



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

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COURSE BROCHURE

Blood Product Fractionation for Transfusion

Health Sciences and Social Services / Curative Health

Unit Standard 257199 · NQF Level 3 · 12 Credits · 9 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills required to fractionate blood products for transfusion, ensuring safe and effective processing of whole blood into components such as red cells, platelets, plasma, and cryoprecipitate. It covers the principles of blood component preparation, quality control, and storage to meet South African transfusion standards.

Category	Health Sciences and Social Services
Subfield	Curative Health
Unit Standard	257199
Accreditation	SAQA Accredited · NQF Level 3 · 12 Credits
Duration	9 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply standard operating procedures for the separation of whole blood into components using centrifugation and other fractionation techniques.
- Demonstrate the correct labeling, storage, and transportation of blood products to maintain integrity and traceability.
- Evaluate quality control parameters for each blood component to ensure compliance with regulatory requirements.
- Implement safety protocols to minimise risks of contamination, haemolysis, and adverse transfusion reactions.
- Analyse the indications and contraindications for the use of different blood components in clinical practice.
- Document fractionation processes accurately in accordance with laboratory information systems and quality management standards.

WHO SHOULD ATTEND

- This course is designed for medical laboratory technologists, blood bank technicians, and healthcare professionals involved in blood transfusion services who require competence in blood product fractionation.

COURSE OUTLINE

Day 1: Introduction to Blood Products and Transfusion Safety

- Overview of whole blood and its components (RBCs, platelets, plasma, cryoprecipitate)
- Indications for transfusion of different blood products
- Transfusion-transmissible infections and donor screening
- Regulatory bodies: SAQA, SANBS, HPCSA, and relevant legislation
- Quality management systems in blood product processing

Day 2: Principles of Plasma Fractionation

- Historical development of plasma fractionation (Cohn process)
- Cold ethanol fractionation method
- Chromatographic techniques (ion exchange, affinity, size exclusion)
- Viral inactivation and removal methods (solvent/detergent, nanofiltration, pasteurization)
- Product portfolio: albumin, IVIG, Factor VIII, Factor IX, fibrinogen

Day 3: Red Blood Cell and Platelet Processing

- Whole blood collection and component separation (centrifugation)
- Additive solutions for RBC preservation (SAG-M, AS-1)
- Platelet production: random donor vs. apheresis
- Platelet storage: temperature, agitation, and bacterial screening
- Quality testing: hematocrit, platelet count, sterility, hemolysis

Day 4: Cryoprecipitate and Plasma Derivatives

- Cryoprecipitate production: thawing, centrifugation, and freezing
- Indications for cryoprecipitate: hemophilia A, von Willebrand disease, hypofibrinogenemia
- FFP and solvent/detergent-treated plasma (Octaplas)
- Pooling and fractionation of plasma for industrial production
- Lyophilization and storage of plasma derivatives

Day 5: Pathogen Reduction and Inactivation Technologies

- Overview of pathogen reduction systems: INTERCEPT (psoralen + UVA), Mirasol (riboflavin + UV), THERAFLEX (methylene blue)
- Mechanism of action: nucleic acid crosslinking
- Effect on platelet function and plasma proteins
- Pathogen reduction for RBCs: S-303 and amustaline
- Validation and quality control for pathogen reduction

Day 6: Fractionation of Granulocytes and Special Products

- Granulocyte apheresis and donor stimulation with G-CSF
- Convalescent plasma: collection, pathogen reduction, and indications
- Hyperimmune globulins: hepatitis B, rabies, tetanus
- Cord blood processing and cryopreservation
- Low-titer group O whole blood for military and trauma settings

Day 7: Quality Control and Assurance in Fractionation

- QC testing: sterility, potency, purity, and stability
- GMP requirements: clean rooms, environmental monitoring, personnel hygiene
- Process validation: viral validation studies, hold time studies
- Batch release procedures and lot number traceability

- Haemovigilance and error management

Day 8: Storage, Distribution, and Logistics of Blood Products

- Temperature monitoring: refrigerators, freezers, transport containers
- Inventory management: FIFO, cross-matching, reservation
- Blood delivery: transport validation, temperature excursion management
- Wastage: causes, prevention, and reporting
- Disaster preparedness and emergency blood supply

Day 9: Clinical Application and Integration

- Case studies: massive transfusion protocol, neonatal transfusion, immune deficiency
- Product selection: matching patient needs to available components
- Special considerations: irradiated, washed, CMV-negative products
- Emerging trends: artificial blood substitutes, recombinant factors
- Final assessment and course wrap-up

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **12 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 24,400.00	R 24,400.00
1	In-House	R 31,700.00	R 31,700.00
1	On-Campus (Pretoria)	R 36,600.00	R 36,600.00

UPCOMING SESSIONS

Start	End	Method	Venue
21 Aug 2026	02 Sep 2026	On-Campus	Shenzhen, China
24 Aug 2026	03 Sep 2026	On-Campus	Bangkok, Thailand
25 Aug 2026	04 Sep 2026	On-Campus	Victoria Falls, Zimbabwe
25 Aug 2026	04 Sep 2026	On-Campus	Abu Dhabi, UAE
26 Aug 2026	07 Sep 2026	On-Campus	Durban, South Africa
27 Aug 2026	08 Sep 2026	On-Campus	Shenzhen, China
28 Aug 2026	09 Sep 2026	On-Campus	Harare, Zimbabwe
31 Aug 2026	10 Sep 2026	On-Campus	Victoria Falls, Zimbabwe

Contact us if no suitable date is listed – on-demand sessions can be arranged for groups.

HOW TO GET A QUOTE OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 257199) and click **Get A Quote / Apply**. Select your training method and number of delegates – your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to apply@aaticd.co.za – our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call **+27 12 004 8389** or WhatsApp **+27 65 077 6310** and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically – the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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