anti-sera and known cell suspensions are demonstrating the appropriate reaction.

3 SCOPE AND RESPONSIBILITIES

- 3.1 The Medical Directors, Laboratory Manager, and applicable Stem Cell Laboratory staff are responsible for ensuring that the requirements of this procedure are successfully met.

4 DEFINITIONS/ACRONYMS

- 4.1 N/A

5 MATERIALS

- 5.1 Reagents
 - 5.1.1 Anti-A, Anti-B, Anti-D
- 5.2 Supplies
 - 5.2.1 12 x 75 mm test tube
 - 5.2.2 Disposable pipettes

6 EQUIPMENT

- 6.1 Centrifuge
- 6.2 Agglutination mirror

7 SAFETY

- 7.1 Wear all appropriate personal protective equipment when handling potentially infectious blood and body fluids to include, but not limited to, gloves, lab coats, etc.

8 PROCEDURE

- 8.1 Label and add reagents to six tubes as reflected in the “Labeling of QC Sample Tubes” table below.

| Labeling of QC Sample Tube | | Expected Results |
|----------------------------|-------|----------------------|
| Tube 1 | Aa | 3 – 4+ Agglutination |
| Tube 2 | Ba | No Agglutination |
| Tube 3 | Ab | No Agglutination |
| Tube 4 | Bb | 3 – 4+ Agglutination |
| Tube 5 | D Rh+ | 1 – 4+ Agglutination |
| Tube 6 | D Rh- | No Agglutination |

Tube 1 contains: 1 drop of anti-A and 1 drop of A_I cells

Tube 2 contains: 1 drop of anti-B and 1 drop of A_I cells

Tube 3 contains: 1 drop of anti-A and 1 drop of B cells

Tube 4 contains: 1 drop of anti-B and 1 drop of B cells

Tube 5 contains: 1 drop of anti-D and 1 drop of Rh⁺ in-house control

Tube 6 contains: 1 drop of anti-D and 1 drop of Rh⁻ in-house control

NOTE:

Preparation of in-house controls:

- Obtain a peripheral anti-coagulated (EDTA preferred) tube of blood from a known Rh⁺ and a known Rh⁻ donor.
- Affix an appropriate label (Rh⁺ or Rh⁻) indicating the collection date and a 30-day expiration date.

Rh (-) Negative CONTROL

Collection Date: _____

Expiration Date: _____

Rh (+) Positive CONTROL

Collection Date: _____

Expiration Date: _____

1. Mix samples well.
2. Centrifuge tubes for the designated amount of time for saline reactions as indicated on the label affixed to each centrifuge.
3. Score reaction according to the table for agglutination/hemolysis and record results on the Blood Bank Worksheet.

NOTE:

If the QC samples do not yield the expected results, do NOT proceed with recipient / donor testing until the expected results are obtained.

- Check the expiration dates of the reagent(s) in question and, if expired, replace with an in-date reagent.
- Repeat the testing.
- If expected results are still not obtained after repeating the testing, inform senior staff so additional troubleshooting measures can be taken until results obtained are as expected.

Agglutination Table

| Strength of Reaction | Cell Button Description | Background Description |
|-----------------------------|---------------------------------------|-------------------------------|
| 4+ | Remains in one clump | Clear |
| 3+ | Several small clumps | Clear |
| 2+ | Many small clumps, equal size | Hazy to clear |
| 1+ | Finely granular definite small clumps | Turbid |

MF = Mixed Field

Hemolysis Table

| Description Of Hemolysis | Definition Of Cell Button | Background Color |
|---------------------------------|--------------------------------------|-------------------------|
| Gross (GH) | Marked reduction in cell button size | Dark red |
| Moderate (MH) | Slight Reduction in cell button size | Obvious Red |
| Slight (SH) | No reduction in cell button size | Pink tinge |

GH = Gross Hemolysis

MH = Moderate Hemolysis

SH = Slight Hemolysis

9 RELATED DOCUMENTS/FORMS

9.1 STCL-SOP-049 FRM1 Blood Bank Worksheet

9.2 STCL-SOP-048 JA1 AB Serum Test (AB Control)

10 REFERENCES10.1 AABB Technical Manual, *Current Edition*10.2 Standards for Blood Banks and Transfusion Services, *Current Edition*10.3 Immucor Gamma Blood Grouping Reagent Anti A and Anti B (*Murine Monoclonal*) Series 110.4 Immucor Gamma Blood Grouping Reagent Anti D (Series 4) Monoclonal Blend
Transfusion Medicine procedure “Grading Agglutination Reactions”**11 REVISION HISTORY**

| Revision No. | Author | Description of Change(s) |
|---------------------|----------------|--|
| 03 | B. Waters-Pick | <ul style="list-style-type: none"> Section 8.1 modified data below table to reflect addition of 1 drop of anti-sera instead of 2 drops in accordance with the package insert instructions Updated 10.1 and 10.2 to reflect “current edition” |

Signature Manifest**Document Number:** STCL-SOP-049 JA2**Revision:** 03**Title:** Performing Daily Control of ABO/Rh Reagents JA2**Effective Date:** 07 Jun 2021

All dates and times are in Eastern Time.

STCL-SOP-049 JA2 Performing Daily Control of ABO/Rh Reagents JA2**Author**

| Name/Signature | Title | Date | Meaning/Reason |
|-----------------------------------|-------|--------------------------|----------------|
| Barbara Waters-Pick (WATER002) | | 27 Apr 2021, 12:36:52 PM | Approved |

Management

| Name/Signature | Title | Date | Meaning/Reason |
|-----------------------------------|-------|--------------------------|----------------|
| Barbara Waters-Pick (WATER002) | | 27 Apr 2021, 12:37:09 PM | Approved |

Medical Director

| Name/Signature | Title | Date | Meaning/Reason |
|-----------------------------|-------|--------------------------|----------------|
| Joanne Kurtzberg (KURTZ001) | | 27 Apr 2021, 01:02:25 PM | Approved |

Quality

| Name/Signature | Title | Date | Meaning/Reason |
|---------------------------------|-------|--------------------------|----------------|
| Isabel Storch De Gracia (IMS19) | | 29 Apr 2021, 02:11:43 PM | Approved |

Document Release

| Name/Signature | Title | Date | Meaning/Reason |
|----------------------------|-------|--------------------------|----------------|
| Sandra Mulligan (MULLI026) | | 24 May 2021, 08:41:01 PM | Approved |