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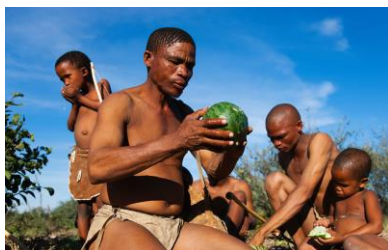
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## KALAHARI MELON SEED Cold pressed oil

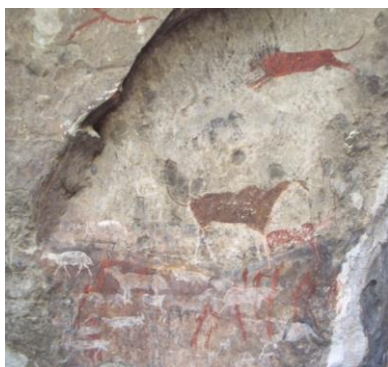
LATIN NAME:	Citrullus lanatus
INCI NAME:	Citrullus lanatus (watermelon) seed oil
OTHER NAMES:	Karkoer, Mankataan, Tshamma, Ootanga White Watermelon, Wild Melon, Wild Watermelon
CAS Nr:	90063-94-8
SOURCE:	Cold pressed from the seed.
COLOUR	Colourless to very light yellow-green colour
AROMA	Very subtle neutral odour
CULTIVATION:	Commercially grown
ORIGEN:	South Africa



## OVERVIEW



Bushmans eating Kalahari melons



Bushman paintings at Highland Essential Oils

It is the biological ancestor of the watermelon, which is now found all over the world, but which originated in the Kalahari region of Southern Africa. Unlike the common watermelon, whose flesh is sweet and red, the Kalahari melon's flesh is pale yellow or green, and tastes bitter. It is a creeping annual herb. The Kalahari melon has hairy stems, forked tendrils and three-lobed hairy leaves. Its flowers are bright yellow.

The fruits vary significantly, from small and round in the wild, to larger and more oblong-shaped under cultivation. The surface is smooth, pale green with irregular bands of mottled darker green radiating from the stalk. The flesh is a pale green or yellow, and contains numerous brown seeds. In its wild form, the fruit is bitter to bland in taste, and largely inedible when fresh.

The Kalahari melon or edible tshamma is 'sweet' and highly adapted to surviving drought and the harsh light of the desert environment. Although found all over Southern Africa, it is most closely associated with the Kalahari sands of Namibia, Botswana, south-western Zambia and western Zimbabwe. It belongs to the botanical family of Cucurbitaceae. The bitter karkoer usually occurs elsewhere, often as a weed in old lands, particularly in the North-West, Free State, Western Cape and southern parts of the Northern Cape. Apparently wild animals, cattle and sheep do eat the bitter fruit.

### History and traditional uses

Archeological evidence suggests that the Kalahari melon has been used for over 4000 years. The San (Bushman) use the melon seed oil to moisturize their skin and encourage hair growth, while the pulp mixed with water is used as a sunblock. The rich yellow oil of Kalahari melon seeds has been used traditionally in Southern Africa as an ingredient in soap.

The seed-meal also has a long history of use as a cosmetic. After grinding, it is chewed and moistened with saliva, and then smeared over the body and rubbed in thoroughly. This is said to impart a healthy colour, and blemish-free complexion, to the skin

The juicy melons, despite their bitterness, have long been a crucial source of water for desert peoples. It is said that the Bushmen can survive for six weeks in the desert on Kalahari melons alone.

