

Baraka Shea Butter: *Quality Control Framework*

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Executive Summary

TRADITIONAL EXCELLENCE

- Grade 1 (ISO Certified Lab tested)
- FAIRTRADE
- 16 point quality control framework
- Zero Pesticide Residues (45 compounds tested)
- Meets food grade standards
- EU Compliant for cosmetic applications



The Baraka Shea Butter Quality Control System combines generations of traditional expertise with systematic quality assurance methods to produce premium unrefined shea butter. Our approach preserves time-honored techniques while implementing rigorous controls at every production stage, from harvest to packaging.

This document outlines our comprehensive quality system, including detailed production steps, verification methods, testing procedures, and traceability protocols. Key features include annual retraining and certification for all personnel, 16 distinct quality checkpoints, and third-party verification. The result is a consistent, high-quality product that



maintains its natural therapeutic properties while maximizing social and economic benefits for women producers and their communities.

Introduction

This document outlines the complete production process for Baraka's premium unrefined shea butter, detailing each stage from harvesting to final packaging. Our process combines traditional methods passed down through generations with modern quality control techniques to ensure consistent, high-quality products while preserving the natural properties of shea butter and supporting the communities who produce it.

Quality Control Philosophy

At Baraka, we believe quality isn't merely an outcome but a continuous process embedded in every step of production. Our approach integrates:

- **Traditional Wisdom:** Generational knowledge of shea butter production
- **Systematic Controls:** Modern quality assurance methodologies
- **Traceability:** Complete documentation from harvest to packaging
- **Sustainability:** Environmentally responsible practices
- **Community Involvement:** Production by women who take pride in their craft

Traditional Wisdom Meets Modern Quality Control

Baraka's approach to quality is unique in that we've carefully integrated rigorous quality control systems into traditional production methods rather than replacing them. This integration enhances product quality while preserving cultural heritage and maximizing community benefits:

Preserving Traditional Knowledge

- **Generational Expertise:** Our production process respects and values the knowledge passed down through generations of women shea butter producers
- **Cultural Techniques:** Traditional methods such as hand-selection, manual whipping, and sensory evaluation are maintained while being augmented with consistent standards
- **Ritual and Rhythm:** The natural rhythm of traditional production is preserved, supporting both quality and cultural identity
- **Oral Tradition Codification:** Formerly undocumented expertise is carefully recorded and standardized without undermining its traditional roots

Quality Enhancement Through Integration

- **Best of Both Worlds:** Modern quality concepts enhance rather than replace traditional methods
- **Standardization Without Industrialization:** Consistent outcomes achieved while maintaining handcrafted production
- **Traditional Quality Indicators:** Indigenous quality assessment techniques (color, aroma, texture) formalized into measurable parameters
- **Training Built on Experience:** Annual training programs build upon existing knowledge rather than discarding it

Annual Certification and Training Program

- **Mandatory Annual Retraining:** All personnel—including shea nut collectors, butter producers, and machine operators—must complete annual retraining to maintain their registration and certification
- **Curriculum Development:** Training programs developed with input from elder producers to ensure respect for traditional knowledge
- **Practical Demonstration:** Hands-on verification of techniques and standards
- **Documentation and Certification:** Each producer receives updated certification after successful training completion
- **Knowledge Exchange:** Training sessions foster intergenerational knowledge transfer while introducing quality improvements

Community Economic Benefits

- **Women's Economic Empowerment:** By maintaining traditional women-led production while enhancing quality, the process preserves economic opportunities for women
- **Value Addition Locally:** Quality control happens within the community, ensuring value remains with producers
- **Premium Pricing Justification:** Enhanced quality control enables premium pricing in international markets
- **Sustainable Livelihoods:** The integrated system ensures long-term economic viability without community displacement
- **Skill Development:** Quality training enhances transferable skills and community capabilities

Environmental and Social Sustainability

- **Waste Reduction:** Traditional full-utilization practices are maintained and enhanced
- **Chemical-Free Processing:** Quality is achieved without introducing chemical processes
- **Resource Conservation:** Traditional resource-conserving methods are standardized and improved
- **Community Cohesion:** Group-based production systems strengthen social bonds and quality accountability

This integrated approach demonstrates that traditional, handmade production can meet and often exceed industrial quality standards when properly supported. The system respects the women producers as the ultimate quality experts while providing them with additional tools and frameworks to consistently achieve excellence and communicate that quality to global markets.

