# Japanese Beef Products Guide Book



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1-2-1 Kasumigaseki, Chiyoda-ku, Tokyo Japan 100-8950 TEL: 03-3502-8111
URL: http://www.maff.go.jp
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Guide Book Contact: Ministry of Agriculture, Forestry and Fisheries, Agricultural Production

Bureau, Livestock Industry Department, Meat and Egg Division

TEL:03-3502-8473



# Japanese Beef Products Guide Book

Boasting a superior natural flavor, Japanese beef is high-quality, tender and juicy.



#### Greetings

I would like to take this opportunity to thank you for your loyalty towards Japanese beef.

Wagyu is a breed of cattle unique to Japan and can also be said to be part of Japan's heritage. The unrivaled quality and taste of Wagyu has been recognized around the world, and exports are increasing in line with the recent Japanese cuisine boom.

This guidebook has been prepared in an effort to introduce cutting and slicing methods so to optimize the characteristic qualities of each cut, including cuts that were previously uncommon overseas, and for a range of dishes including barbecue and hot pot recipes.

I hope that this guidebook provides more opportunities to enjoy the great taste of Wagyu.

MAFF, Agricultural Production Bureau Director-General: Kunio Naito







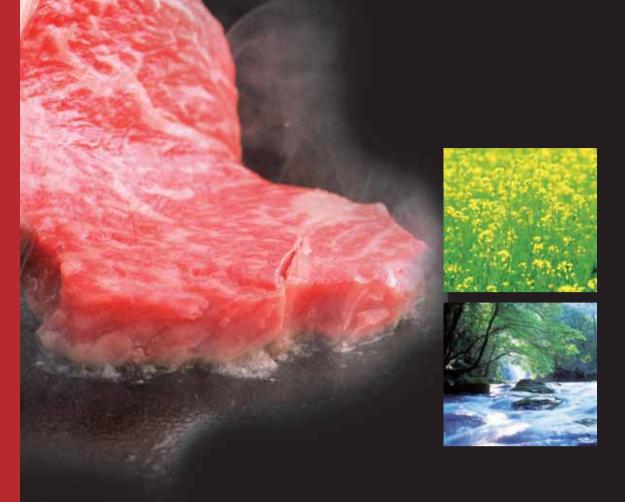


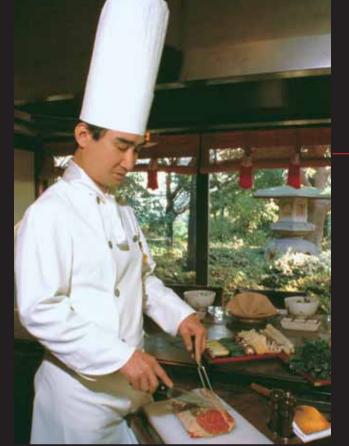


# CONTENTS

JAPANESE BEEF PRODUCTS 2008

Introduction to Wagyu (Japanese Beef)	
The universal Wagyu mark and quality rades————	
Beef cuts	
Illustration of beef cuts	
Recommended cooking methods	
Chuck roll	
Shoulder clod	
Neck —	
Chuck tender	
Brisket —	
Shank —	
Fillet	
Ribloin	
Sirloin —	
2 Rib short rib	
Short plate —	
Gooseneck round	
Top-round —	
D Rump	
Knuckle —	
Slicing/cutting guide lines	
Vagyu recipes —	
American cuisine	
Italian cuisine	
Chinese cuisine	
Korean cuisine	
Japanese cuisine	
leat safety measures —	







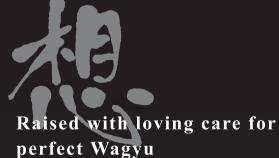
Including teppanyaki, sukiyaki and shabushabu, there is a wide variety of Japanese dishes that allow one to fully appreciate the tenderness and flavor of Wagyu. Teppanyaki is a simple method of drawing out the full flavor of the ingredients, while sukiyaki and shabushabu emphasize the delicate flavor and mouth-watering texture of thinly sliced beef. Japanese food culture places emphasis on enjoying the natural flavors of ingredients and has developed Wagyu into what it is today. Wagyu is unrivalled in its great taste and is now gaining popularity around the world as a luxury ingredient.



## Bringing the great taste of globally acclaimed Wagyu to dinner tables worldwide

The tenderness and delicate flavor of Wagyu is in high demand in Japan, where cuisine honors the inherent flavor of the ingredients. In response to such demand, Japan has refined its production technologies and the rest of the world, which is more accustomed to slightly more textured red meat, has been taken by surprise by the texture of Wagyu - a new style beef that once tried will not soon be forgotten. Wagyu, a relatively rare commodity, has the potential to increase the possibilities and value of food cultures around the world and bring with it significant change.







