Significant Changes and Response to Comments Received to the 14th edition of Standards for Immunohematology Reference Laboratories

Please note that public comments that were submitted address the proposed 14th edition of Standards for Immunohematology Reference Laboratories (*IRL Standards*), and not the final version. The IRL Standards Committee has elected to make the substance of public comments that were submitted a part of this document. Guidance that appears with the 14th edition of *IRL Standards* in the Standards Portal provides a more in-depth look at the additions, deletions and changes and the rationales behind those decisions that appears below.

Standard (13th edition)	**Significant Change (SC)/Response to Comment (RtC)**	**Comment**	**Change made?**	**Outcome**
General	SC	NA	NA	Where appropriate, the phrase in bold below was added to all applicable standards that have CMS references: **For accredited facilities that are assessed by AABB for conformance with the Clinical Laboratory Improvement Amendments (CLIA), refer to the Verification of CLIA Compliance Form before on-site assessment.**
1.1.2.1	SC	NA	NA	The committee flipped the placement of the term "international" for accuracy purposes. The intent of the standard has not changed. **1.1.2.1** The supervisor shall have one of the following qualifications: 1) Certification as a Specialist in Blood Banking (SBB) or ~~international~~ equivalent **international** credential.
1.1.3	SC	NA	NA	The committee elected to add crossrefrences to standards 1.1.1, 1.1.2, and 1.2.1 to standard 1.1.3 for completeness. These standards relate to the qualifications required to serve in the capacity of medical or laboratory director.

				✎**1.1.3 Staffing Changes** The laboratory shall communicate initial appointments and staffing changes, or interim leadership, for the medical director, medical director designee, and immunohematology reference laboratory supervisor within 30 days to AABB's Accreditation and Quality Department. **Standards 1.1.1, 1.1.2, and 1.2.1 apply.**
1.9 (New)	SC	NA	NA	Standard 1.9 is new to the 14th edition and was added to mirror a new standard in the 12th edition of Standards for Cellular Therapy Services and 35th edition of Standards for Blood Banks and transfusion Services. The standard reads as follows: **1.9 Facility Status Changes** **The facility shall communicate to AABB within 30 days a change that directly or indirectly impacts a facility's accreditation status.**
1.9.1 (New)	SC	NA	NA	The committee created new standard 1.9.1 based on the same addition to the 12th edition of Cellular Therapy Standards. This standard now requires accredited programs contact AABB if they are under investigation by their relevant Competent Authority. This ensures AABB accreditation's department is aware of all issues that could potentially impact the program or AABB as an accreditation organization. The standard reads as follows: **1.9.1 If the organization is the subject of regulatory enforcement action by a relevant Competent Authority, the organization shall notify AABB within 7 days in electronic or written format.** The committee also added a new definition to

