



KLEIN KAROO
— OUDTSHOORN —
HALLMARK OF QUALITY

OSTRICH MEAT

KLEIN KAROO INTERNATIONAL LTD
SOUTH AFRICA





THE OSTRICH IS A BIRD OF AFRICA and its true home is in South Africa's Klein Karoo region. Large flocks of ostriches have roamed the plains of the Southern Cape for centuries. It is here in the Klein Karoo where the majority of ostrich activities are still concentrated. Since the onset of ostrich farming in 1864, South Africa is still the leader in the ostrich industry and has a 70% global market share. South Africa's leadership role is due to its ideal climate, vast experience and expertise of all role players, as well as the high quality and continuous investment in research.

This arid, sunny area on the most southern tip of Africa is also home to Klein Karoo International Ltd (KKI), the world's foremost producer of ostrich related products, supplying some 65% of all ostrich meat, leather and feathers found on international markets.



KLEIN KAROO
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WORLD LEADER IN OSTRICH MEAT

The Klein Karoo Co-operative was founded in 1945 in the town of Oudtshoorn, although local farmers already began domesticating ostriches in the region over 130 years ago. Since then ostriches have been bred for optimum production of quality meat, leather and feathers and it is this commitment to quality that is recognised by consumers of our products worldwide. Subsequently the KLEIN KAROO brand name has become synonymous with the best the exotic ostrich has to offer.

Klein Karoo International Ltd has approximately 1 100 members, of which over 500 supply birds to the company. These ostrich farmers are leaders in their field. Under the auspices of Klein Karoo International, they practise scientific farming management programmes, monitored by KKI, the Directorates of Animal Health, and Veterinary Public Health. These monitoring programmes ensure that each bird remains healthy right up to the slaughter date, producing meat of the highest quality.

Klein Karoo International Ltd is committed to adhere to all international standards in relation to farming practices, processing, export requirements, biodiversity management, bio-security, and the humane treatment of ostriches, as prescribed by the industry's code of conduct.



www.kleinkaroo.com

OSTRICH MEAT PRODUCTION



PRODUCTION OF OSTRICHES

Klein Karoo International's ostriches are raised to a live mass of about 90 kg in natural surroundings according to free range principles on privately owned farms mainly in the Klein Karoo region. The producers are responsible farmers and aim to raise the birds in the most acceptable way according to international legislation as required by export countries.

NUTRITION OF OSTRICHES

Ostriches are fed on pastures such as alfalfa, wheat and alfalfa hay produced by the farmers. The birds on pastures receive additional energy and protein supplements to ensure a balanced ration. This will include energy sources such as maize, barley, oats; protein sources such as soya and canola; and roughage sources such as alfalfa and bran. Vitamins and minerals are also added. No animal protein sources are used and no growth stimulants are administered. The meat is free of any systematically administered antibiotics. Klein Karoo International partakes in a rigorous residue (growth stimulants and other chemicals) monitoring program on all meat.

PROCESSING OF OSTRICH MEAT

The birds are transported live to either one of the three Klein Karoo International ostrich abattoirs (ZA92, ZA118, ZA8), held in a holding pen and are slaughtered under humane and Halaal conditions. The carcasses are then de-boned. The utilisable meat, mainly emanating from the legs, is prepared as various primal cuts and meat is being portioned into final products. The whole muscles (primal cuts) are portioned according to clients' specific requirements. These products are all vacuum packed, labelled, boxed and kept in cold storage until dispatched.

PACKING, STORAGE & SHELF-LIFE

PACKAGING AND STORAGE OF MEAT

Portioned meat is vacuum packed on multivac machines with clear lidding (65 - 80 μm) and base (150 μm) plastics. Primal cuts are vacuum packed in plastic bags of 70-80 μm . The products are boxed in specially designed 10 kg boxes and stored either as fresh meat (0 - 4 $^{\circ}\text{C}$) or as frozen meat (<-18 $^{\circ}\text{C}$) destined for export markets. The meat is exported fresh as well as frozen to accommodate both-in-and-out-of-season demand.

