

MARQUIS MACADAMIA SOUTH AFRICAN KERNEL SPECIFICATION

This Specification supersedes all previous specifications.

All reasonable endeavors have been used to ensure that the information in this specification is accurate. The information in this specification should not be construed as recommending the fitness of the product for any particular purpose or application. The purchaser needs to satisfy itself whether the product is suitable for any particular purpose or application. Raw kernel has to be further processed before consumption. The product is an agricultural product, as such it is subject to seasonal variability.

Description: This is an all-natural product and may therefore be subject to seasonal colour and flavour variation.

Origin: South Africa

PRODUCT	INGREDIENT	LABELLING
Raw Macadamia (pasteurised)	Macadamia Kernel	Raw
Roasted Macadamia (pasteurised)	Macadamia Kernel	Dry Roast or DR
Roasted and Salted Macadamia (pasteurised)	Macadamia Kernel, Salt	Dry Roast Salt or DRS
Raw Macadamia	Macadamia Kernel	Raw
Roasted Macadamia	Macadamia Kernel	Dry Roast or DR
Roasted and Salted Macadamia	Macadamia Kernel, Salt	Dry Roast Salt or DRS

MANDATORY ADVISORY OR WARNING STATEMENTS AND DECLARATION

ALLERGENS:

FOOD ALLERGEN	PRESENT IN RAW MATERIAL	PRESENT ON SAME PROCESSING LINE
Cereals containing gluten and their products, namely, wheat, rye, barley, oats, spelt, and their hybridized strains.	Nil	Nil
Crustacea and crustacean products	Nil	Nil
Egg and egg products	Nil	Nil
Fish and fish products (including mollusc and oil)	Nil	Nil
Milk and milk products	Nil	Nil
Tree nuts and tree nut products	Present	Present
Sesame seed and sesame seed products	Nil	Nil
Peanuts and peanut products (including peanut oil)	Nil	Nil
Soybean and soybean products (including soybean oils)	Nil	Nil
Sulphites	Nil	Nil
Lupin	Nil	Nil
Mustard (EU only)	Nil	Nil
Celery (EU only)	Nil	Nil

SENSITIVITIES:

FOOD SENSITIVITIES	PRESENT IN RAW MATERIAL	PRESENT ON SAME PROCESSING LINE
Non applicable	Nil	Nil

DIETARY CLAIMS:

Suitable for vegetarians ✓	Suitable for lacto-ovo vegetarians ✓	
Suitable for lacto vegetarians ✓	Suitable for vegans ✓	Suitable for coeliacs ✓
Regulatory Compliance		
<p>This product shall comply with the provisions specified in South African regulation R638 of 22nd June 2018: Regulations governing general hygiene requirements for Food Premises, the Transport of Food and Related Matters. Department of Health, No. 41730 Government Gazette, 22nd June 2018: the SANS Food & Beverage Standards, SANS 10330:2020 and SANS 10049:2019, as amended and all other relevant South African legislations. Refer to the website below to ensure compliance www.sabs.co.za/Sectors-and-Services/Sectors/Food</p>		
Contaminants and Residues		
<p>This Product shall comply with the provisions specified in GNR. 246 of 11 February 1994: Regulations governing the maximum limits for pesticide residues that may be present in foodstuffs. Department of Health. www.nda.agric.za/docs</p>		

PHYSICAL PARAMETERS:

PARAMETER	SUPER PREMIUM GRADE	PREMIUM GRADE	COMMERCIAL GRADE
Rejects % by weight	<1.0%	<2.0%	<3.0%

FLAVOUR: Typical of raw, roasted or roasted salted macadamias, free from off or objectionable flavours.

