Tonga
KAVA QUALITY STANDARD

SEPTEMBER 2021

Government of Tonga

Australian Aid

NEW ZEALAND
MINISTRY OF FOREIGN AFFAIRS & TRADE
Aid Programme

Pacific Horticultural & Agricultural Market Access Plus Program
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INTRODUCTION

The Tonga archipelago is a chain of islands in the South Pacific, nearest to Fiji and Samoa, which has been inhabited by Tongans for about 3000 years, making it one of the oldest settled islands in the South Pacific. Fundamental to the Tongan customary and traditional ceremonies, kava has played an important role in the coronations of the King, installment of nobles, weddings funerals, and social gatherings.

The consumption of kava in the customary and traditional ceremonies in Tonga enhances the four main virtues of the Tongan culture – respect, humility, commitment and relationships. These four virtues still exist today and are expressed as mutual respect, sharing, cooperating and fulfillment of mutual obligations, humility and generosity, loyalty and commitment and maintaining strong family relationships.

The Tonga National Quality Standard has been developed to make sure that kava as a traditional and commercial commodity, is prepared and manufactured in accordance with a set of rules and guidelines to achieve food safety. Through the use of this quality standard, the kava stakeholders in Tonga from the public and private sectors including the farmers aim to improve the confidence of the markets in kava as a safe product for human consumption. The improvement in consumer confidence will contribute to increasing market share and expanding the consumer base for kava and kava products.

The National Quality Standard provides a set of minimum requirements, specifications and guidelines that products and processes should adhere to in order to achieve product safety and meet client expectations. This standard is aligned with the Codex Regional Kava Quality Standard for kava as a food. This quality standard also provides the minimum requirements for the export of kava raw materials for further processing into other products.

01 SCOPE

1.1. This standard applies to kava and kava products as defined in Section 2, and consumed as a food or beverage or other products in Tonga and markets overseas.

1.2. The quality standard should not remain static but should be subjected to continuous review and improvement, which should take into account new technical information, feedback, and customer complaints and suggestions.

02 DESCRIPTION

Kava products are derived from selected parts of the kava plant, Piper methysticum Frost. The parts of the kava plant used to produce kava products may include:

a) Peeled, fresh and dried rhizomes and basal stems; and
b) Fresh and dried roots.

Upper stems, leaves and peelings (bark) are excluded and should not be used in the preparation and manufacture of the kava beverage, as defined in 2.1.

2.1 DEFINITION OF KAVA
Kava is defined as the plant species Piper methysticum Frost consisting of known noble kava varieties and the traditional and ceremonial beverage kava extracts made by mixing water and the plant's organs such as roots, peeled rhizome or stump.

The noble kava varieties in Tonga are:

Kava Variety/ Other Known Name
i) Kava Lekahina
ii) Kava Fukufulufulu
iii) Kava Lekakula /Kava Leka'uli
iv) Kava 'Akaukula/ Kava Kula
v) Kava Kofekula
vi) Kava Kofehina/Kava 'Akauhina
vi) Kava Valu

Note : Order of kavalactones from highest.

2.2 TYPES OF KAVA PRODUCTS
Kava products covered by this standard include the following:

2.2.1 Fresh kava
Fresh kava is kava plant that has just been harvested, been thoroughly cleaned with water, and is devoid of visible soil and dirt.

2.2.2 Dried kava
Dried kava is the dried root and basal stems of kava in the form of chips when it is sun-dried, hot air-dried or dried using other recognized methods. It includes any peeled main stump, peeled basal stems or unpeeled lateral roots that are sliced or ground into powder.

2.2.3 KAVA EXTRACTS
Kava extracts are made when soluble components of fresh and dried kava are extracted using water and served as a drink at ceremonial or social settings. Also used in value-added products or for further processing, the kava extracts may be presented in powdered form through spray-drying, freeze-drying or ground-dried kava.

03 ESSENTIAL COMPOSITION & QUALITY FACTORS

3.1 COLOUR
Kava products have a characteristic light brown.

3.2 MATURITY
Kava plants should be mature (generally a minimum of 3 years of age) before being harvested.

3.3 AROMA AND TASTE
Kava products have the characteristics of a plant-based aroma. The aroma should be free of extraneous aromas or blending indicating contamination with other plant material, solvents or other volatile matter.

Being a member of the pepper family, the kava when consumed as a beverage should have a strong penetrating peppery-spicy taste that is also tingly and numbing.

3.4 FILTH
Using standard methods, heavy filth will not exceed 0.63% of dry-weight basis. Heavy filth exceeding 0.63% but less than 0.7% is considered to be second grade. Heavy filth exceeding 0.7% will be re-washed and re-dried.