Bulk Packaging: Each carton is check-weighed, labelled and strapped. Full control and traceability of the products is maintained throughout each part of the process.

Retail packaging: Automatic weight control of packs take place to select and combine portions to achieve fixed weight and/or fixed number of pieces.



SHELF-LIFE

The selling date of various ostrich products is derived from shelf-life studies conducted in Klein Karoo International's research laboratory. Products are tested over a period of time to ensure that sensory (taste, appearance and smell) and microbiological (food safety) values comply with the quality criteria of the consumer.

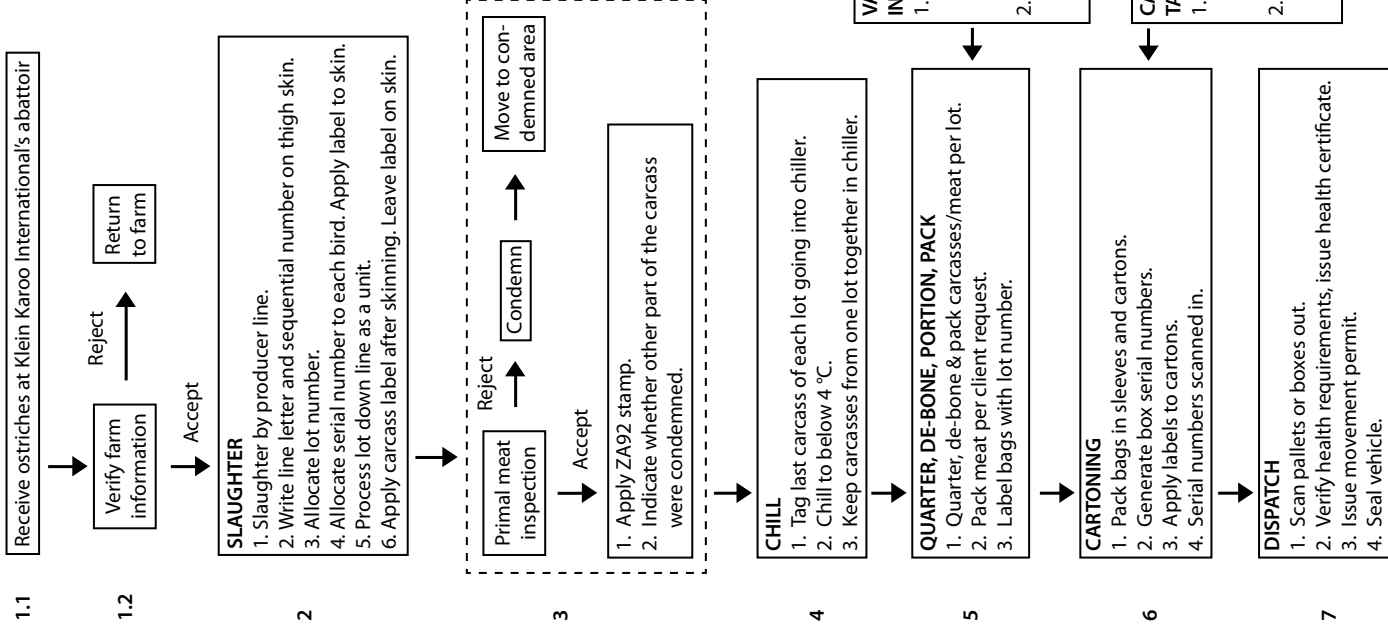
Shelf-life (from date of production) for portioned chilled meat is 28 and 42 days for bulk packed chilled meat (both stored continuously at 0 - 4 $^{\circ}\text{C}$).

Shelf-life (from date of production) for frozen meat is three years stored continuously at or below -18 $^{\circ}\text{C}$.