APPEARANCE Free flowing whole or half kernels, pieces, chips or meal

COLOUR: Raw – White to Cream

Roasted or roasted salted – Cream to Light Brown

TEXTURE: Typical of Macadamias, firm and crunchy

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SIEVE ANALYSIS AND WHOLE & HALF KERNEL PERCENTAGES:

STYLE	SCREEN SIZE		WHOLE KERNELS (BY WEIGHT)
	PASSED THROUGH	RETAINED ON	
STYLE 0	N/A	20mm (round hole)	98% min
STYLE 1	20mm (round hole)	16mm (round hole)	95% min
STYLE 1S	17mm (round hole)	14mm (round hole)	90% min
STYLE 1SW	14mm (round hole)	10mm (round hole)	80%
STYLE 2	Blend of a minimum of 50% Wholes and the remainder being mainly Halves		
STYLE 3	Blend of a minimum of 15% Wholes and the remainder being mainly Halves		
STYLE 4L	N/A	14mm (round hole)	15% max
STYLE 4LS (14-16mm)	16mm (round hole)	14mm (round hole)	15% max
STYLE 4	14mm (round hole)	12mm (round hole)	10% max
STYLE 5	12mm (round hole)	8mm (round hole)	10% max
STYLE 6 NATURAL CHIP	8mm (round hole)	6mm (round hole)	N/A
STYLE 7 NATURAL CHIP	6mm (round hole)	3mm (round hole)	N/A

NOTE: Sizing refers to production screen sizes. Due to the nature of this process there may be a percentage of kernel that is over or undersize.

FOREIGN MATERIALS:

FOREIGN MATTER	LEVEL	MAXIMUM
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	Target Nil	1pc/100kg maximum
Loose macadamia shells in Style 0-5	Target Nil	1pc/100kg
Loose macadamia shells in Style 6-7	Target Nil	1pc/100,000pc
Impacted Shell	Target Nil	1% w/w

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CHEMICAL:

PARAMETER	LIMITS PREMIUM AND SUPER PREMIUM	LIMITS COMMERCIAL GRADE	TEST METHODS
Moisture	2%	2%	Halogen Lamp Balance/ Oven Method
Free Fatty Acid	<0.5%	<0.8%	ISO 660:2009
Peroxide Value	<3 meq/kg OIL	<5 meq/kg OIL	ISO 3960:2017
Aflatoxin (B1, B2, G1, G2)	As per country requirements	As per country requirements	Vicam - HPLC

MICROBIOLOGY:

ND = Not Detected

PARAMETER	LIMITS				TEST METHODS
	RAW	RAW (PASTEURISED)	ROASTED/ROASTED SALTED	ROASTED/ROASTED SALTED (PASTEURISED)	
Standard Plate count	≤ 20,000 cfu/g	<10,000 cfu/g	<3,000 cfu/g	<3,000 cfu/g	CCFRA method 1.1.1
Mould & Yeast count	≤ 10,000 cfu/g	<500 cfu/g	<1,000 cfu/g	<1,000 cfu/g	ISO 21527
Total Coliforms	≤ 350 cfu/g	<100/g	<25/g	<25/g	ISO 4832
E. Coli	< 10 cfu/g	ND / 1g	ND / 1g	ND / 1g	CCFRA method 2.4.2
Salmonella	ND / 250g or ND / 375g (USA)	ND / 250g or ND / 375 (USA)	ND / 250g	ND / 250g	ISO 6579
Coagulase positive staphylococci	< 100 / g	<100/g	<100/g	<100/g	ISO 6888
Listeria monocytogenes	ND / 25g	ND / 25g	ND / 25g	ND / 25g	Oxoid method based on ISO 11290

NUTRITION:

ND = Not Detected

RAW / PASTEURISED MACADAMIA	AVERAGE QUANTITY PER SERVING (30G)	AVERAGE QUANTITY PER 100G
Energy, without dietary fibre	890kj	2966kj
Energy, including dietary fibre	905kj	3018kj
Dietary Fibre	1.92g	6.4g
Fats (total)	22.2g	74g
▪ Monounsaturated	17.892g	59.64g
▪ Saturated	3.012g	10.04g
▪ Polyunsaturated	0.336g	1.12g
Trans fatty acid	ND	ND
Protein	2.76g	9.2g
Carbohydrates	1.35g	4.5g
Sugars	1.35g	4.5g
▪ Added Sugars	0g	0g
Calcium	14.4mg	48mg
Iron	0.54mg	1.8mg
Sodium	0.3mg	1mg
Cholesterol	0mg	0mg

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Vitamin D	0mg	0mg
Potassium	123mg	410mg