Complete Production Process with Quality Controls

1. Shea Nut Harvesting and Sourcing

Process:

- Shea nuts are hand-collected from wild shea forests by women and families
- Collection follows traditional methods unchanged for centuries
- Annual harvesting begins in early May, as determined by local Chiefs and Elders

Quality Controls:

- ✓ Designated organic picking areas clearly marked and monitored
- ✓ Regular environmental inspections of collection zones
- ✓ Training of collectors in proper selection techniques
- ✓ Strict separation of nuts from non-designated areas

2. Initial Shea Nut Preparation

Process:

- Collected nuts are transported to community areas in working basins
- Nuts are placed in large pots and boiled for approximately 30 minutes
- This process sterilizes the seeds and removes remaining fruit bits

Quality Controls:

- ✓ Potable water used for boiling process
- ✓ Standardized 30-minute boiling time to ensure proper sterilization
- ✓ Visual inspection of cleanliness after boiling
- ✓ Proper drainage to prepare for drying

3. Primary Drying of Shea Nuts

Process:

- Boiled nuts are laid out on tarpaulins or cement pads to dry
- Drying allows the shell to harden for easier cracking
- Nuts require constant monitoring during the rainy season

Quality Controls:

- ✓ Clean, dedicated drying surfaces
- ✓ Careful monitoring for rainfall
- ✓ Protection from ground contamination
- ✓ Regular turning to ensure even drying
- ✓ Annual training for all workers on proper drying techniques and contamination prevention

4. Cracking and Sorting

Process:

- Dried shells are cracked using traditional methods
- Nuts are collected, inspected, and sorted
- Highest quality (AAA) nuts are selected for further processing

Quality Controls:

- ✓ Visual inspection of each nut
- ✓ Removal of damaged or discolored nuts
- ✓ Quality grading system (AAA standard)
- ✓ Sustainable repurposing of rejected materials as fuel

5. Secondary Drying for Storage

Process:

- Selected nuts are placed on tarpaulins or cement pads for thorough drying
- Regular turning prevents mold development
- Drying continues until optimal moisture content is achieved

Quality Controls:

- ✓ Moisture content reduced to 6-8%
- ✓ Protection from rain and ground moisture
- ✓ Regular inspection during drying process
- ✓ Testing for proper dryness before storage

6. Purchasing and Traceability System

Process:

- Women bring fully dried and inspected nuts to purchase stations
- Each collector has a registered number and identification
- Nuts are weighed and documented, with receipts issued
- Each sack of nuts receives a unique identification number

Quality Controls:

- ✓ Verification of collector registration and training
- ✓ Documentation of collection area for each batch
- ✓ Weight verification with calibrated scales
- ✓ Full traceability from individual collector to final product

7. Allocation to Production Groups

Process:

- Purchased nuts are stored in organic storage facilities
- Sacks are allocated to self-organized groups of 3-4 women
- Each group is part of the Konjeihi Women's Enterprise Centre
- Allocation is documented with sack numbers and weights

Quality Controls:

- ✓ Proper storage conditions to maintain nut quality
- ✓ Training verification for all production group members
- ✓ Documentation of group composition and responsibilities
- ✓ Allocation records maintained for traceability

8. Final Quality Inspection of Nuts**Process:**

- Women take allocated nuts to a designated inspection area
- 80kg sacks are emptied onto clean concrete surfaces
- Each nut is individually inspected by hand
- Rejected nuts are repurposed as fuel

Quality Controls:

- ✓ Second quality verification before processing
- ✓ Clean inspection surfaces to prevent contamination
- ✓ Strict application of quality standards
- ✓ Documentation of inspection results

9. Washing of Nuts**Process:**

- Quality-inspected nuts are placed in basins and transported to washing area
- Basins are filled with clean drinking water
- Nuts are scrubbed to remove any dust or dirt
- Multiple washings ensure complete cleanliness