FOOD SAFETY & TRACEABILITY: PROCESS FLOW DIAGRAM

6



VACUUM & MULTIVAC PACKING OF MEAT

1. Vacuum bags and roll stock received from packing stores with batch traceability.
2. Indicate traceability information on daily HACCP sheets.

CARTONING OF BULK & RETAIL VACUUM PACKED MEAT

1. Retail and bulk cartons and sleeves received from stores.
2. Indicate traceability information on daily HACCP sheets.

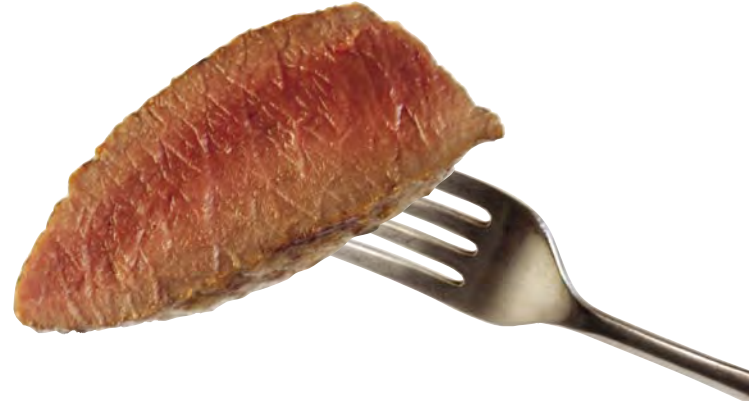
FARM-TO-FORK TRACEABILITY

FOOD SAFETY & TRACEABILITY

Klein Karoo International has three abattoirs (ZA92, ZA118, ZA8) which are used exclusively for the slaughtering of ostriches. These abattoirs have been designed to comply with the very stringent hygiene controls stipulated by importing countries in Europe and elsewhere.

At Klein Karoo International, food safety is non-negotiable. By applying a quality management system which focuses specifically on food safety it is possible to produce high quality meat products on a continuous basis. The producer raising ostriches is the first link in the quality control system. KKI continues with this control process in the slaughter, processing, marketing and selling of meat. Monitoring takes place in such an in-depth and stringent manner that it is possible for the end-consumer to trace the succulent ostrich meat on his or her plate back to the farm of origin.

KKI's food safety system monitors not only meat products, but also the manufacturing process as a whole at various levels. A series of tests and analyses are



conducted daily. This system consists of a process flow that monitors critical points (HACCP). Everything is documented for reference and adjustment purposes. Thereafter it is reviewed by independent internal and external auditors to ensure that the process is transparent and executed correctly. Klein Karoo International has a resident ostrich specialist veterinarian. At KKI's fully equipped laboratory an expert team of microbiologists and food technologists set the benchmark for traceability and food safety. To maintain high standards, KKI is also committed to continuous investment in research.

Audits are carried out by independent bodies such as the Department of Agriculture: Veterinary Services, the European Union's food safety teams and the accredited certifying organisations such as the SABS and SGS. KKI is also measured against international chain group standards such as the British Retail Consortium (BRC) and the International Food Standards (IFS).

To ensure that the KKI food safety philosophy is communicated to all groups within the organisation, supervisors and workers who are in direct contact with the product receive ongoing training in safe handling of food products. Consumers can therefore be sure that the route from the farm to the fork remains entirely safe.



NUTRITIONAL VALUE OF OSTRICH

CHARACTERISTICS OF OSTRICH MEAT

The growing trend towards a healthier lifestyle has led to an increase in the popularity of South African ostrich meat. In today's health conscious world ostrich meat has become part of a balanced diet and allows the meat lover the pleasure of a scrumptious steak or fillet in the full knowledge that it is, in fact, a great choice. The character and versatility of ostrich meat makes it the ideal choice for home cooks and chefs when preparing light meals and great tasting nutritious dinners.