3.5 MOISTURE
The moisture content will not exceed 12.5% when dried to constant weight at 105°C. Moisture content exceeding 12.5% but less than 12.9% will be considered second grade kava. Kava samples with moisture content in excess of 12.9% will be re-dried to inhibit any mould or other materials growing on them.

3.6 ASH
The ash content will not exceed 6.0% when organic matter is removed at 440°C. Samples exceeding 6.0% but less than 6.5% will be considered second grade kava. Samples with ash content in excess of 6.5% will be washed and re-dried and will be considered second grade kava.

3.7 DEFECTS
The following defects must apply to the dried kava;

a) ***Insect-damaged kava:*** kava that is visibly damaged by a disease or insects or contains dead insects;
b) ***Mouldy kava:*** kava that is visibly affected by mould;
c) ***Off-aroma kava:*** kava that has a noticeable off or foul aroma.

3.7.1 Classification of defectives and acceptable
A container of kava or kava products that fails to meet one or more of the applicable quality requirements shall be considered defective. Where not already specified in Section 3.0, applicable thresholds and or tolerances for the quality requirements may be specified in specific standards under the recognized legislation.

04 CONTAMINANTS

Kava or kava products must comply with the maximum levels of the Codex General Standard for Contaminants and Toxins in Foods (CODEX/STAN 193-1995).

The kava product must also comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

05 HYGIENE & FOOD SAFETY

5.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the General Principles of Food Hygiene (CAC/RCP 1-1969) Rev.4-2003 which HACCP procedures are captured and relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice. The International Code of Practice for food hygiene including HACCP principles is outlined in Annex 1.

5.2 The kava and kava products must comply with any microbiological criteria established under the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997), including any amendment to these principles.

06 TRACEABILITY & LABELLING

6.1 TRACEABILITY

Traceability of all kava and kava products shall be established at all stages of the production, processing and distribution of kava and kava products. Kava business operators shall have in place systems and procedures which allow information to be available to the Competent Authority on demand. The requirements for kava products under this standard are outlined in Annex 2.

6.2 NAME OF THE PRODUCT

The village or place of cultivation, the island of origin, the product type - peeled basal stems/stumps or chips (kakano), or peeled roots (uho) - must be appear on the labels and the bags.

The date the kava is processed and packaged must be stated and clearly identified on the labels and bags containing kava and kava products.

6.3 NAME OF THE KAVA SPECIES
Scientific or common name of the kava that is used as raw material must appear on the label of all kava or kava products.

6.4 LABELLING OF NON-RETAIL CONTAINERS
Information about non-retail containers must be on the container or in enclosed documents, but the name of the kava product, lot identification and the name and address of the manufacturer, packer or distributor, as well as storage instructions, must appear on the container.

6.5 OTHER LABELLING REQUIREMENTS
Except otherwise specified by other national legislation, the kava products should have a clear marking to indicate that they are not intended for medicinal purposes, and are prepared for human consumption as food beverage.

07 METHODS OF ANALYSIS & SAMPLING

7.1 DETERMINATION OF MOISTURE
The determination of moisture must be in accordance with the Association of Official Analytical Chemists (AOAC)

7.2 DETERMINATION OF SOLID
The determination of solid must be in accordance with the AOAC and calculated by subtracting the content of water from 100%

7.3 DETERMINATION OF ASH
The determination of ash must comply with the AOAC 923.03.

7.4 DETERMINATION OF KAVA LACTONES
The determination of kava lactones must comply with the method described in Annex A of the Codex.

08 INSPECTION

8.1 Food safety inspectors shall conduct inspections of producers, handlers, processors and exporters of kava to ensure compliance with the Act and these Regulations. The requirements for kava products inspection under this standard are outlined in Annex 3.

ANNEX 1: GENERAL PRINCIPLES OF FOOD HYGIENE & HACCP PRINCIPLES

Food is the basic need of all living beings. To lead a healthy life, food safety is necessary. Consumers of food have the right to expect the food they eat to be safe and suitable for consumption. Foodborne illness and foodborne injury are at best unpleasant; at worst, they can be fatal. But there are also other consequences. Outbreaks of foodborne illness can damage trade and tourism, and lead to loss of earnings, unemployment and litigation. Food spoilage is wasteful, costly and can adversely affect trade and consumer confidence.

Central to the integrity of this standard and food safety system is the understanding of each stakeholder of their responsibilities in its implementation. To do this, key stakeholders from both the public and private sectors including NGOs all have an important role to play.

These General Principles lay a firm foundation for ensuring food hygiene and should be used in conjunction with each specific code of hygienic practice, where appropriate, and the guidelines on microbiological criteria. The document follows the food chain from primary production through to final consumption, highlighting the key hygiene controls at each stage. It recommends a HACCP-based approach wherever possible to enhance food safety as described in Hazard Analysis and Critical Control Point (HACCP) System and Guidelines for its application.