DRY ROASTED MACADAMIA	AVERAGE QUANTITY PER SERVING (30G)	AVERAGE QUANTITY PER 100G
Energy, without dietary fibre	890kj	2966kj
Energy, including dietary fibre	905kj	3018kj
Dietary Fibre	1.92g	6.4g
Fats (total)	22.2g	74g
▪ Monounsaturated	17.892g	59.64g
▪ Saturated	3.012g	10.04g
▪ Polyunsaturated	0.336g	1.12g
Trans fatty acid	ND	ND
Protein	2.76g	9.2g
Carbohydrates	1.35g	4.5g
Sugars	1.35g	4.5g
▪ Added Sugars	0g	0g
Calcium	14.4mg	48mg
Iron	0.54mg	1.8mg
Sodium	0.3mg	1mg
Cholesterol	0mg	0mg
Vitamin D	0mg	0mg
Potassium	123mg	410mg

ROASTED & SALTED MACADAMIA	AVERAGE QUANTITY PER SERVING (30G)	AVERAGE QUANTITY PER 100G
Energy, without dietary fibre	881kj	2936kj
Energy, including dietary fibre	896kj	2988kj
Dietary Fibre	1.90g	6.34g
Fats (total)	21.98g	73.26g
▪ Monounsaturated	17.71g	59.04g
▪ Saturated	2.98g	9.94g
▪ Polyunsaturated	0.33g	1.11g
Trans fatty acid	ND	ND
Protein	2.73g	9.11g
Carbohydrates	1.34g	4.46g
Sugars	1.34g	4.46g
▪ Added Sugars	0g	0g
Calcium	14.26mg	47.52mg
Iron	0.53mg	1.78mg
Sodium	114.90mg	382.99mg
Cholesterol	0mg	0mg
Vitamin D	0mg	0mg
Potassium	122.07mg	406.9mg

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ADDITIONAL INFORMATION:

PACKAGING: The Product is normally packed into nitrogen flushed vacuum sealed aluminium foil bags in fibreboard cartons. Net carton weights are normally:

STYLE	KG PER CARTON	POUNDS PER CARTON	Residual Oxygen
Style 0 to Style 4	11.34kg	25.00lb	<2%
Style 5 and Style 6	11.34kg	25.00lb	<5%
Style 7 and Meal	10.00kg	22.05lb	<5%

****Note:** Style 5 and Style 6 packaging will change from 10kg to 11.34kg from 1st April 2022. Any Style 5 or Style 6 product packed before 1st April 2022 will remain in 10kg cartons.

STORAGE: The Product should be stored in original packaging in a clean (10-15°C), dry area (50-60% RH), free from toxic chemicals, odours, insect and rodent infestation. Shelf life (recommended best before) for raw macadamias is 24 months from date of manufacture/packing if packaged and stored as per above. Shelf life (recommended best before) for roasted and or salted macadamias is 24 months for Styles 0 to 4 and 18 months for Styles 5 to 7 and Meal, from the date of manufacture/packing if packaged and stored as per above.

DEFINITIONS:

- **Reject Kernel** is defined as kernel with major defects/disorders suitable only for non-food use.
- **Commercial Kernel** is defined as kernel exhibiting minor defects/disorders but fit for human consumption.
- **Premium Kernel** is defined as fully matured kernel free from significant defects/disorders in its current form.
- **Whole Kernel** is kernel which is not split or separated into halves, with not more than ¼ of the kernel missing, given that the kernel contour is not materially affected by the missing portion.
- **Half Kernel** means approximately half of a whole kernel as it normally separates.
- **Infestation** those which are typical of the Product.
- **Loose shell** means any loose shell, which will not pass through a 3mm square opening.
- **Impacted shell** means any kernel with embedded shell which will not pass through a 3mm square opening.
- **Pasteurised:** refers to kernel processed through a Napasol pasteurisation system which has been demonstrated to provide a >5 log reduction of *Salmonella* sp. on macadamia kernel.
- **Grading of kernel is based on a statistical testing regime.** Kernel is collected continuously with the composite sample being representative of the day code to determine the kernel quality.

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