- Low in fat – Only 1.4 g per 100 g meat
- Rich in protein – A high 22 g per 100 g meat
- Lower in cholesterol than other red meats – Only 60 mg per 100 g meat
- Low in collagen – Most digestible red meat
- A good source of biologically available iron – 3.2 mg per 100 g meat
- Kilojoules – Approximately 377 kJ per 100 g meat
- KLEIN KAROO ostrich meat is free of hormones and growth stimulants.

TYPICAL NUTRITIONAL INFORMATION PER 100 g OSTRICH FILLET

Energy (kJ)	425
Protein (g)	22
Carbohydrate (g)	0
of which total sugars	0
Total Fat	1.6
mono unsaturated fat (g)	0.6
poly unsaturated fat (g)	0.4
saturated fat (g)	0.6
trans fat (g)	0
Cholesterol (mg)	46
Total dietary fibre (g)	0
Total sodium (mg)	40



Ostrich meat is the best choice for the weight conscious consumer because it is low in fat and lower in cholesterol than other red meats. This, as well as the iron content of ostrich meat, will greatly benefit people with an active lifestyle. The fact that the iron is biologically available also makes ostrich an ideal protein source for anaemic people. Ostrich meat will contribute to a healthy lifestyle without compromising on taste.

NUTRITIONAL VALUE OF OSTRICH MEAT

The nutritional values for primal cuts and portioned meat (*table above*) were determined through analyses of the products based on the latest results.

** Please note that the typical nutritional information of different cuts may vary.*

ALLERGENS

Ostrich meat does not inherently carry any known allergens.



APPROVED AS PART OF
THE HEART AND STROKE
FOUNDATION EATING PLAN



OUR OSTRICH PRODUCT RANGE

Klein Karoo International Ltd offers a wide variety of ostrich meat and ostrich by-products that include:

- **A RANGE OF BULK VACUUM PACKED OSTRICH MEAT CUTS**
- **RETAIL VACUUM PACK RANGES**
- **VIENNAS AND RUSSIAN SAUSAGES**
- **INDIVIDUALLY QUICK FROZEN (IQF) OSTRICH MEAT RANGE**
- **OSTRICH AND OSTRICH LIVER PÂTÉ**
- **PETFOOD**
- **OSTRICH OIL**
- **CARCASS MEAL**



BULK VACUUM PACK RANGE

KKI's range of bulk vacuum packed ostrich meat primal cuts includes:

- **Fan Fillet**
- **Small Fillet:** Tornado Fillet, Eye Fillet, Tenderloin, Oyster Fillet and Long Fillet
- **Small Steak:** Small Drum, Tender Steak, Minute Steak One, Minute Steak Two and Small Steak
- **Steak:** Rump Steak, Big Drum, Moon Steak, Flat Drum, Drum Steak and Triangle Steak
- **Sauté:** Fillet and Steak Cubes
- **Goulash:** Mixed Cubes
- **Trimmings**
- **Geschnetzeltes**
- **Stroganoff**
- **Roast Fillet and Roast Steak**

Packaging: Individually vacuum sealed portions and bulk packed (2.5 kg).



Above: Individually vacuum sealed portions ideal for catering.



Above: Bulk vacuum sealed portions.

RANGE OF OSTRICH MEAT CUTS

FAN FILLET



Fan Fillet 1.5 kg

SMALL FILLET



Long Fillet 500 g

SMALL STEAK



Small Drum 300 g

SMALL FILLET



Tornado Fillet 250 g



Tender Steak 300 g



Eye Fillet 450 g



Minute Steak One 125 g



Tenderloin 500 g



Minute Steak Two 125 g



Oyster Fillet 300 g



Small Steak 200 g

STEAK



Rump Steak 1.2 kg



Big Drum 1 kg



Moon Steak 750 g



Flat Drum 650 g



Drum Steak 500 g



Triangle Steak 400 g

SAUTÉ



Fillet & Steak Cubes 30 - 60 g

GOULASH



Mixed Cubes 30 - 60 g

STROGANOFF



Mixed Strips 60/80 x 10mm

GESCHNETZELTES



Thin Slices 20 x 20 x 3 mm

TRIMMINGS



Carcass Trim

* Please note: The weight specified above indicates the approximate weight per muscle.