SECTION I **OBJECTIVES**

1.1 THE GENERAL PRINCIPLES OF KAVA HYGIENE:

- Identify the essential principles of kava hygiene applicable throughout the kava processing chain (including primary production through to the final consumer), to achieve the goal of ensuring that kava is safe and suitable for human consumption.

SECTION II **SCOPE, USE & DEFINITION**

2.1 SCOPE

2.1.1 The kava processing chain
This document follows the kava processing chain from primary production to the final consumer, setting out the necessary hygiene conditions for producing good quality kava.

2.1.2 Roles of Government, industry, and consumers
The National Competent Authority and relevant agencies can consider the contents of this document and decide how best it will encourage the implementation of these general principles to:

- Adequately protect consumers from illness or injury caused by poor quality kava;
- maintain confidence in internationally traded kava products; and

- provide health education programs which effectively communicate the principles of kava hygiene to the industry and consumers.

The industry will apply the hygienic practices set out in this document to:

- provide kava that is safe and suitable for consumption;
- ensure that consumers have clear and easily-understood information, on labels and other appropriate means, to enable them to protect their kava from contamination;
- prevent the growth/survival of pathogen associated with kava during storage, handling and preparation of kava; and
- maintain confidence in internationally traded kava products.

Consumers will recognize their role by following relevant instructions and applying appropriate kava hygiene measures.

2.2 USE

Each section in this Annex states both the objectives to be achieved and the rationale behind those objectives in terms of the safety and suitability of kava and kava products.

Section III covers primary production and associated procedures. Although hygiene practices may differ considerably for the various kava products yet specific procedures will be applied where appropriate. Sections IV to X set down the general hygiene principles which apply throughout the kava processing chain to the point of sale. Section IX also covers consumer information, recognizing the important role played by consumers in maintaining the safety and suitability of kava.

2.3 DEFINITIONS

For the purpose of this Standard, the following expressions have the meaning stated:

Cleaning - the removal of soil, kava residue, dirt or other objectionable matter.

Contaminant - any biological or chemical agent, foreign matter, or other substances not intentionally added to kava which may compromise kava safety or suitability.

Contamination - the introduction or occurrence of a contaminant in kava.

Disinfection - the reduction, by means of chemical agents and/or physical methods, of the number of micro-organisms in the environment, to a level that does not compromise kava safety or suitability.

Facility - any building or area in which kava is handled and the surroundings under the control of the same management.

Kava – in this Annex the word kava refers to the kava plant and kava products that are derived from kava through harvesting and processing into food beverages.

Kava hygiene - all conditions and measures necessary to ensure the safety and suitability of kava at all stages of the processing chain.

Hazard - a biological, chemical or physical agent in, or condition of, kava with the potential to cause an adverse health effect.

HACCP – stands for Hazard Analysis Critical Control Point. It is a system which identifies, evaluates, and controls hazards which are significant for kava safety.

Kava handler - any person who directly handles packaged or unpackaged kava, kava equipment and utensils, or kava contact surfaces and is therefore expected to comply with kava hygiene requirements

Kava safety - assurance that kava will not cause harm to the consumer when it is prepared and/or consumed according to its intended use.

Kava suitability - assurance that kava is acceptable for human consumption according to its intended use.

Primary kava processing - those steps in the kava handling chain from the farm, including, harvesting, transport, cleaning, washing, drying, storage and transport.

Secondary kava processing – those steps in the kava handling chain when the kava arrives at the processing and export facility, including initial checks, grading, weighing, varietal determination testing, packaging and shipping.

SECTION III **PRIMARY PROCESSING**

3.1 ENVIRONMENTAL HYGIENE

Potential sources of contamination from the environment will be considered. Primary processing of kava should not be carried on in areas where the presence of potentially harmful substances would lead to an unacceptable level of such substances in kava.

3.2 HYGIENIC PROCESSING OF KAVA

The potential effects of processing activities on the safety and suitability of kava will be considered at all times. In particular, this includes identifying any specific points in such activities where a high probability of contamination may exist and taking specific measures to minimize that probability.

Farmers will as far as practicable implement measures to:

- harvest kava with the greatest of care and not to damage the lateral roots in the process;
- protect kava from bruising during transport to the village or point of processing;
- begin cleaning the kava within 48 hours of harvest;
- peel all basal stems and stump and to wash kava thoroughly before drying;
- restrict contamination from air, soil, water, fertilizers, pesticides, or any other agent used in production or primary processing;
- protect kava sources from faecal and other contamination; and
- ensure that kava is dried to the point that it snaps when pressure is applied to it.