<table>
<tr><td></td><td></td><td></td><td></td><td>the Glossary for “Regulatory Enforcement Action” for clarity which reads as follows:
<u>Regulatory Enforcement Action: Measures taken by a Competent Authority that include, but are not limited to, progressive measures (eg, suspension or termination of operations, information notices requiring specific documentation or data, fines incurred) or critical triggers (eg, pattern of recurrent, unresolved issues; deficiencies in risk management systems).</u></td></tr>
<tr><td>2.2B</td><td>SC</td><td>NA</td><td>NA</td><td>The committee added the new Gerbich system to Reference Standard 2.2B for completeness reflecting the availability thereof.
The entry reads as follows:
<table>
<tr><th>ISBT Symbol</th><th>System or Collection No./ Antigen No.</th><th>Antisera</th><th>No. of Examples</th><th>Red CEll s</th><th>No. of Examples</th></tr>
<tr><td>GE</td><td>020/002
020/003
<u>020/004</u></td><td>Ge2
Ge3</td><td>1
1</td><td>Ge:–2,3
Ge:–2,–3
<u>Ge:-2, -3, -4</u></td><td>1
1
<u>1</u></td></tr>
</table></td></tr>
<tr><td>2.2B</td><td>SC</td><td>NA</td><td>NA</td><td>The committee updated the antisera for the Cost blood group for consistency with the current ISBT ID.
The entry reads as follows:
<table>
<tr><th>ISBT Symbol</th><th>System or Collection No./ Anti</th><th>Antisera</th><th>No. of Examples</th><th>Red CEll s</th><th>No. of Examples</th></tr>
</table></td></tr>
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				gen No. | COST | 205/001 | ~~Cs~~ **TL2** | 1 | Cs(a–) | 2
2.2B	RtC	This is unreasonable to require every IRL to have this. Leach phenotype RBCs are one of rarest of null types. This should be challenged.	No	The committee reviewed this comment but did not feel that a change was needed at this time. The committee notes that the more options given to accredited laboratories to meet the standard would be for the better.
3.5.4.1 (New)	SC	NA	NA	The committee created new standard 3.5.4.1 for clarity. This new standard clarifies that not all equipment has to be reviewed when it is known that one piece of equipment is at the root of the nonconformance. The standard reads as follows: **3.5.4.1 When a nonconformance cannot be attributed to a specific piece of equipment, all pieces of equipment potentially involved in the nonconformance shall be evaluated to determine if expected performance criteria are met based on the manufacturer's written instructions.**
3.6 (deleted)	SC	NA	NA	Based on a review of chapter 3, it was deemed that this standard is redundant to many standards in chapter 3, specifically the 3.5 thread. This standard was also deemed redundant per standard 6.2.2. ~~**3.6 Equipment Traceability**~~ ~~**The organization shall maintain records of equipment use in a manner that permits:**~~ ~~**1) Equipment to be uniquely identified and traceable.**~~ ~~**2) Tracing of any given product or service to all equipment associated with the procurement, processing, storage, distribution, and administration of the product or service.**~~
3.7 (New)	SC	NA	NA	The committee created new standard 3.7 to ensure that facilities monitor their critical

				technology infrastructure and that they function as expected. This standard requires that there are defined checks to monitor that technology is working as intended and expected. The standard reads as follows: ✎**3.7 Technology Infrastructure** **The organization shall have an active program to ensure that critical technology and communication infrastructures function as intended, including risk-based monitoring or testing at facility-defined intervals. Standards 1.4, 1.5, and 1.6 apply.**
3.8.3 (New)	SC	NA	NA	The committee created new standard 3.8.3 to fill a gap that existed in the previous edition of the IRL Standards. Providing this specific standard closes this loophole and ensures that AABB assessors can associate a clear standard with a found nonconformance. The standard reads as follows: ✎**3.8.3 The organization shall ensure that storage devices undergo quality control testing at facility-defined intervals. Standards 3.10.1, 3.10.2, and 5.1.2 apply.**
3.8.3 (New)	RtC	I wonder if 3.10.3 should apply? How does committee "define" interval and frequency of control testing per year.	No	The committee reviewed this comment but did not feel that a change was needed at this time. The committee noted that these concepts are related to different requirements and would not be compatible.
3.8.3 (New)	RtC	As written, it is unclear to which devices this standard applies. Please clarify, does this standard apply to devices such as shakers? Additionally, it is unclear what QC would be required for these devices as there are other standards that cover requirements for alarms and temperature. This standard appears to apply to IRLs that manage platelets.	No	The committee noted this comment but did not feel that a change would be appropriate at this time. The committee feels that this requirement applies to all IRLs that uses a storage device and it is imperative that laboratories ensure that they are doing more than just an electronic check.
3.8.3/3.10.3	RtC	There should be consideration for what facilities are contractually allowed to do with temperature monitoring probes. There may be contractual language that prohibits the facility from physically manipulating the probes for "fire and ice" testing. Additionally, the probes are frequently installed and secured within	No	The committee reviewed this comment but did not feel that a change was needed at this time. The committee notes that the requirements are not requesting laboratories to go beyond what

