
# QSEAL NAT Testing Standard

**Version 2.0**
**Approved June 13, 2013**

PPTA
Plasma Protein Therapeutics Association


## Background

The QSEAL NAT Testing Standard is part of a series of standards that comprise the Plasma Protein Therapeutics Association (PPTA) QSEAL Standards Program. PPTA's Voluntary Standards Program provides global leadership for the plasma protein industry's goal of continuous improvement with a focus on safety and quality from the donor to the patient.

This voluntary QSEAL Standard was developed by the PPTA QSEAL Standards Committee, and was approved by the PPTA Global Board of Directors on June 13, 2013. The current version of this standard supersedes the previous version in its entirety.

For questions about this PPTA Voluntary Standard contact QSEAL@pptaglobal.org. For more information about the QSEAL Standards Program or PPTA, visit www.pptaglobal.org.


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## 1. Introduction

Safety of plasma protein therapies is the top priority of the plasma fractionation industry. PPTA has adopted Voluntary Standards and other criteria that apply to the collection and fractionation of plasma for plasma protein therapies. These standards are in addition to formal regulatory requirements and are intended to promote the safety and quality of plasma protein therapies. The International Quality Plasma Protein (IQPP) voluntary standards address collecting, processing and testing of Source Plasma. The Quality Standards of Excellence, Assurance and Leadership (QSEAL) program addresses the manufacture and fractionation of plasma protein therapies, regardless of the source of plasma. QSEAL certification provides recognition of a company's adherence to the voluntary standards to address product safety during the manufacture of life-saving plasma protein therapies.

The Nucleic Acid Amplification Technology (NAT) Testing Standard was established to decrease the possibility of viruses entering the first homogenous plasma pool. In particular, it allows for the detection of units reactive for HIV, HBV and HCV much earlier after an infection than conventional serological testing technologies, thereby limiting the window period. Early detection of virus increases safety by reducing the chance of viruses entering the first homogenous plasma pool. Furthermore, the potential virus load in all donations released is below the limit of detection of a sensitive NAT assay. The standard also includes requirements for in-process testing for HAV and Parvovirus B19.

## 2. Scope

This standard applies to all units of plasma, regardless of source, that are released for manufacturing. This QSEAL Standard is not applicable for toll fractionation (i.e., where plasma from a specific country is only manufactured under contract into final products that are delivered for distribution in that country). If products (or intermediates used for manufacture of such products) are intended to be marketed outside the jurisdiction where the plasma was collected, this standard will apply.

## 3. REQUIREMENTS

### 3.1. QUALIFICATION OF DONATIONS

**3.1.1.** BEFORE ASSEMBLING THE FIRST HOMOGENOUS PLASMA POOL, PLASMA DONATIONS SHALL BE TESTED FOR VIRAL NUCLEIC ACID OF THE TARGET VIRUSES, HIV, HBV, AND HCV USING NUCLEIC ACID AMPLIFICATION TECHNOLOGY ("NAT").

MINIPOOL TESTING SHALL BE RESOLVED TO THE INDIVIDUAL DONATION.

NOTE: TESTING OF PLASMA DONATIONS FOR HAV AND PARVOVIRUS B19 IS ALSO ENCOURAGED IN ORDER TO AVOID THE LOSS OF A COMPLETE FIRST HOMOGENOUS PLASMA POOL BASED ON NAT REACTIVITY FOR THESE VIRUSES.

**3.1.2.** THE MANUFACTURER SHALL ENSURE THAT ALL DONATIONS ARE TESTED FOR HIV, HBV AND HCV USING LICENSED OR APPROVED TEST KITS AND/OR VALIDATED TEST ASSAYS IN COMPLIANCE WITH NATIONAL AND INTERNATIONAL REQUIREMENTS.

WHERE TESTING IS PERFORMED BY THE PLASMA COLLECTOR, THE MANUFACTURER SHALL REQUIRE THE COLLECTOR TO REPORT TEST SYSTEMS AND RESULTS TO THE MANUFACTURER. THE ACTUAL METHOD FOR REPORTING RESULTS SHALL BE JOINTLY AGREED TO BY THE COLLECTOR AND THE MANUFACTURER.

WHERE TESTING IS PERFORMED BY THE MANUFACTURER, THE MANUFACTURER SHALL REPORT REACTIVE RESULTS FOR HIV, HBV AND HCV TO THE COLLECTOR.

**3.1.3.** NO UNIT OF PLASMA THAT RECEIVES A POSITIVE NAT TEST RESULT FOR HIV, HBV, HCV OR HAV, AND NO UNIT OF PLASMA WITH A HIGH TITER THAT WOULD LEAD TO A PLASMA POOL EXCEEDING $10^4$ IU/ML PARVOVIRUS B19, SHALL BE USED IN MANUFACTURING.

ANY SUCH UNIT SHALL BE DESTROYED OR SEGREGATED FROM UNITS THAT HAVE NOT BEEN TESTED OR THAT HAVE RECEIVED NEGATIVE TEST RESULTS.

### 3.2. QUALIFICATION OF FIRST HOMOGENOUS PLASMA POOLS

**3.2.1.** NAT TESTING FOR HIV, HCV, HBV AND PARVOVIRUS B19 SHALL BE PERFORMED AT THE FIRST HOMOGENOUS PLASMA POOL LEVEL USING VALIDATED TEST ASSAYS IN COMPLIANCE WITH APPLICABLE NATIONAL AND INTERNATIONAL REQUIREMENTS.

**3.2.2.** FIRST HOMOGENOUS PLASMA POOL NAT TESTING FOR HAV SHALL ALSO BE PERFORMED IF HAV NAT TESTING IS NOT PERFORMED BEFORE THE PLASMA ENTERS THE FIRST HOMOGENOUS PLASMA POOL.

**3.2.3.** IF A FIRST HOMOGENOUS PLASMA POOL NAT TEST IS CONFIRMED POSITIVE FOR HIV, HBV, HCV OR HAV, THE POOL, OR MATERIAL DERIVED FROM IT, SHALL NOT BE USED IN MANUFACTURING.

AS SOON AS POSSIBLE, ANY SUCH POOL, OR MATERIAL DERIVED FROM IT, SHALL BE DESTROYED OR DESIGNATED FOR MANUFACTURING INTO REAGENT MATERIAL.

**3.2.4.** THE MANUFACTURER SHALL HAVE IN PLACE A WRITTEN, APPROVED SYSTEM TO ENSURE THAT FIRST HOMOGENOUS PLASMA POOLS DO NOT EXCEED $10^4$ IU/ML PARVOVIRUS DNA. ANY POOL, OR MATERIAL DERIVED FROM IT, THAT EXCEEDS THIS LIMIT SHALL NOT BE USED IN MANUFACTURING.