

THE ORTHO CLINICAL DIAGNOSTICS FRANCHISE



Transfusion Medicine: Securing the Safety of the World's Blood Supply

As far back as the 1600s, physicians recognized the potential value of blood transfusions.¹ Today, more than 81 million units of whole blood are collected annually throughout the world to save lives and improve health through blood transfusions.²

The need for blood and plasma continues to be of great importance, with transfusions often required for trauma victims, heart surgery, organ transplants, and patients receiving treatment for leukemia, cancer or other diseases. To ensure blood and plasma supplies are safe and compatible with each patient, donated blood must meet rigorous compliance standards that include screening each donation for common infectious diseases, testing it to determine the blood type (such as A, B, AB or O) and checking for a positive or negative Rh factor.

Serving the transfusion medicine community, Ortho Clinical Diagnostics (OCD) is the leading provider of donor screening and blood grouping and typing products to make certain every patient receives blood that is safe.

Donor Screening

Screening donor blood for various diseases is crucial to help protect the safety of the world's blood and plasma supplies. OCD provides a comprehensive system of screening assays, automation and information management for the donor screening market. The company's products screen blood and plasma for known infectious agents, such as hepatitis viruses, HIV and parasites.

The sensitivity and accuracy of the screening tests are vital to ensure that the blood given by the donor is safe to pass on to the recipient. For example, globally, an estimated 180 million people are chronically infected with hepatitis C virus.³ If a donor's blood donation were contaminated and not screened, it could pass the infectious agent on to a patient.

OCD has an unparalleled track record of being first to market with new assays to ensure a safe blood supply. In 1989, OCD introduced the first test for the detection of antibodies to hepatitis C. In addition, in the U.S., the ORTHO® T. cruzi ELISA Test System was the first FDA-licensed blood-screening test for Chagas' disease — a serious and potentially fatal parasitic infection. In the first ten months of the test's availability, 241 blood donations in the U.S. tested positive, indicating possible donor exposure to the parasite known to cause the infection.



Immunoematology

Receiving the correct type and component of blood is critical. Immunoematology is more commonly known as “blood banking” — the area of laboratory medicine that ensures the accurate selection of appropriate and compatible blood components for transfusion. If a unit of incompatible blood is transfused from a donor to a recipient, a severe acute immunological reaction, hemolysis (red blood cell destruction), renal failure and shock can occur, and even death is possible.

To help ensure blood compatibility, more than 40 percent of today’s laboratories are using OCD automated products for their blood banking. OCD’s legacy in blood banking began in the 1940s with the introduction of its first Anti-D reagent, used to determine whether a patient’s blood is Rh positive or negative. Nearly 70 years later, OCD is still the leader in blood compatibility testing worldwide, providing a full line of traditional blood bank reagents and column agglutination technology.

Providing full automation to blood transfusion services worldwide, OCD’s column agglutination products include the ID-Micro Typing System™ Gel Test, ORTHO ProVue™ Analyzer, ORTHO BioVue™ System, and ORTHO AutoVue® *Innova* System. Each of these products provides increased laboratory productivity while supporting safe transfusions.



¹ Foster, Michelle. “Early blood transfusions: from concept to practice”. *Hem/Onc Today*. January 10, 2009.

² WHO, Blood Safety and Donation, www.who.int/mediacentre/factsheets/fs279/en/, Accessed May 13, 2009.

³ WHO, Initiative for Vaccine Research, www.who.int/vaccine_research/diseases/viral_cancers/en/index2.html, Accessed December 3, 2008.

⁴ AABB Chagas Biovigilance Network

⁵ Based on market share; OCD Data on File