		storage devices in such a way that makes "fire and ice" testing difficult, but this instillation is required /recommended by the manufacture to ensure proper function of the probes.		the manufacturer's written instructions say or allow.
3.10.3 (New)	SC	NA	NA	The committee added new standard 3.10.3 to mirror a change being made to the 35th edition of BB/TS Standards recognizing the need to ensure that quality control testing of the activations of alarms at least annually. The standard reads as follows: **3.10.3 The organization shall ensure that alarms undergo quality control testing at least annually to verify that alarms are activated when the temperature-sensing device detects an unacceptable temperature.*** ***42 CFR 493.1271.**
Chapter 5/9 Education Requirements	RtC	I did not find the requirement for educating staff and providing change in the SOP for staff to be updated as needed when a better method of testing has occurred after errors in a process are found: It could be placed either in 9.1 #5 or as new standard 5.1.1.2	No	The committee reviewed this comment but did feel an addition would be appropriate at this time. The committee feels that standard 2.1.2 focused on performance qualifications is sufficient to cover this request.
5.1.2.5 (New)	SC	NA	NA	The committee created new standard 5.1.2.5 to cover and address the CFR included with the standard. This standard focuses on requisitions for clarity on AABB's behalf to CMS as it relates to if tittered results applied in the IRL standards. The response from CMS was affirmative, but the direction of the standard's level of specificity led to a more general approach for each laboratory. Of note, the committee felt it was important to focus the standard on when titration testing errors are reported. The standard reads as follows: **5.1.2.5 The laboratory shall have a facility-defined process to detect errors in serial titration testing by performing controls each day of testing. Positive and negative controls shall have a known titer result. Standard**

				5.3.3 applies.* *42 CFR 493.1256(d)(3)(iii).
5.1.2.5 (New)	RtC	We are respectfully requesting clarification on the new standard 5.1.2.5, Titration QC. The new standard requires QC on each day testing is performed, can it be more specific as to what is required for each the testing phase? Does the QC need to be performed using the same testing phase as patient titration testing? Does it apply to all types of titrations, patients and platelet product qualifications?	No	The committee reviewed this request but did not feel that a change was needed at this time. The committee notes that the standard is focused on all types of titration however. Finally, the committee did feel that the addition of new standard 5.1.2.6 focused on point dilution testing errors would also serve to address this concern. Also, the committee has created extensive guidance to assist users in the implementation of this new standard.
5.1.2.5 (New)	RtC	There is no guidance provided on how to report/include the results on the control testing in patient reports or the extent of testing of the pos and neg controls; for the latter it allows for limited control tests, which is good.	No	The committee reviewed this comment but did not feel that a change was needed at this time. The committee notes that how a laboratory choses to report these results would be defined by the facility in question. The committee feels that the standard as written, and the addition of new standard 5.1.2.6 will help to clarify the questions received.
5.1.2.5 (New)	RtC	Guidance is needed to help clarify this guidance. As written, it is unclear to which activities this standard applies. For example, does the standard apply to manual titration? Additionally, we suggest deregulation of blood banking establishments as it relates to this standard.	No	The committee reviewed this comment but did not feel that a change was needed at this time. The committee did not that this standard does apply to all types of titration, and that extensive guidance has been written on the standard to assist users in their implementation of the standard.
5.1.2.5 (New)	RtC	Can the positive and negative controls be from the same sample (e.g. negative reactions after titer endpoint)?	No	The committee reviewed this comment but did not feel that a change was needed at this time. The committee nots that for this question, it would be defined by the facility in question.
5.1.2.5 (New)	RtC	Questions related to titration controls 5.1.2.5: What part of the titer test system is being controlled? This will help us to formulate our procedures. - Is the control run for the reagent red cell, the dilution (to what end point?), the testing materials, or a combination? - If using in-date, licensed reagent cells and testing materials that have valid quality control performed on the day of testing, what additional reagents should we QC?	No	The committee reviewed this comment but did not feel that a change was needed at this time. The committee noted that much of the comment in question is under the discretion of the associated CMS regulation, 42 CFR 493.1256(d)(3)(iii), which reads, “Test procedures producing graded or titered results, include a negative control material and a control