Quality Controls:

- ✓ Potable water used for all washing
- ✓ Minimum of three complete wash cycles
- ✓ Visual inspection for cleanliness
- ✓ Clean basins and washing equipment

10. Crushing Process

Process:

- Washed nuts are transported to the machine room
- Specialized crusher reduces nuts to optimal consistency
- Crushing fineness is carefully controlled for proper heat absorption

Quality Controls:

- ✓ Equipment cleaning and inspection before use
- ✓ Consistency monitoring during crushing
- ✓ Visual inspection of crushed material
- ✓ No chemical additives or processing aids

11. Roasting of Crushed Nuts

Process:

- Crushed nuts are placed in modern, eco-ergonomic roasters
- Women control the roasting process by turning cranks
- Thermostats monitor internal temperature
- Roasting continues until oils are ready for natural release

Quality Controls:

- ✓ Temperature monitoring throughout roasting
- ✓ Consistent turning rate for even heat distribution
- ✓ Visual inspection for proper color development
- ✓ Sustainable fuel from production waste

12. Milling Process

Process:

- Roasted nuts are cooled slightly on clean cement surfaces
- Cooled nuts are processed through a milling machine
- Milling transforms the material into a thick, viscous paste
- The paste is now ready for oil extraction

Quality Controls:

- ✓ Clean cooling surfaces
- ✓ Equipment cleaning between batches
- ✓ Consistent feed rate through mill
- ✓ Visual inspection of paste consistency

13. Kneading and Whipping

Process:

- Milled paste is transferred to a basin
- Potable water is kneaded in by hand until proper consistency is achieved
- Traditional whipping method separates oils from solids
- Oils coagulate and rise to the surface

Quality Controls:

- ✓ Potable water for kneading process
- ✓ Consistent water-to-paste ratio
- ✓ Clean containers and implements
- ✓ Visual monitoring of oil separation

14. Boiling and Purification

Process:

- Coagulated oils are collected and placed in a large pot
- Water is added and the mixture is boiled for over an hour
- Impurities rise to the surface and are skimmed off
- Boiling continues until all water has evaporated

Quality Controls:

- ✓ Clean boiling vessels
- ✓ Consistent boiling time (minimum one hour)
- ✓ Regular impurity removal
- ✓ Complete water evaporation verification

15. Cooling and Straining

Process:

- Hot oil is carefully poured into a basin and covered
- Oil is transported to a dedicated cooling room
- Slow stirring accelerates cooling and transforms color
- Once cooled to workable temperature, oil is double strained to remove impurities

Quality Controls:

- ✓ Protected cooling environment
- ✓ Clean stirring implements
- ✓ Visual color verification
- ✓ Fine-mesh straining to remove particles

16. Final Packaging

Process:

- Cooled and strained shea butter is allowed to solidify
- Solidified butter is inspected and weighed
- Butter is packaged into various sized containers
- Processing receipt numbers are recorded on packages for traceability

Quality Controls:

- ✓ Visual inspection for color, texture, and purity
- ✓ Aroma evaluation
- ✓ Clean packaging materials and environment
- ✓ Batch numbering for complete traceability

Quality Testing and Verification

In addition to the integrated quality controls throughout our production process, Baraka conducts comprehensive testing on finished products:

Physical Testing

- **Color:** Visual assessment against standardized color chart
- **Aroma:** Sensory evaluation by trained personnel
- **Texture:** Physical evaluation of consistency and smoothness
- **Melting Point:** 28-45°C (82-113°F) using AOCS Cc 1-25 method

Chemical Analysis

- **Free Fatty Acid:** Maximum 3.0% (ISO 660:2020)
- **Peroxide Value:** Maximum 10.0 meq O₂/kg (ISO 3960:2017)
- **Moisture Content:** Maximum 0.5% (ISO 662:2016)
- **Impurities:** Maximum 0.09% (Visual/ISO 663:2000)
- **Iodine Value:** 50-70 g I₂/100g (AOCS Cd 1d-92)
- **Saponification Value:** 170-195 mg KOH/g (ISO 3657:2020)