OSTRICH RETAIL RANGE



Ostrich Fillet 500 g



Ostrich Steak 500 g



Ostrich Sausage 500 g



Ostrich Goulash 500 g



Ostrich Steak Burgers 500 g



Ostrich Minced Meat 500 g



PROCESSED OSTRICH MEAT RANGE

VIENNAS AND RUSSIAN SAUSAGES

Klein Karoo International Ltd makes high quality, ready-to-eat Russian and Vienna sausages that are free of MSG and high in protein. These Russians and Viennas are made of 100% pure ostrich meat (free of offal and mechanically deboned meat) and vacuum packed in 500g packs.



IQF OSTRICH MEAT RANGE



IQF Ostrich Cubes
(10 x 20 x 20 mm per cube)

INDIVIDUALLY QUICK FROZEN (IQF) OSTRICH MEAT RANGE

- **Ostrich Fillet** 125 g. Cooked. IQF. Cartons of 5 kg
- **Ostrich Steak** 125 g. Cooked. IQF. Cartons of 5 kg
- **Ostrich Strips** (10 x 10 x 40 mm per strip). Cooked. IQF. Cartons of 5 kg
- **Ostrich Cubes** (10 x 20 x 20 mm per cube). Cooked. IQF. Cartons of 5 kg

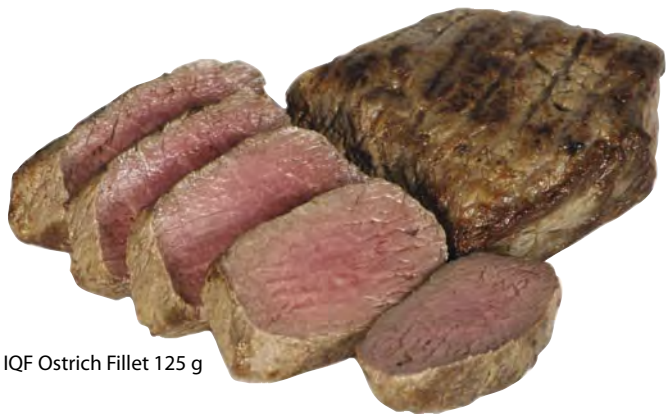
IQF Capacities

The capacity of the plant is currently two containers per month (30 tons).
The reaction time: two weeks for the production of a container, three weeks shipping to Europe.

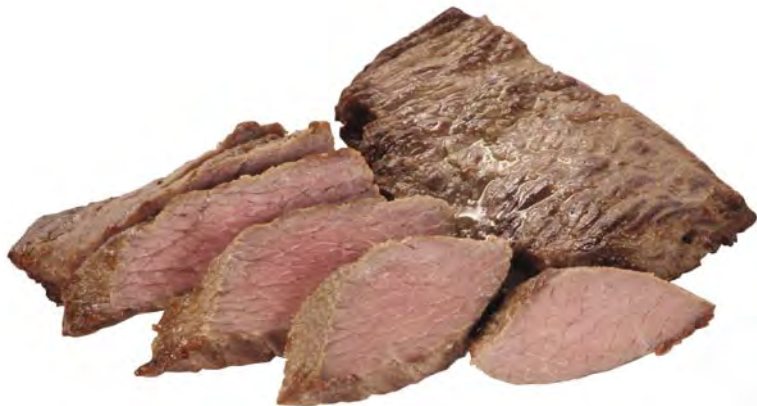
IQF ostrich meat is ideal for the food service sector!