3.3 HANDLING, STORAGE AND TRANSPORT

Procedures will be in place to:

- sort kava to segregate material which is evidently unfit for human consumption;
- dispose of any rejected material;
- store dried kava in new and clean polythene bags;
- store kava in well ventilated and dry storage facility;
- protect kava from contamination by pests, or by chemical, physical or microbiological contaminants or other objectionable

substances during handling, storage and transport. Specific attention and care must be taken not to cause contamination when transporting kava from the village to the anchorage/airport and from anchorage/airport to the exporter facility.

3.4 CLEANING, MAINTENANCE AND PERSONNEL HYGIENE

Appropriate facilities and procedures will be in place to ensure that:

- any necessary cleaning and maintenance is carried out effectively; and
- an appropriate degree of personal hygiene is maintained.

SECTION IV **PROCESSING & EXPORT FACILITY: DESIGN & FACILITIES**

4.1 LOCATION

4.1.1 Facilities

Potential sources of contamination need to be considered when deciding where to locate kava processing and export facilities, as well as the effectiveness of any reasonable measures that might be taken to protect kava. Facilities will not be located anywhere where, after considering such protective measures, it is clear that there will remain a threat to kava safety or suitability. In particular, facilities will normally be located away from:

- environmentally polluted areas and industrial activities which pose a serious threat of contaminating kava;
- areas prone to infestations of pests;
- areas where wastes, either solid or liquid, cannot be removed effectively.

4.1.2 Equipment
Equipment will be located so that it:

- permits adequate maintenance and cleaning;
- functions in accordance with its intended use; and
- facilitates good hygiene practices, including monitoring.

4.2 PREMISES AND ROOMS

4.2.1 Design and layout
Where appropriate, the internal design and layout of kava facility will permit good kava hygiene practices, including protection against cross-contamination between and during operations by kava handlers.

4.2.2 Internal structures and fittings
Structures within kava facilities will be soundly built of durable materials and be easy to maintain, clean and where appropriate, able to be disinfected. In particular the following specific conditions will be satisfied where necessary to protect the safety and suitability of kava:

- the surfaces of walls, partitions and floors will be made of impervious materials with no toxic effect in intended use;
- walls and partitions will have a smooth surface up to a height appropriate to the operation;
- floors will be constructed to allow adequate drainage and cleaning;
- ceilings and overhead fixtures will be constructed and finished to minimize the buildup of dirt and condensation, and the shedding of particles;
- windows will be easy to clean, be constructed to minimize the buildup of dirt and where necessary, be fitted with removable and cleanable vermin-proof screens. Where necessary, windows will be fixed;
- doors will have smooth, non-absorbent surfaces, and be easy to clean and, where necessary, disinfect;
- working surfaces that come into direct contact with kava will be in sound condition, durable and easy to clean, maintain and disinfect. They will be made of smooth, non-absorbent materials, and inert to the kava, to detergents and disinfectants under normal operating conditions.

4.3 EQUIPMENT

4.3.1 General

Equipment and containers will be made of materials with no toxic effect in intended use. Where necessary, equipment will be durable and movable or capable of being disassembled to allow for maintenance, cleaning, disinfection, monitoring and, for example, to facilitate inspection for pests.

4.3.2 Kava control and monitoring equipment

These requirements are intended to ensure that:

- harmful or undesirable micro-organisms or their toxins are eliminated or reduced to safe levels or their survival and growth are effectively controlled;
- colorimetric tests shall be conducted on all inward batch or consignment of kava;
- confirmatory HPTLC tests shall be requested by the buyer/exporter or regulatory authority; and
- temperatures and other conditions necessary to kava safety and suitability can be rapidly achieved and maintained in the facility.

4.3.3 Containers for waste and inedible substances

Containers for waste, by-products and peelings, will be specifically identifiable and suitably constructed at the processing facility. Containers used to hold dangerous substances will be identified and, where appropriate, be lockable to prevent malicious or accidental contamination of kava.

4.4 FACILITIES

4.4.1 Water supply

An adequate supply of potable water with appropriate facilities for its storage and distribution will be available to clean the kava and to ensure the safety and suitability of kava.
Processing facilities in the rural areas that are not connected to the municipal water supply will need to use potable water to eliminate any contamination.

4.4.2 Drainage and waste disposal
Adequate drainage and waste disposal systems and facilities will be provided. They will be designed and constructed so that the risk of contaminating kava or the potable water supply is avoided.

4.4.3 Cleaning
Adequate facilities, suitably designed, will be provided for cleaning kava. Such facilities will have an adequate supply of potable water where appropriate.