		- If a 1:1 sample/red cell is tested in the series to confirm previously seen reactivity what is the need for a positive control in a prenatal antibody titer? - Prenatal titers have antibody identification performed prior to titer Comments related to titration controls 5.1.2.5: - Testing errors would be identified using check cells for any negative reactions, like any other AHG testing. - Staff are assessed annually using control material to determine competency in preparing dilutions and performing titration testing. - Titer proficiency samples are incorporated in the lab and results are reviewed		material with graded or titered reactivity, respectively;" The committee did feel that the comments provided did form a good basis for the extensive guidance that has been written for this standard.
5.1.2.6 (New)	SC	NA	NA	Based on the feedback received to new standard 5.1.2.5, the committee created new standard 5.1.2.6 for completeness. The standard ensures laboratories have processes in place to detect point dilution errors in conformance with the CFRs cited, "42 CFR 493.1256(d)(3)(iii), which reads, "Test procedures producing graded or titered results, include a negative control material and a control material with graded or titered reactivity, respectively;" The standard reads as follows: **5.1.2.6 The laboratory shall have a facility-defined process to detect point dilution testing errors by performing positive and negative controls each day of testing. Standard 5.3.3 applies.*** ***42 CFR 493.1256(d)(3)(iii)**
5.1.11.2	SC	NA	NA	The committee elected to edit standard 5.1.11.2 for clarity. The committee edited the order of the language of the standard to move "by the laboratory director" after "approved" in the standard. The committee also added a crosseference to standard 1.3.1, focused the required approval of all policies, processes, and procedures by the laboratory director before implementation. This was added for completeness. The standard now reads as follows:

				5.1.11.2 Where manufacturers' instructions are used as a standard operating procedure, any new or revised instructions that impact test results shall be reviewed and approved by the laboratory director before use.* Standard 1.3.1 applies. *42 CFR 493.1251(d). For accredited facilities that are assessed by AABB for conformance with CLIA, refer to the Verification of CLIA Compliance Form before on-site assessment.
5.1.14	SC	NA	NA	The committee edited standard 5.1.14 for completeness and clarity. The clause "written" was included to now reads as "manufacturer's written instructions" thus creating parallel structure with other standards in the edition and other sets of AABB Standards. The standard reads as follows: **5.1.14** Appropriate controls shall be used to ensure reliability of the test results when deviating from manufacturers' written instructions for immunohematology investigations.
5.2.1	SC	NA	NA	In an effort to match the structure of standard 5.2.2, standard 5.2.1 was edited to mirror the language of standard 5.2.2, replacing "All laboratories with organizations that perform collections…" with "Donor center based laboratories…" The standard reads as follows: **5.2.1** Donor-center-based laboratories shall register donors identified as lacking a high-prevalence antigen(s).
5.2.1	RtC	Having the words "current or subsequent donation" was to make it clear that reporting donors who are in the BECs who have not donated within the time this standard was in place is not required. Omitting them may result in misinterpretation by laboratories or those assessing them. Suggest they be retained.	No	The committee reviewed this comment but did not feel that a change was appropriate at this time. The committee feels that the edit in question simplifies the understanding of the intent of the standard.

5.3.1.2.1 (New)	SC	NA	NA	The committee elected to create new standard, 5.3.1.2.1 based on the existing guidance of standard 5.3.1.2. The addition of the standard was done for completeness and ensures that laboratories should be able recognize potential discrepancies in ABO/D type determination arising from missing or unexpected reactivity, while focusing on evaluation of results. The standard reads as follows: **5.3.1.2.1** This shall include an evaluation of results that could potentially interfere with the forward and reverse grouping interpretations regardless of ABO type.
5.3.1.2.1 (New)	RtC	This standard is very vague. My takeaway is that if we would need to get an antibody (allo or auto) that reacts in direct testing that its reactivity may interfere in the ABO type. Eg. Anti-c reactive in saline at RT… As above- no guidance on how/what to state in the patient report.	Yes	The committee reviewed the comment and agreed with its intent. Based on the comment, the committee edited standard as written when released for comment, and has created new standard 5.3.1.2.1.1 which reads as follows: **5.3.1.2.1.1 The laboratory shall provide an explanation of the cause of the discrepancy and its serologic resolution. Standard 5.3.1 applies.**
5.3.1.2.1 (New)	RtC	What does review of serological findings mean? What action steps would be expected?	Yes	The committee reviewed the comment and agreed with its intent. Based on the comment, the committee edited standard as written when released for comment, and has created new standard 5.3.1.2.1.1 which reads as follows: **5.3.1.2.1.1 The laboratory shall provide an explanation of the cause of the discrepancy and its serologic resolution. Standard 5.3.1 applies.**
5.3.1.2.1.1	SC	NA	NA	The committee created new standard 5.3.1.2.1.1 based on feedback received to new standard 5.3.1.2.1. The new standard was written to ensure that laboratories provide explanations for the cause and resolution of any discrepancies. The standard reads as follows: **5.3.1.2.1.1 The laboratory shall provide an explanation of the cause of the discrepancy**

