

RAW ORGANIC MACADAMIA NUTS KERNEL PRODUCT SPECIFICATIONS		
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### 1.0 ORIGIN

Kenya

### 2.0 SEASON

February – November

### 3.0 PRODUCT DESCRIPTION

Macadamia Nuts from the species *Macadamia* and their hybrids which should meet the specifications outlined in this document. Produced and processed in conditions that meet organic agriculture practices that promote ecosystem health, GAPs, GMPs, Good Storage Practices, FDA, FSSC 22000, Halal, and Kosher requirements.

PRODUCT	INGREDIENT	LABELLING
Raw Macadamia	100% Macadamia Kernel	Raw
Roasted macadamia	100% Macadamia Kernel	Dry Roast / DR
Roasted and Salted Macadamia	100% Macadamia Kernel, Salt	Dry Roast Salt / DRS

### 4.1 DIETARY CLAIMS

Suitable for Vegetarians ✓	Suitable for Lacto-Ovo Vegetarians ✓
Suitable for Lacto Vegetarians ✓	Suitable for Vegans ✓
Suitable for Coeliacs ✓	

### 4.2 VULNERABILITY TO USERS

Macadamia nuts are natural allergens and thus are venerable to users known to have tree nuts allergic reactions. Macadamia nuts are toxic to dogs.

### 5.1 PHYSICAL PARAMETERS, PREMIUM GRADE

FLAVOUR	Free from off or objective flavor
APPEARANCE	Free flowing whole/half kernels, pieces/chips, meal
COLOUR	Raw: White to Cream Color; free from rancidity Roasted: Cream
TEXTURE	Firm and crunchy

### 5.2 COMMERCIAL GRADES

Is Edible Kernel but may contain discoloration (medium brown color), onion ring and/or spots provided that the appearance of the product is not adversely affected. To be used in food ingredients. May not be sold as snack premium grade and be labelled as commercial grade.



### 5.3 GRADES AND STYLES SPECIFICATIONS

GRADES/STYLE	TYPICAL SIZE RANGE	SPECIFICATIONS	REJECT KERNELS	REJECT AND COMMERCIAL GRADE KERNELS
Style 0	20+ mm	95% Wholes	2.0% max	3.0% max
Styles 1L	16-20 mm	90% Wholes	2.0% max	3.0% max
Style 1S	13-18 mm	90% Wholes	2.0% max	3.0% max
Style 2	13+ mm	50/50 Mix	2.0% max	3.0% max
Style 3	13+ mm	Min 15% Wholes	2.0% max	3.0% max
Style 4L	13+ mm	Min 80% Halves	2.0% max	3.0% max
Style 4S	10-14 mm	Min 50% Halves	2.0% max	3.0% max
Style 5	8-12mm	Pieces & Small Half Kernel	2.0% max	3.0% max
Style 6	5-9 mm	Pieces & Chips	2.0% max	3.0% max
Style 7	3-6 mm	Pieces & Chips	2.0% max	3.0% max
Style 8	<3mm	Pieces & chips	2.0% max	3.0% max

**\*\* Whole:** Not more than 25% missing / chipped out

**\*\* Halves:** Not more than 33% missing of half of the kernel

### 6.0 FOREIGN MATERIALS

#### 6.1 PHYSICAL

FOREIGN MATTER	TARGET	ACCEPTABLE LIMIT
CRITICAL – Classified as Metal, Glass, Wood, Hard Plastic, Other Nuts, Live Infestation, Rodent Droppings	Absent	N/A
MAJOR – Classified as Pliable Plastic, Fibres, String	Absent	N/A
MINOR – Classified as Stalks, Stems, dead Infestation, Extraneous Vegetable Matter	Absent	0.02%
Loose Shells	Absent	1pc/100kg maximum

#### 6.2 CHEMICAL

PARAMETER	LIMITS	TEST METHOD
Moisture & Volatile Matter Content	2.0% Max	AOAC 925.40
Free Fatty Acids (FFA)	0.5% max	ISO 660
Peroxide Value	3.0 Meq/kg	ISO 3960:2017
Aflatoxin Total	4.0 ppb max	AOAC 991.31 (LC-MS/MS)

#### 6.3 MICROBIOLOGY

PROPERTY	LIMITS	TEST METHOD
Total Plate Count	Max 20000 cfu/g	ISO 4833 – 1:2013
Yeast and Moulds	Max 30000 cfu/g	ISO 21527-2
E. Coli	Absent (<10 cfu/g)	ISO 16649-2
Salmonella	Absent (<10 cfu/g)	ISO 6579

## 7.0 NUTRITION

NUTRIENT	Units	Average Quantity
Energy	N/A	3100kj (739Cal)/100g
Protein	g/100g	7.9
Fat, Total	g/100g	75.8
• Saturated	g/100g	12.1
Carbohydrate	g/100g	5.2
• Sugars	g/100g	4.6
Dietary Fibre	g/100g	8.6
Sodium	mg/100g	5.0
Water	g/100g	2
Ash	g/100g	1.1

### 8.1 PACKAGING

The macadamia kernels are packed into 11.34kg (25 Lbs) Nitrogen flushed vacuum sealed food grade aluminum foiled bags in corrugated cartons.

\*\*\*\*Other pack sizes are available upon request.

### 8.2 STORAGE:

The product should be stored in original packaging in a clean, cool, dry area (50-60% RH), free from toxic chemicals, odours, insect and rodent infestation; away from direct sunlight.

### 8.3 SHELF LIFE

Shelf life is 18 months from the date of manufacture/packing for macadamias.

### 8.4 Batch Numbers

#### 8.4.1 INTERMEDIATE PRODUCTS

Products are labelled with a batch number that reflects the raw material receiving year, month, date and the drying bin number. Example: Batch 20102115ORG

ELEMENT	MEANING/REPRESENTATION
20	Year (2020)
10	10 <sup>th</sup> month of the year (October)
21	Date 21 <sup>st</sup> of October
15	Drying bin number 15
ORG	Organic Macadamia

#### 8.4.2 FINISHED PRODUCTS

Finished product lot coding reflects year, month from Julian calendar exempting letter 'l', day and a unique number for every singly carton packed. The style is also indicated on the label. Example of product package code 2020A28 H-664 ORG

ELEMENT	MEANING/REPRESENTATION
2020	Year
A	Month (January)
28	Day of the Month (28 <sup>th</sup> )
H-664	Unique carton number (serial number)
ORG	Organic Macadamia