Each and every head of Wagyu cattle is given time and attention, and raised lovingly by feeding specialists in the vast open spaces of Japan. In addition to a well managed environment — a carefully designed diet including rice, hay, wheat, and bran to raise cattle that are both healthy and produce great tasting beef, and cattle sheds kept in immaculate condition so as not to stress the delicate cattle — Wagyu cattle are bred with human compassion and attention. Outstanding production technologies and the pride of the master in pursuit of perfect Wagyu gives way to a superior quality found nowhere else in the world.



# The melt-in-your-mouth texture is unique to Wagyu

Perhaps the most prominent characteristic of Wagyu is the marbled fat distributed through the muscle fibers known as "shimofuri" in Japan. The fine texture of Wagyu gives an extremely tender, melt-in-the-mouth quality. Wagyu is also known for its sweet, full-bodied aroma known as "wagyuko" or beef aroma. When cooking, Wagyu is known to give off an aroma that is likened to coconut or fruit. This beef aroma serves to further draw out the great taste of Wagyu. The flavor of Wagyu does not only satisfy the taste buds, but all five senses and has the potential to significantly change beef cuisine in countries around the world.









universal Wagyu mark

# The Wagyu brand is increasing in popularity all over the world

# Authentic Japanese Wagyu comes sealed with the universal Wagyu mark

Wagyu is increasing in popularity all over the world. This mark is only given to authentic Japanese Wagyu and we hope that you use it as a guide to selecting high-quality, great tasting authentic Wagyu meat products. Try one of the authentic Wagyu products today.

#### What breeds of cattle produce Wagyu?

Only breeds that satisfy the following conditions can be accredited as Wagyu beef.

#### ■Breeds

- 1. Japanese Black Cattle
- 2. Japanese Brown Cattle
- 3. Japanese Shorthorn Cattle
- 4. Japanese Polled Cattle
- 5. Cross breeds resulting from interbreeding of 1.- 4. above
- 6.Cross breeds from the interbreeding of 1. 5. or 5. above. Proof of the above must be able to be evidenced by means of a registration system in accordance with the Improvement and Increased Production of Livestock Act and through the cattle traceability system \* .
- \* Japan has established a beef traceability system that provides production records of domestic cattle in Japan from the time they are born up until the time they reach the consumer.

  Homepage Address: https://www.id.nlbc.go.jp/english/top.html

  For more information, please see p.45 and 46, "High-level Measures to Ensure Meat Safety", of the

#### ■Breeding environment

- 1. Must be cattle born and bred in Japan.
- 2. Ancestry of the cattle must be able to be confirmed by a traceability system.

#### High-grade Wagyu. Beef brands bred in specific regions of Japan.

Included under the category of Wagyu are beef brands that are extremely popular that have been bred using improved feeding methods and feed individually developed in specific regions throughout Japan. A large majority of these beef brands are given the name of the production area such as Matsuzaka Beef, Yonezawa Beef and Maesawa Beef.

#### Grading system to clearly identify meat yield and quality

currently graded by the Japan Meat Grading Association. Beef is graded based on the yield grade and meat quality. The yield grade refers to the ratio of meat to total weight of the carcass and is classified into three grades from A to C with A being a grade of higher yield. Meat quality is classified into five grades from 5 to 1 based on beef marbling, color and brightness of the meat, firmness and texture of the meat and color and brightness of the fat. The lowest of the four individual grades is the final grade allocated to the meat. A thorough grading system of 15 grades through a combination of the above two elements ensures a clear indication of Wagyu meat quality and yield grade.

To ensure fair trading, beef in Japan is ■Standard grades and how they are displayed <Example>

3

Yield	Meat Quality Grade							
Grade	5	4	3	2	1			
Α	Α	Α	Α	Α	Α			
	5	4	3	2	1			
В	В	В	В	В	В			
	5	4	3	2	1			
С	С	С	С	С	С			
	5	4	3	2	1			