				and its serologic resolution. Standard 5.3.1 applies.
5.3.3, #9 (New)	SC	NA	NA	The committee added new #9 to standard 5.3.3 focused on "titration" to mirror the creation and inclusion of standards 5.1.2.5 and 5.1.2.6 to the edition. This was also done to mirror the CMS requirements and clarification given by the agency to AABB. The subnumber reads as follows: **5.3.3 Investigational Techniques** The laboratory shall have the following processes: **9) Titration.**
5.3.4	SC	NA	NA	The committee added a crossreference to 42 CFR 493.1256(d)(3)(iii) to the standard for completeness. This mirrors the inclusion of new standard 5.1.2.5, 5.1.2.6 and the addition of titration to standard 5.3.3.
6.1.2.1 (New)	SC	NA	NA	The committee added new standard 6.1.2.1 to the edition to mirror the same standard in the 34th edition of Standards for Blood Banks and Transfusion Services. The standard reads as follows: **6.1.2.1 The organization shall ensure all new and revised documents are reviewed and approved before use. Standard 1.3.1 applies.**
7.2.1.1	SC	NA	NA	The committee elected to edit standard 7.2.1.1 to mirror the state of current practice in accredited laboratories. As previously written, the standard could only be understood that laboratories have the ultimate responsibility, however in reality, the determination of action to take can be in the hands of the laboratory or their appropriate blood supplier. The standard reads as follows: **7.2.1.1** When a nonconforming blood component is identified, **the laboratory shall perform an investigation to determine the need for further action by the laboratory or**

				the blood provider ~~previously collected components and other components associated with the nonconformance shall be evaluated, and their disposition determined~~.
Glossary – Antibody Screen	SC	NA	NA	The committee added the definition of the term "antibody screen" to the edition for completeness. The original language was pulled from the Standards for Blood Banks and Transfusion Services. The glossary entry reads as follows: **Antibody Screen: A serologic method to detect the presence of clinically significant antibodies in recipients and/or donors.**
Glossary – Point Dilution	SC	NA	NA	The committee added the definition of the term "point dilution" to the edition for completeness. This term appears in new standard 5.1.2.6. The glossary entry reads as follows: **Point Dilution: A laboratory technique that reduces the original solution's concentration to a fixed point.**
Glossary – Regulatory Enforcement Action	SC	NA	NA	In conjunction with the creation of new standard 1.9.1, the committee added a definition for the term "Regulatory Enforcement Action" to the glossary. This definition will be universally adopted across all sets of AABB Standards. The glossary entry reads as follows: **Regulatory Enforcement Action: Measures taken by a Competent Authority that include, but are not limited to, progressive measures (eg, suspension or termination of operations, information notices requiring specific documentation or data, fines incurred) or action based on critical triggers (eg, pattern of recurrent, unresolved issues, deficiencies in risk management systems).**
Glossary – Regulatory	RtC	Please clarify what actions would be reportable, for example, does a regulatory enforcement action include the issue of FDA 483 or FDA Warning Letter.	No	The committee reviewed this comment but did not feel that a change was needed at this time. The committee notes that the guidance to new

Enforcement Action				standard 1.9 provides examples of what this would include and the intent of said standard.
Glossary – Serial Titration	SC	NA	NA	The committee added the definition of the term "serial titration" to the edition for completeness. This term appears in new standard 5.1.2.5. The glossary entry reads as follows: **Serial Titration: A semiquantitative method used to determine the strength or concentration of an antibody in a sample through a series of dilutions.**