4.4.4 Personnel hygiene facilities and toilets
Personnel hygiene facilities will be available to ensure that an appropriate degree of personal hygiene can be maintained and to avoid contaminating kava. Where appropriate, facilities will include:

- adequate means of hygienically washing and drying hands, including wash basins and a supply of potable water;
- lavatories of appropriate hygienic design; and
- adequate changing facilities for personnel.

Such facilities will be suitably located and designated.

4.4.5 Temperature control
Depending on the nature of the kava operations undertaken, adequate facilities will be available for drying, storage, refrigerating and freezing kava, monitoring kava temperatures, and when necessary, controlling ambient temperatures to ensure the safety and suitability of kava.

4.4.6 Air quality and ventilation
Adequate means of natural or mechanical ventilation will be provided, in particular to:

- minimize air-borne contamination of kava, for example, from aerosols and condensation droplets;
- control ambient temperatures;
- control odors which might affect the suitability of kava; and
- control humidity, where necessary, to ensure the safety and suitability of kava.

4.4.7 Lighting
Adequate natural or artificial lighting will be provided to enable the undertaking to operate in a hygienic manner. Where necessary, lighting will not be such that the resulting color is misleading. The intensity will be adequate to the nature of the operation.

4.4.8 Storage
Adequate facilities for the storage of kava and non-kava chemicals (e.g. cleaning materials, lubricants, fuels) will be provided separately.

Where appropriate, kava storage facilities will be designed and constructed to:

- permit adequate maintenance and cleaning;
- avoid pest access and harborage;
- enable kava to be effectively protected from contamination during storage; and
- where necessary, provide an environment which minimizes the deterioration of kava (e.g. by temperature and humidity control).

SECTION V **CONTROL OF OPERATION**

5.1 CONTROL OF HAZARDS THROUGH HACCP
Kava Exporters will need to control kava hazards through the use of the principles and guidelines outlined in systems such as HACCP. The HACCP requirements, which have been captured in Annex 1 will be developed to support the principles being promoted in this standard. Where applicable, the control procedures can include subjecting kava to colorimetric and HPTLC testing.

The HACCP principles and steps include the following:

- identify any steps in their operations which are critical to the elimination of hazards for the safety and integrity of kava prepared for export;
- implement effective control procedures at those steps;
- monitor control procedures to ensure their continuing effectiveness; and

- review control procedures periodically, and whenever the operations change.

These systems will be applied throughout the kava export chain to control unwanted kava products. Control procedures may be simple, such as mandatory testing of incoming kava stocks to the kava processing and export facilities, calibrating equipment to ensure a test is carried out each time and is done correctly.

5.2 KEY ASPECTS OF HYGIENE CONTROL SYSTEMS

5.2.1 Time and temperature control

Systems will be in place to ensure that temperature is controlled effectively where it is critical to the safety and suitability of kava.

Temperature control systems will take into account:

- the nature of the kava, e.g. types of micro-organisms;
- the method of packaging and processing; and
- the kava product and its storage requirements.

Such systems will also specify tolerable limits for time and temperature variations.

5.2.2 Microbiological and other specifications

Management systems described in paragraph 5.1 offer an effective way of ensuring the safety and suitability of the kava product. Where microbiological, chemical or physical specifications are used in any kava product control system, such specifications will be based on sound scientific principles and state, where appropriate, monitoring procedures, analytical methods and action limits.

5.2.3 Microbiological cross-contamination

Pathogens can be transferred from one kava product to another, either by direct contact or by kava handlers, contact surfaces or the air. Raw, unprocessed kava will be effectively separated, either physically or by time, from ready-to-export kava products, with effective intermediate cleaning.

Access to processing areas may need to be restricted or controlled. Where risks are particularly high, access to processing areas will be only via a well-managed entrance. Personnel may need to be required to put on clean protective clothing including washing of hands before entering.

5.2.4 Physical and chemical contamination
Systems will be in place to prevent contamination of kava by foreign bodies such as glass or metal shards from machinery, dust, harmful fumes and unwanted chemicals. It is a serious issue to consider with pounding or preparing kava powder for export.

5.3 INCOMING MATERIAL REQUIREMENTS
No fresh kava material will be accepted by a facility if it is known to contain narafala kava, undesirable micro-organisms, pesticides, and toxic substances, decomposed or extraneous substances which would not be reduced to an acceptable level by normal sorting and/or processing. Where appropriate, specifications for fresh kava products will be identified and applied.

Fresh kava materials or ingredients will always be inspected and sorted before processing. Where necessary, laboratory tests will be conducted to establish the integrity of the kava product for further processing and for use. Only suitable raw materials from noble kava varieties will be processed for export.

