



Accredited Africa Training Institute for Capacity Development

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

Tel: +27 12 004 8389 · Mobile: +27 65 077 6310

Email: apply@aatid.co.za · Website: www.aatid.co.za

COURSE BROCHURE

Juice Clarifier Sedimentation Control Techniques Training

Agriculture and Nature Conservation / Secondary Agriculture

Unit Standard 114324 · NQF Level 2 · 8 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to control sedimentation in juice clarifiers, ensuring efficient separation of solids from liquids in the beverage industry. Participants will understand the principles of sedimentation, identify factors affecting clarifier performance, and apply techniques to optimize sedimentation control for quality and safety compliance.

Category	Agriculture and Nature Conservation
Subfield	Secondary Agriculture
Unit Standard	114324
Accreditation	SAQA Accredited · NQF Level 2 · 8 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply sedimentation principles to optimize juice clarifier performance.
- Analyze factors affecting sedimentation efficiency, including particle size and flow rates.
- Evaluate clarifier operation data to identify and correct sedimentation issues.
- Implement control techniques to maintain desired juice clarity and solids removal.
- Demonstrate compliance with health, safety, and environmental regulations during clarifier operation.

WHO SHOULD ATTEND

- Process operators, production supervisors, and quality control personnel working in juice processing or beverage manufacturing plants who are responsible for clarifier operation and maintenance.

COURSE OUTLINE

Day 1: Fundamentals of Juice Clarification and Sedimentation

- Introduction to juice clarification processes.
- Sedimentation theory: Stokes' law and particle settling.
- Equipment overview: clarifiers, thickeners, and settling tanks.
- Flocculation and coagulation mechanisms.
- Key process parameters: pH, temperature, flow rate.
- Quality parameters for clarified juice.
- Overview of process control and automation.
- Safety considerations in clarification operations.

Day 2: Process Variables and Their Impact on Sedimentation

- Detailed study of pH and temperature effects.
- Flow rate and retention time optimisation.
- Flocculant selection and dosage optimisation.
- Mixing intensity and its influence on floc formation.
- Common problems: turbidity, sludge bulking, and channeling.
- Introduction to statistical process control (SPC).
- Data collection and interpretation for process adjustment.
- Practical exercises on adjusting process variables.

Day 3: Equipment Operation and Maintenance for Clarifiers

- Clarifier types: centre-feed, peripheral-feed, and tray clarifiers.
- Startup, shutdown, and normal operation procedures.
- Routine maintenance: rake mechanisms, pumps, and drives.
- Troubleshooting mechanical faults: vibrations, leaks, and blockages.
- Cleaning and sanitation: CIP (clean-in-place) procedures.
- Instrumentation calibration: flow meters, pH probes, and level sensors.
- Safety interlocks and emergency shutdown procedures.
- Practical session: hands-on operation and maintenance.

Day 4: Advanced Sedimentation Control and Optimisation

- Advanced control strategies: PID, cascade, and feedforward control.
- Online sensors: turbidity, suspended solids, and sludge level.
- Automation and SCADA integration.
- Predictive maintenance using vibration analysis and wear monitoring.
- Data analytics for process optimisation.
- Cost-benefit analysis of process improvements.
- Case studies of successful optimisation.
- Group exercise: designing an optimised control scheme.

Day 5: Integration, Quality Assurance, and Practical Assessment

- Developing a sedimentation control plan.
- Quality assurance: sampling, testing, and documentation.
- HACCP considerations in juice clarification.
- Troubleshooting guide creation.
- Practical assessment: operation, control, and maintenance tasks.

- Review of key concepts and Q&A;
- Unit standard assessment preparation.
- Course evaluation and certification.

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 **8 NQF credits** at **NQF Level 2**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 23,000.00	R 23,000.00
1	In-House	R 29,900.00	R 29,900.00
1	On-Campus (Pretoria)	R 34,500.00	R 34,500.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Abu Dhabi, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Mauritius
17 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
17 Aug 2026	21 Aug 2026	On-Campus	Pretoria, South Africa

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 114324) 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.

Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza, 1122 Burnett St, Hatfield 0028, Pretoria, Gauteng, South Africa
Tel: +27 12 004 8389 · WhatsApp: +27 65 077 6310 · apply@aaticd.co.za · www.aaticd.co.za