

International Macadamia Symposium 2023



IMS'23

MOVING FORWARD TOGETHER

Macadamias South Africa (NPC)
(SAMAC)



Macadamia Kernel Product Standard & Visual Guide

September 2023

Context and principles

- Specifications should ultimately be customer and consumer led
- Some customers want “interchangeability”
- As a qualification to interchangeability, many customers and suppliers have customised specifications
- Product can be sold that is different to the global product specification - the variation needs to be clearly specified
- Balance between “minimum standards that can be evolved over time” and “standards that are so low that they’re not worth having”
- To be agreed by the industry – and to be implemented by them
- Early versions – can be revised and evolve over time

The process





AWARENESS AND ENGAGEMENT

- Available on the WMO website
- Circulated to:
 - WMO Members' Council for onward circulation
 - Primary contact in non-member countries
 - Stakeholders, including INC
- Announced on the WMO page on LinkedIn

WORKING GROUP FORMED

- Working group formed including:
 - Darren Burton – independent project lead
 - Heinrich Grobler (South Africa)
 - Rogan Schultze (South Africa)
 - Pieter van der Westhuizen (South Africa)
 - Peter Edmondson (South Africa)
 - Steven Lee (Australia)

WMO MACADAMIA PRODUCT STANDARD

May 2022

Certified HACCP System

Each processor must have a 3rd party certified HACCP system in place. The system must be certified by a registered accredited certification body.

Approved Supplier Program

It is best practice for nut-in-shell (NIS) suppliers of certified processors to have in place a food safety based approved supplier program that is at least 2nd party audited.

Country of Origin

All Macadamia nuts sold must be labelled with the country of Origin in which they were grown.

Nut in Shell Storage and Handling

- Prior to being dried to cracking moisture, NIS must be stored by the processor in conditions that provide forced ventilation.
- NIS should be dried to less than 7.5% NIS moisture within 14 days following intake (by processor or other drying facility).
- NIS held in ambient conditions should be processed within 90 days.
- NIS held for longer than 90 days must be stored in a temperature-controlled environment at <15 °C and, if possible, a relative humidity not exceeding 70% for up to 270 days
- or an alternative validated process that is proven to not adversely affect kernel quality.

Non-standard kernel styles must incorporate the prefix "SP" to indicate a special (non-standard) specification. SP 'styles' should use "SP" and the closest standard style that they represent.

An example of the descriptive labelling convention, for a special blend of 70% whole kernel and 30% half kernel of the size range 17-20mm, which is deemed closest to Style 1, and has been Dry Roasted & Salted would be labelled as follows:
PREM STYLE SP 1 70%W 17-20mm DRS

An example of the descriptive labelling convention, for an in-specification Style 1, with 90% whole kernel and size range 16-20mm which has been Dry Roasted & Salted would be labelled as follows:
PREM STYLE 1 90%W 16-20mm DRS

Style conventions

"Style" is to define the various kernel sizes and blends.

Table 1. Accepted definitions for labelling

Style 0	Min 95% whole kernel	>20 mm
Style 1	Min 90% whole kernel	16-20 mm
Style 1s	Min 90% whole kernel	13-18 mm
Style 2	Min 50% whole kernel	>13 mm
Style 3	Min 15% whole kernel	>13 mm
Style 4L	Min 80% halves	>13 mm
Style 4S	Min 50% halves and pieces	10-14 mm
Style 5	Pieces	8-12 mm
Style 6	Pieces	5-9 mm
Style 7	Pieces	3-6 mm
Style 8	Fines or Meal	<3 mm

The style convention in Table 1 is also applicable for commercial grade kernel but must use the prefix of COM as follows:

COM Style 2 50%W >13 mm DRS

Table 4. Physical kernel specifications

	Premium grade
	Raw
Kernel moisture content	Not to exceed 1.8%
Appearance and taste	White/cream in colour or as specified for roasted product. Free from excessive dust or oil. Crunchy texture (excluding meal) with a typical Macadamia flavour. Free from off odours and flavours. Each Style must be reasonably uniform in shape, colour and size.
Foreign matter*	Target nil
Loose shell**	Style 0-4: max 1 piece per 10kg Style 5-8: max 3 pieces per 10kg
Impacted shell***	Not more than 1% of kernels by weight
Unsound Kernel (Reject plus Commercial Grade Kernel)	Not more than a combined total of 3% Unsound Kernel by weight, of which Reject Grade Kernel must not exceed 2% by weight
Wholes, halves, piece count	Must meet specification per Table 1 and/or as per customer requirements

Definitions

*Foreign Material includes any product that is not kernel and/or shell.

