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@aaticd.co.za · Website: www.aaticd.co.za

COURSE BROCHURE

Cane Sugar and Fruit Raw Material Fermentation Preparation

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 259339 · NQF Level 3 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to prepare cane sugar and fruit raw materials for fermentation processes in industries such as biofuel, beverage, and food production. Participants will learn to assess raw material quality, apply pre-treatment methods, and ensure optimal conditions for fermentation. The course aligns with SAQA unit standard 259339 and emphasizes safety, quality control, and efficient material handling.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	259339
Accreditation	SAQA Accredited · NQF Level 3 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Apply principles of raw material selection and quality assessment for cane sugar and fruit intended for fermentation.
- Demonstrate pre-treatment techniques such as cleaning, crushing, juicing, and pH adjustment to prepare raw materials.
- Analyze the impact of raw material characteristics (sugar content, acidity, contaminants) on fermentation efficiency.
- Implement safety and hygiene protocols during material handling and preparation.
- Evaluate the readiness of prepared materials for fermentation using standard tests and observations.

WHO SHOULD ATTEND

- This course is designed for production workers, process operators, and technicians in sugar, fruit processing, and fermentation industries who are responsible for preparing raw materials for fermentation.
- It is also suitable for individuals seeking entry-level qualifications in bioprocessing or food and beverage manufacturing.

COURSE OUTLINE

Day 1: **Introduction to Fermentation and Raw Materials**

- Overview of fermentation in the sugar and fruit industry
- Types of raw materials: sugarcane, molasses, fruit juices, and pulps
- Chemical composition: sugars, acids, and other nutrients
- Raw material handling and storage best practices
- Pre-treatment methods: cleaning, crushing, and juicing
- Factors affecting fermentation: temperature, pH, and nutrient availability
- Introduction to microorganisms used in fermentation
- Quality control parameters for raw materials

Day 2: **Fermentation Process and Monitoring**

- Fermentation kinetics: lag, log, stationary, and death phases
- Microorganisms: yeast strains and bacterial cultures
- Nutrient management: nitrogen, phosphorus, and trace elements
- Monitoring techniques: pH, temperature, specific gravity, and alcohol content
- Troubleshooting: stuck fermentation, off-flavors, and contamination
- Safety protocols: handling chemicals and biological agents
- Hygiene and sanitation in fermentation vessels
- Record keeping and data interpretation

Day 3: **Advanced Applications and Practical Integration**

- Production of ethanol from sugarcane and fruit substrates
- Vinegar production: acetification process
- By-products: distillers grains, CO2, and organic acids
- Quality testing: alcohol content, acidity, and sensory evaluation
- Scaling up from lab to industrial fermentation
- Waste management and environmental considerations
- Case studies: successful fermentation facilities
- 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 **6 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 13,200.00	**R 13,200.00**
1	In-House	R 17,800.00	**R 17,800.00**
1	On-Campus (Pretoria)	R 19,800.00	**R 19,800.00**

UPCOMING SESSIONS

Start	End	Method	Venue
01 Dec 2026	03 Dec 2026	On-Campus	Pretoria, South Africa
01 Dec 2026	03 Dec 2026	On-Campus	Kinshasa, DRC
02 Dec 2026	04 Dec 2026	On-Campus	Victoria Falls, Zimbabwe
02 Dec 2026	04 Dec 2026	On-Campus	Mauritius
09 Dec 2026	11 Dec 2026	On-Campus	Bangkok, Thailand
09 Dec 2026	11 Dec 2026	On-Campus	Blantyre, Malawi
09 Dec 2026	11 Dec 2026	On-Campus	Nairobi, Kenya
09 Dec 2026	11 Dec 2026	On-Campus	Kinshasa, DRC

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

HOW TO GET A QUOTATION OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 259339) and click **Get A Quotation**. 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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