Microbiological Testing

- **Aerobic Plate Count:** <1.0×10³ CFU/g (ISO 4833-2:2013-09)
- **Yeasts/Moulds:** <1.0×10² CFU/g (ISO 21527-2:2008-07)
- **Salmonella:** Absent per 25g (ISO 6579-1:2017-02)

Pesticide Residue Analysis

- Comprehensive testing for 42 pesticide compounds
- All results below quantification limit (<0.01 mg/kg)
- Analysis performed using LC-MS/MS (GSA-SM-T04)

Traceability System

Baraka's traceability system ensures that every batch of shea butter can be traced back to its source:

1. **Collector Identification:** Each woman who collects nuts is registered and assigned a unique ID
2. **Batch Numbering:** Each sack of nuts receives a unique identification number
3. **Processing Documentation:** Allocation of nuts to production groups is recorded
4. **Production Records:** Processing details are documented for each batch
5. **Packaging Identification:** Final packages are marked with processing receipt numbers

This system allows us to identify:

- The specific women who collected the nuts
- The exact geographical area where nuts were harvested
- The production group responsible for processing
- The date and conditions of processing
- Any quality parameters specific to that batch

Certifications and Compliance

Our production process and finished products meet or exceed the following standards:

- **Ghana Standard for Shea Butter (GS 238:2019)**, Grade I
- **EU Cosmetic Regulation (EC) No 1223/2009**
- **Generally Recognized as Safe (GRAS)** status for properly refined versions
- **GMO-free** verification
- **Vegan certification** (100% plant-based)

Environmental Sustainability

Our production process incorporates several environmentally sustainable practices:

1. **Waste Reduction:** nut solids are repurposed as fuel
2. **Climate Impact:** 90% reduction in climate change impact compared to traditional methods
3. **Deforestation Prevention:** Reduced need for cutting trees for firewood
4. **Water Conservation:** Responsible water management throughout production
5. **Chemical-Free:** No synthetic chemicals or solvents used in any production phase

Conclusion

Baraka's production process represents a harmonious balance between traditional wisdom and modern quality assurance. By respecting time-honored techniques while implementing systematic controls, we deliver premium unrefined shea butter that maintains its natural properties while meeting consistent quality standards.

Our approach not only ensures product excellence but also preserves the cultural heritage of shea butter production and supports the economic empowerment of women producers and their communities.

Appendix A: Quality Control Checkpoints

Production Stage	Quality Control Points	Testing Methods
Harvesting	Organic zone verification	Visual inspection, GPS tracking
Nut preparation	Sterilization verification	Time monitoring, visual inspection
Primary drying	Moisture level assessment	Visual and tactile assessment
Cracking & sorting	Quality grading	Visual inspection against standards
Secondary drying	Moisture content verification	Touch test, weight assessment
Purchasing	Collector verification	ID checking, documentation review
Allocation	Group qualification check	Training verification, record review
Final inspection	Individual nut assessment	Visual inspection, manual sorting
Washing	Cleanliness verification	Visual inspection, water clarity check
Crushing	Consistency assessment	Visual inspection, texture assessment

Appendix A: Quality Control Checkpoints

Production Stage	Quality Control Points	Testing Methods
Roasting	Temperature monitoring	Thermostat readings, color development
Milling	Paste consistency check	Visual inspection, texture assessment
Kneading	Water quality verification	Source verification, visual clarity
Boiling	Complete water evaporation	Visual inspection, experienced assessment
Cooling	Color transformation check	Visual comparison to standards
Packaging	Final product inspection	Visual, olfactory, and tactile assessment

Appendix B: Glossary of Terms

- **AAA Quality:** Highest grade of shea nuts meeting specific size, color, and condition standards
- **Coagulation:** Process where oils separate and rise to the surface during whipping
- **Eco-ergonomic Roasters:** Specially designed roasting equipment that reduces smoke exposure and physical strain
- **Organic Picking Areas:** Designated zones for nut collection that are free from agricultural chemicals
- **Traditional Whipping Method:** Process of vigorously agitating the paste-water mixture to separate oils from solids
- **Unsaponifiable Matter:** Components of shea butter that don't form soap when mixed with alkali, containing many beneficial compounds

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