IQF Ostrich Strips
(10 x 10 x 40 mm per strip)



IQF Ostrich Fillet 125 g



IQF Ostrich Steak 125 g

OSTRICH LIVER PÂTÉ

OSTRICH LIVER PÂTÉ WITH GREEN PEPPER CORN

Ingredients: Ostrich Liver (42%), Vegetable Oil, Water, Isolated Vegetable Proteins, Herbs and Spices, Flavourings, Curing Agent, Sodium Nitrate. No preservatives.

Packaging: 110 g can

Also available in KKI's pâté range: Ostrich Pâté, Springbok Pâté, Kudu Pâté.

Plant Registration: ZA151

Abattoir: ZA92, ZA14, ZA18



OSTRICH PET FOOD RANGE

DOG TREATS

Great variety of 100% natural ostrich dog treats.

Ostrich dog treats are made of ostrich by-products in the export approved abattoir of Klein Karoo International Ltd.

Ostrich dog treats are low in fat, low in cholesterol, low in sodium and high in protein.

Ostrich pet treats are suitable for all dogs, big and small.

These products are sold on a natural fall basis.

Dried Ostrich Sinew Twisters >

Nutritional analysis (g/100g):

Protein – 98.2; Fat – 0.7; Moisture – 11.2;

Crude Fibre – 0.5; Ash – 0.6

Ingredients: Plated ostrich flat sinews.



Pet Food Plant
Registration: ZA14/93
Abattoirs: ZA92, ZA8, ZA118

Dried Ostrich Stomach >

Nutritional analysis (g/100g):

Protein – 87.7; Fat – 7.2; Ash – 3.6;

Moisture – 4.5; Crude Fibre – 3.2.

Ingredients: Ostrich oesophagus.



< Dried Ostrich Pet Biltong

Nutritional analysis (g/100g):

Protein – 64.3; Fat – 5.2; Ash – 8;

Moisture – 18.8; Crude Fibre – n/a;

Ingredients: Ostrich meaty off-cuts.



Dried Ostrich Mini Burger Patties >

Nutritional analysis (g/100g):

Protein – 35.25; Fat – 6.1; Ash – 5.57;

Moisture – 14.27; Crude Fibre – 1.87;

Ingredients: Meat patties are produced from ostrich trimmings, stomach skin, maize meal and water.



< Dried Ostrich Heart Pieces

Nutritional analysis (g/100g):

Protein – 73.7; Fat – 7.7; Ash – 5.7;

Moisture – 12.4; Crude Fibre – 0.6;

Ingredients: Ostrich hearts.



Dried Ostrich Stone Stomach >

Nutritional analysis (g/100g):

Protein – 76; Fat – 4.1; Ash – 7

Moisture – 5.5; Crude Fibre – 1.2;

Ingredients: Ostrich stomach.



OSTRICH PET FOOD RANGE

Dried Ostrich Sausage >

Nutritional analysis (g/100g):

Protein – 35.25; Fat – 6.1;

Crude Fibre – 1.87; Ash – 5.57

Moisture – 14.27; Ingredients:

Minced ostrich trimmings, stomach skin, maize meal, water and synthetic casings.



Dried Ostrich

Long Sinews >

Nutritional

analysis (g/100g):

Protein – 94.5;

Fat – 2.3; Moisture – 9.4;

Crude Fibre – n/a;

Ash – 2.0. Ingredients:

Ostrich long sinews



< Dried Ostrich Windpipes

Nutritional analysis (g/100g):

Protein – 70.1; Fat – 7; Moisture – 8.5;

Crude Fibre – n/a; Ash – 7.2

Ingredients: Ostrich windpipes



Dried Ostrich Sinew Trimmings >

Nutritional analysis (g/100g):

Protein – 82.3; Fat – 12; Ash – 2.2;

Moisture – 7; Crude Fibre – n/a;

Ingredients: Ostrich Pros B.