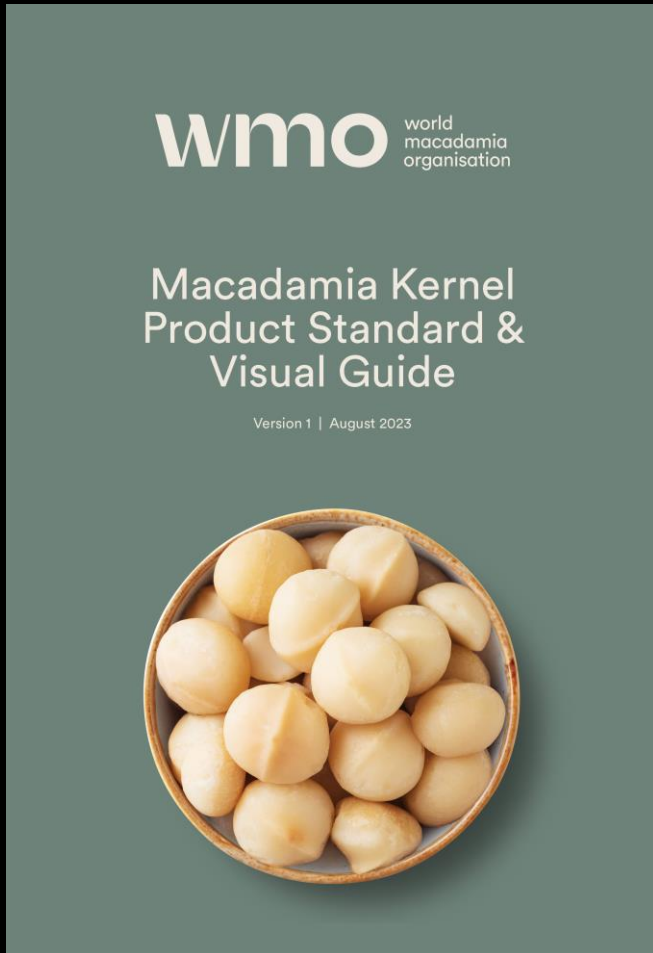
**Loose shell is defined as pieces of shell that cannot pass through a 3mm round hole.

***Impacted shell is defined as shell that is embedded in the kernel and cannot pass through a 1mm round hole

Agrichemical Residue Testing

All products must conform to importing country's maximum residue levels (MRL) for agricultural chemicals.

Visual guide



- The WMO Macadamia Product Standard has been updated with one change
 - This is available in PDF format on the WMO website
- The visual guide was created to support the WMO Product Standard
- This is now integrated into one document, called the Macadamia Kernel Product Standard & Visual Guide
 - As this document is sensitive to colour for quality assessment, it will **only be available in printed form**
 - A booklet and a poster will be produced and available for purchase
- There is a two-page Style Guide which can be used independently
 - This is available in PDF format on the WMO website

What's available?

	Macadamia Kernel Product Standard	Macadamia Kernel Product Standard & Visual Guide Booklet	Visual Guide Poster	Style Guide
Status	Version 2, July 2023 available Only change impacted shell	Available for purchase	Available for purchase from October	Available
Printed	Will be a section of the Macadamia Kernel Product Standard & Visual Guide booklet	Printed only 29 pages	Printed only	Will be a section of the Macadamia Kernel Product Standard & Visual Guide booklet
PDF	8-page PDF			2-page PDF



To view the **WMO Product Standard** and **Style Guide** PDFs, visit www.worldmacadamia.com

To order printed copies of the **Macadamia Kernel Product Standard & Visual Guide** booklet, visit the WMO website or contact info@worldmacadamia.com

Macadamia Style Guide



All styles set out below are premium grade



Style 0	Style 1	Style 1S	Style 2
Min 95% wholes	Min 90% wholes	Min 90% wholes	Min 50% wholes
> 20 mm	16 - 20 mm	13 - 18 mm	> 13 mm



Style 3	Style 4L	Style 4S	Style 5
Min 15% wholes	Min 80% halves	Min 50% halves	Pieces
> 13 mm	> 13 mm	10 - 14 mm	8 - 12 mm



Style 6	Style 7	Style 8
Pieces	Pieces	Fine pieces and meal
5 - 9 mm	3 - 6 mm	< 3mm

Wholes Kernels which are not split into halves, nor with more than 1/4 of the kernel missing, provided that the kernel contour is not materially affected by the missing portion.	Halves Means that half of a whole kernel, with not more than 1/8 of its mass missing.	Pieces Pieces can be naturally broken or diced with the size specifications listed above.	Fines / Meal Fines / meal are produced when macadamias are diced and consist of any small material less than 3mm in size.
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Comparison Chart



FY24 Plans



- The WMO Members' Council have approved that the next area of focus of product standard development is:
 - Nut in shell (including storage and handling)
 - Macadamia oil
- A similar process to the one used for the visual guide development will be put in place:
 - A working group lead
 - One representative from each WMO member country, can opt to be a developer or reviewer
 - An agreed project plan, budget and timeframes

Benefits of WMO led standard development



- Removes a barrier for customers formulating with macadamias
- Sets quality expectations
- All WMO members contribute to and approve standards
- Brings together technical experts from across the globe
- Output orientation of the group
- Being used as a starting point for country specific work

Thank you





QUESTIONS ?