5.4 PACKAGING
Packaging design and materials will provide adequate protection for products to minimize contamination, prevent damage, and accommodate proper labelling. Packaging materials must be new, non-toxic and not pose a threat to the safety and suitability of kava under the specified conditions of storage and use.

5.5 WATER

5.5.1 In contact with kava
Only potable water will be used in kava handling and processing at the export facility.

Water recirculated for reuse will be treated and maintained in such a condition that no risk to the safety and suitability of kava results from its use. The treatment process will be effectively monitored.

5.5.2 As an ingredient
Potable water will be used wherever necessary to avoid kava contamination.

5.6 MANAGEMENT AND SUPERVISION

The type of control and supervision needed will depend on the size of the business, the nature of its activities and the types of kava products involved. Managers and supervisors should have sufficient knowledge of kava hygiene principles and practices to be able to judge potential risks, take appropriate preventive and corrective action, and ensure that effective monitoring and supervision takes place.

5.7 DOCUMENTATION AND RECORDS

Where necessary, appropriate records of processing, production and distribution will be kept and retained for a period that exceeds the shelf-life of the kava product in the export facility. Documentation can enhance the credibility and effectiveness of the kava quality control system.

5.8 RECALL PROCEDURES

Managers will ensure effective procedures are in place to deal with any kava safety hazard and to enable the complete, rapid recall of any implicated lot of the prepared kava product from the market. Where a product has been withdrawn because of an immediate health hazard, other products which are produced under similar conditions, and which may present a similar hazard to public health, it should also be withdrawn.

Recalled products will be held under supervision until they are destroyed, used for purposes other than human consumption, determined to be safe for human consumption, or reprocessed in a manner to ensure their safety.

SECTION VI **FACILITY: MAINTENANCE & SANITATION**

6.1 MAINTENANCE AND CLEANING

6.1.1 General

Facilities and equipment will be kept in an appropriate state of repair and condition to:

- facilitate all sanitation procedures;
- function as intended, particularly at critical steps (see paragraph 5.1);
- prevent contamination of kava products, e.g. from metal shards, flaking plaster, debris and chemicals.

Cleaning will remove kava residues and dirt which may be a source of contamination. The necessary cleaning methods and materials will depend on the nature of the kava business.

Cleaning chemicals will be handled and used carefully and in accordance with manufacturers' instructions and stored, where necessary, separated from kava, in clearly identified containers to avoid the risk of contaminating kava.

6.1.2 Cleaning procedures and methods

Cleaning can be carried out by the separate or the combined use of physical methods, such as heat, scrubbing, vacuum cleaning or other methods that avoid the use of water, and chemical methods using detergents, alkalis or acids.

Cleaning procedures will involve, where appropriate:

- removing gross debris from surfaces;
- rinsing with water which complies with section 4, to remove loosened soil and residues of detergent;
- dry cleaning or other appropriate methods for removing and collecting residues and debris.

6.2 CLEANING PROGRAMMES

Cleaning and disinfection programs will ensure that all parts of the facility are appropriately clean, and will include the cleaning of cleaning equipment.

Cleaning and disinfection programs will be continually and effectively monitored for their suitability and effectiveness and where necessary, documented.

Where written cleaning programs are used, it should specify:

- areas, items of equipment to be cleaned;
- responsibility for particular tasks;
- method and frequency of cleaning; and
- monitoring arrangements.
- Records of cleaning and date

6.3 PEST CONTROL SYSTEMS

6.3.1 General

Pests pose a major threat to the safety and suitability of kava products prepared for export. Pest infestations can occur where there are breeding sites. Good hygiene practices will be employed to avoid creating an environment conducive to pests. Good sanitation, inspection of incoming materials and good monitoring can minimize the likelihood of infestation and thereby limit the need for pesticides control.

6.3.2 Preventing access

Buildings and facilities will be kept in good repair and condition to prevent pest access and to eliminate potential breeding sites. Holes, drains and other places where pests are likely to gain access will be kept sealed. Wire mesh screens, for example on open windows, doors and ventilators, will reduce the problem of pest entry. Animals will be excluded from the grounds of kava processing facilities.

6.3.3 Monitoring and detection

Facilities and surrounding areas will be regularly examined for evidence of infestation.

6.3.4 Eradication

Pest infestations will be dealt with immediately and without adversely affecting the kava products safety or suitability. Treatment with chemical, physical or biological agents will be carried out without posing a threat to the safety or suitability of the kava products.

6.4 WASTE MANAGEMENT

Suitable provision must be made for the removal and storage of waste. Waste must not be allowed to accumulate in kava handling, kava storage, and

other working areas and the adjoining environment except so far as is unavoidable for the proper functioning of the business.

Waste stores must be kept appropriately clean.