< Dried Ostrich Knee Sinews

Nutritional analysis (g/100g):

Protein – 81.4; Fat – 5; Ash – 8.1;

Moisture – 6.2; Crude Fibre – n/a;

Ingredients: Ostrich knee sinews



Dried Ostrich Neck Pieces >

Nutritional analysis (g/100g):

Protein – 65.8; Fat – 4.8; Ash – 26.2;

Moisture – 5.4; Crude Fibre – 2.2;

Ingredients: Ostrich Neck Pieces.

< Dried Ostrich Flat Sinews

Nutritional analysis (g/100g):

Protein – 95.6; Fat – 5; Moisture – 8;

Crude Fibre – n/a; Ash – 1.7

Ingredients: Ostrich flat sinews



Dried Ostrich Hip Bones >

Ingredients: Ostrich bones. (< 300 g)

Dried oesophagus >

Nutritional analysis (g/100g):

Protein – 92.2; Moisture – 12.9;

Crude Fibre – n/a; Ash – 2.2

Ingredients: Ostrich oesophagus.



OSTRICH OIL & CARCASS MEAL



OSTRICH OIL

Export category 3 ostrich oil is yellowish in colour and produced from ostrich fat and by-products treated with an anti-oxidant.

The oil has no rancid smell. The fatty acid profile of ostrich oil shows a high content of Omega 3, 6 and 9.

Ingredients: Ostrich oil, treated with an anti-oxidant.

Ostrich Oil Plant Registration: ZA14/19

Abattoirs: ZA92, ZA8, ZA118.

NUTRITIONAL INFORMATION AND OTHER CHEMICAL STANDARDS			
Analytical criteria	Values centred on	Alarm Level	Klein Karoo Reject Level
H2O & Impurities	0.7	> 0.15	Presence of impurities
Free Fatty Acid (%)	0.8	> 2.5	3.5 max
BHA (ppm)	850	< 800 to > 1 000	Min 650 Max 1 100
Ethoxyquine (ppm)	0	Detection of ethoxyquine	
BHT (ppm)	0	Detection of BHT	



CARCASS MEAL

Ostrich meat-and-bone meal is produced from ostrich by-products which originated from an export approved slaughter house. Meal is dark brown and finely ground. It is used as an ingredient in pet food.

Ingredients: Category 3 ostrich by-products, anti-oxidant and a salmonella inhibitor.

Packaging: 50 kg woven polypropylene bags (930 x 620 cm)

NUTRITIONAL ANALYSIS	
Protein	Minimum 45%
Fat	Maximum 15%
Moisture	Maximum 10%

Carcass Meal Plant Registration: ZA14/19
Abattoirs: ZA92, ZA8, ZA118.



HOW TO PREPARE OSTRICH MEAT

Open the vacuum-sealed ostrich meat packet and leave to stand for five minutes. Separate individual portions. Lightly baste with olive oil. Heat a heavy-base or griddle pan until very hot. If you are having a barbeque, the coals should be very hot. Place the fillets or steaks in the pan or on the grid and seal both sides. Turn meat twice on each side until done as preferred. Use tongs for turning, not a fork, to prevent loss of meat juices. Once the meat is sealed, sprinkle with seasoning. Remove from heat. Again baste lightly with olive oil. Cover and leave to rest for five minutes before serving.

WE DELIVER AT ANY PORT OF CALL

Meat products are distributed in refrigerated road transport vehicles or sea freight containers. Temperature is maintained at -18°C for frozen export containerization and at $0-4^{\circ}\text{C}$ for chilled products.

Thermo recorders are packed with consignments. Trucks are standard equipped with their own recorders to ensure that the temperature is maintained to the final destination.

Chilled meat intended for export is dispatched by road in refrigerated road transport vehicles to the airport in Johannesburg (O.R. Tambo International) from where it is air freighted to the European Union and other markets.

Frozen meat intended for export is containerized on site, dispatched by road transport vehicles to the Cape Town harbour and shipped to various markets.





KLEIN KAROO INTERNATIONAL LTD
is the world's largest producer of
ostrich meat products.



www.kleinkaroo.com

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