# CHEMICAL COMPOSITION

COMPARISON BETWEEN VEGETABLE OILS																
Fatty acids		Omega	Kalahari melon	Manketti	Moringa	Almond	Apricot	Avocado	Ev.Prim	Grape	Jojoba	Rosehip	Palm	Wheatgerm	Marula	Boabab
			%	%	%	%	%	%	%	%	%	%	%	%	%	%
Myristic	C14:0		<1		0.1							0.0 - 0.3	0.5-6			
Palmitic	C16:0		<b>8-13</b>	7.4-9.2	3.5-6.9	3-9	3-6	14-25	5.5-7	6.0-9.0	< 3	3.4-4.4	35-48	11-16	9-12	18-30
Palmitoleic	C16:1		< 1		1.1	< 2	< 1.4	2-10		< 1	< 1	0.1-0.18		< 1	0.05-0.15	
Margaric	C17:0			0.04												
Stearic	C18:0	9	<b>5-11</b>	8-11.1	4.3-8.3	0.5-3	< 2	0.1-2	1.5-2.5	3-6	< 1	1.5-2.5	3-7	2-6	5-8	2-8
Oleic	C18:1	9	<b>10-29</b>	10.-18	67.3-76.5	60-75	55-70	55-75	5-11	12-25	5-15	14-16	35-50	12-39	70-78	30-40
Linoleic	C18:2	6	<b>55-70</b>	38-47	0.4-3.5	20-30	20-35	9-17	70-77	60-75	< 5	43-46	6-13	30-57	4-7	24-34
Linolenic	C18:3	3	< 2	18.3	0.1	0.4	< 1	0.1-2	9-10.9	< 1.5	< 1	31-34		2-10	0.1-0.6	1-3
Arachidic	C20:0		<1	24.9		<0.2	< 1		< 1	< 0.5	< 0.5	0.1-0.9		< 1	0.3-0.7	
Eicosenoic	C20:1				2.3-2.6	0.2	<1		< 1	< 0.5	65-80	< 0.5		< 0.5	0.1-0.5	
Behenic	C22:0		<1			0.2				< 0.3	< 0.5	< 0.4		< 1		
Erucic	C22:1				4.6-7.3	<0.1					10-20				0.1-0.5	

## CULTIVATION & PRESSING at HEO



Kalahari melons on the field gathered in rows and picked up by women in bags

Kalahari melons crushed



Seeds separated from fruit

Seeds and pulp

Fruit pulper separating seed from the pulp

Washed and Dried seeds

Seeds cold pressed

Oil filtered

Oil





Spend material on field used as animal feed



Pulp separated from seed used in compost



Oil Cake used as animal feed

## USES

The rich yellow oil of Kalahari melon seeds has been used traditionally in Southern Africa as a moisturizer to protect the skin from the sun, to promote hair growth and as an ingredient in soap. The ground seeds also have a history of use as a cosmetic, primarily being used as a face and body scrub which is said to impart a blemish-free complexion to the skin.

### SKIN CARE



- **Natural moisturiser suitable for all skin types**- It is highly moisturizing regenerating and restructuring properties. It is a very light and naturally absorbent oil. Renew the skin's elasticity. Wonderful for mature, acne-prone, oily, and dry skin.
- **Non-greasy and non-clogging** - Lightweight yet highly moisturizing and emollient. Kalahari Melon Seed oil penetrates quickly without feeling greasy
- **Reduce wrinkles.** The high content of linoleic acid provides anti-inflammatory, moisturizing and healing support, softens the skin, restoring skin elasticity, helps to keep the skin supple and youthful, combating wrinkles. Linoleic acid also helps to facilitate the penetration of other active ingredients such as anti-oxidants. Its an excellent ingredient to incorporate into serum formulations.
- Massage into stretch marks to lighten appearance or use as a preventative measure
- **Dissolves excess sebum** - this oil is perfect for acne and blemish prone skin types. Linoleic acid helps to combat acne by blocking the hypersecretion of sebum due to hormones
- **Rich in antioxidants and omega 3; 6 & 9 essential fatty acids.** The high content of essential fatty acids (linoleic, oleic and palmitic acids) improve and maintain the integrity of the cell walls. Epidermal lipids are a mixture of ceramides, free fatty acids and cholesterol. The two essential fatty acids; linoleic acid (omega 6) and linolenic acid (omega 3) cannot be manufactured by the body and is best applied topically to the skin. Both play an important part in a viable epidermis and consequently a healthy skin. It is important to note that ceramides are critical ingredients of the epidermal lipids and there is substantial evidence that linoleic acid is an essential structural component of skin ceramides. Thus, linoleic acid not only forms part of the lipid structure of the epidermis but is also utilized to help form critically important ceramides.
- **Baby skin care formulations** -Can be used 100% to replace commercial baby oil
- **Noncomedogenic** - not tending to clog pores

**HAIR CARE**- Can be used as a hair oil and for itchy scalp and dandruff

## PRE-CAUTION

The FDA has not evaluated the statements on this website. No claims are made by HEO as to the medicinal value of any products from HEO. The information presented here is for educating our customers about the traditional uses of essential oils and is not intended to diagnose, treat, cure, or prevent any disease.

You are responsible for understanding the safe application of these products.