6.5 MONITORING EFFECTIVENESS
Sanitation systems will be monitored for effectiveness, periodically verified by means such as audit pre-operational inspections or, where appropriate, microbiological sampling of environment and kava contact surfaces and regularly reviewed and adapted to reflect changed circumstances.

SECTION VII **FACILITY: PERSONAL HYGIENE**

7.1 HEALTH STATUS
People known, or suspected, to be suffering from, or to be a carrier of a disease or illness likely to be transmitted through kava, will not be allowed to enter any kava handling area if there is a likelihood of their contaminating kava. Any person so affected will immediately report illness or symptoms of illness to the management. Medical examination of a kava handler will be carried out if clinically or epidemiologically indicated.

Kava handlers shall undergo annual health examination to declare them fit and healthy to handle kava.

7.2 ILLNESS AND INJURIES
Conditions including communicable diseases which will be reported to management so that any need for medical examination and/or possible exclusion from kava handling can be considered, include:

- jaundice;
- diarrhoea;
- vomiting;
- fever;
- sore throat with fever;
- visibly infected skin lesions (boils, cuts, etc.);
- discharges from the ear, eye or nose.

7.3 PERSONAL CLEANLINESS

Kava handlers will maintain a high degree of personal cleanliness and, where appropriate, wear suitable protective clothing, head covering, and footwear. Cuts and wounds, where personnel are permitted to continue working, will be covered by suitable waterproof dressings.

Personnel will always wash their hands when personal cleanliness may affect kava safety, for example:

- at the start of kava handling activities;
- immediately after using the toilet; and
- after handling raw kava or any contaminated material, where this could result in contamination of other kava items; they will avoid handling ready-to-export kava, where appropriate.

7.4 PERSONAL BEHAVIOUR

People engaged in kava handling activities will refrain from behavior which could result in contamination of kava, for example:

- smoking;
- spitting;
- chewing or eating;
- etc.

7.5 VISITORS

Visitors to kava manufacturing, processing or handling areas will, where appropriate, wear protective clothing and adhere to the other personal hygiene provisions in this section.

SECTION VIII
TRANSPORTATION

8.1 GENERAL
Kava must be respected as a kava product, adequately handled and protected during transport. The type of conveyances or containers required depends on the nature of the kava and the conditions under which it is transported.

8.2 REQUIREMENTS
Where necessary, conveyances and bulk containers will be designed and constructed so that they:

- do not contaminate the kava or packaging;
- can be effectively cleaned and, where necessary, disinfected;
- permit effective separation of different kava from non-kava items where necessary during transport;
- provide effective protection from contamination, including dust and fumes; and
- can effectively maintain the temperature, humidity, atmosphere and other conditions necessary to protect kava from harmful or undesirable microbial growth and deterioration likely to render it unsuitable for consumption.

8.3 USE AND MAINTENANCE
Conveyances and containers for transporting kava will be kept in an appropriate state of cleanliness, repair and condition. Where the same conveyance or container is used for transporting different kava, or non-kava items, effective cleaning and, where necessary, disinfection will take place between loads.

SECTION IX **PRODUCT INFORMATION & CONSUMER AWARENESS**

9.1 LOT IDENTIFICATION

Lot identification is essential in product recall. Each container of kava will be permanently marked to identify the producer and the lot.

9.2 PRODUCT INFORMATION

All kava will be accompanied by or bear adequate information to enable the next person in the kava processing chain to handle, display, store and prepare and use the product safely and correctly.

9.3 LABELLING

Packaged kava will be labelled with clear instructions to enable the next person in the kava processing chain to handle, display, store and use the product safely.

9.4 CONSUMER EDUCATION

Health education programs will cover general kava hygiene. Such programs will enable consumers to understand the importance of any kava product information and to follow any instructions accompanying products, and make informed choices.

SECTION X **TRAINING**

10.1 AWARENESS AND RESPONSIBILITIES
Kava hygiene training is fundamentally important. All personnel will be aware of their role and responsibility in protecting kava from contamination or deterioration. Kava handlers will have the necessary knowledge and skills to enable them to handle kava hygienically.

10.2 TRAINING PROGRAMMES
Factors to take into account in assessing the level of training required include:

- the nature and type of the kava products the business is dealing with for export, in particular its ability to sustain growth of pathogenic or spoilage micro-organisms;
- the manner in which the kava is handled and packed, including the probability of contamination;
- the extent and nature of processing or further preparation before export;
- the conditions under which the kava product will be stored; and
- the expected length of time before consumption.

10.3 INSTRUCTION AND SUPERVISION
Periodic assessments of the effectiveness of training and instruction programs will be made, as well as routine supervision and checks to ensure that procedures are being carried out effectively. Managers and supervisors of kava processes will have the necessary knowledge of kava hygiene principles and practices to be able to judge potential risks and take the necessary action to address deficiencies.

10.4 REFRESHER TRAINING
Training programs will be routinely reviewed and updated where necessary. Systems will be in place to ensure that kava handlers remain aware of all procedures necessary to maintain the safety and suitability of kava.

ANNEX 2 **GUIDELINES: PRODUCT TRACEABILITY**

1. Purpose:

i. Consistent with the Food Act, appropriate operators must establish and implement a system to enable businesses to identify a person who supplied or to whom the business supplied any food or substance intended to be eaten or expected to be incorporated into any other food;
ii. Traceability of the kava shall be established at all stages of production, processing and distribution;

2. Scope:

The scope applies to all lots of kava sold by the farm or farmer. This also applies to kava manufacturers and or exporters receiving kava raw materials for processing;

3. Responsibility:

i. Kava trading businesses, including exporters, processors, farmers and food safety managers, are responsible for making certain that the traceability process is functioning on a day-to-day basis. The farm owner is responsible for responding to any problems that the farm food safety manager is unable to resolve;

4. Materials

i. System for labelling lots or batches (lot numbers, varieties, labelling stickers, etc.);
ii. System for organising lot number (database, logs, etc.);
iii. A map of the farm and fields to identify locations and varieties;
iv. Names and crew number designations (if applicable) of workers harvesting and packing produce;

5. Procedure:

This procedure should result in the labelling of every lot or batch that is sold by the farm or received by the manufacturer or exporter:

i. Assign each commodity with a unique lot of batch numbers;
ii. Create a unique coding system that identifies the kava type, origin of lot or batch (Island, village, farmer etc.), and harvest date;

iii. If the product is already ground into powder, the following information must be provided to facilitate the process of traceability:

   i. HACCP facility location, registration number and contact details;
   ii. Plant parts (peeled basal stems/ stumps (kakano), or peeled roots (uho) must appear on the labels and the bags;

ANNEX 3 GUIDELINES: INSPECTION & ANALYSIS

1. Purpose:

i. Consistent with the Food Act, inspections will be an essential component of the system to ensure the products are received, handled, processed, packaged and stored to comply with food hygiene requirements.
ii. An inspection may be carried out at the farm site, packhouse, processing facility or other establishments deemed appropriate by the Regulatory Authority. An inspection is a formal process that has legal implications if non-compliance with the standard is found.
iii. A regulatory inspection is often “notified”, however, there are exceptions if the responsible ministry or Competent Authority (CA) has concerns relating to safety or grounds to suspect that improper practices are occurring at a site.

2. Scope:
The scope applies to all producers, processors, manufacturers and exporters of kava and kava products.

3. Responsibility:
i. Businesses, including the farmer, business owner, food safety manager and facility manager, are responsible for making certain that their processes relating to training, food safety and traceability are in order and well documented and can be provided to the Food Safety officer upon request for verification;
ii. Staff involved in the handling and processing of the kava may be asked to explain their activities to confirm their understanding of their roles and purposes;

4. Required materials
For the farm operations:

i. A map of the farm and fields to identify locations and varieties;
ii. A documented process for harvesting, cleaning, drying and packing will be required. If some level of cleaning is carried out onsite, a source of clean water will also need to be documented;
iii. A documented process for grading, inspection and management of waste products to avoid any opportunities of mixing and contaminating the good samples;
iv. A record of staff training;

For the accredited facilities or packhouses etc.:

v. A map layout of the premises to identify the areas for receival of the product, washing and grading will be required. The management of waste will also need to be part of this documentation;
vi. A record of any breaches and corrective actions must be documented;

5. Procedure:
The inspection procedures should result in strengthening the processes on-farm and in accredited facilities or packhouses to meet their requirements as stipulated in the Act:

i. Up to 2 inspections may be carried out per year. Additional follow-up inspections may be necessary depending on the level of non-compliance;

a. Inspection will be announced and organised ahead with the operator. The remaining inspection may be unannounced, however, it must be carried out during normal business hours at the premises;
b. The cost of the inspection will be met by the owner of the farm, facility or packhouse.

ii. The approved officer (Food Safety Officer) must perform his or her duties in accordance with the Act;

a. All inspection should start with an entry meeting to explain the purpose and scope of the inspection. This will allow the manager or owner to provide an overview of their operations, staff training, breaches and corrective actions, and present documentation;
b. The inspection should end with a closing meeting at which the summary of the findings will be discussed with the operator.
c. For any non-compliance and depending on the nature of the breach, the operator must be granted the opportunity to make corrective actions and agree to a follow-up visit, if necessary;

iii. A copy of the inspection report must be provided to the operator for their record.

Notes

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