# Wagyu Product Guide

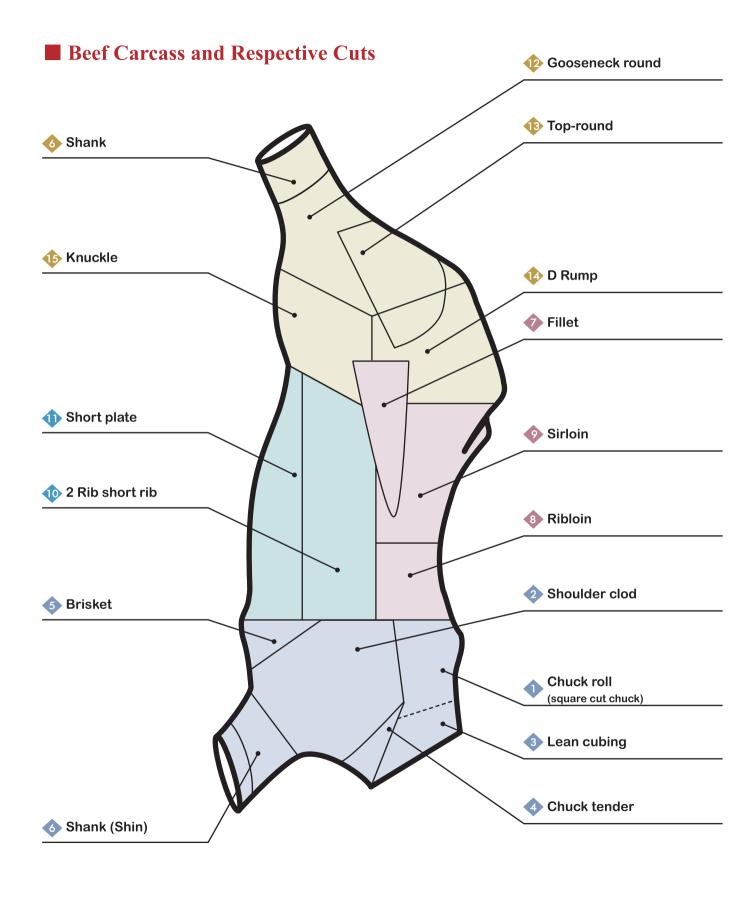
-A new range of selections-

This catalog, while also reviewing standard cuts that are popular in the marketplace, will also focus on introducing cuts that until now have been used with less frequency.

We hope that th]]e catalog serves as a guideline to exploring the possibilities for new product development.



# **Illustration of Beef Cuts**

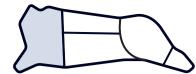


#### **■**Recommended Cooking Methods for Each Cut

★= Specially Recommended Cuts

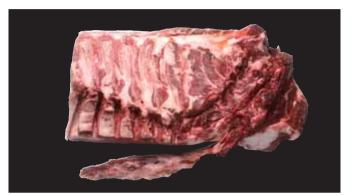
	Part of Meat		D. J.	Devel Devel			
Primal Cut	Sub-primal Cut	Steak	Barbecue	Roast Beef	Stewing	Sukiyaki	Shabu-shabu
Forequarter	Chuck roll * (Square cut chuck)	0	0		0	0	0
	2 Shoulder clod	0	0		0	0	0
	3 Neck		0		0	0	
	Chuck tender		©	©			
	5 Brisket		©		©	0	©
	<b>♦</b> ♦ Shank		0		0		
Loin	Fillet *	©	©	©			
	3 Ribloin	©	0			©	0
	Sirloin	0	0	0		0	0
Short plate briske t	2 Rib short rib *	0	0		0	0	
	◆ Short plate *	0	0		0	0	0
Round	Gooseneck round *		0	0	0	0	0
	1 Top-round	0	0	0	0		0
	<b>1</b> D Rump	0	0	0		0	0
	<b>♦</b> Knuckle	0	0	0		©	0

# Chuck roll\*



#### Overview of Raw Meat

The chuck roll is the forequarter portion that is cut between the 6th and 7th rib perpendicular to the dorsal line excluding the shoulder clod and the brisket. It is divided into the chuck and the neck. The chuck roll can be well-marbled and the meat is tender and tasty making it perfect for sukiyaki and barbecuing.



#### **Culinary Applications**

Barbecue

Shabu-shabu





■Chuck roll

■Neck

#### PRIMAL CUT



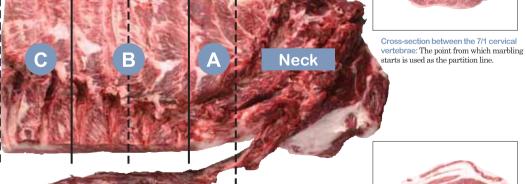
vertebrae: Marbling can be clearly seen in this cut and shows that it has been cut perpendicular to the muscle fiber.



vertebrae: The portion where inter-muscular fat is significant and the core of the chuck is smaller is used as the partition line.



Cross-section between the 6/7 thoracic vertebrae: Cross section between the chuck and the ribloin. The core of the loin is large with a proportionate balance of lean meat and fat.



Cross-section between the 3/4 cervical vertebrae: Interface between the neck and chuck (May differ depending on standards)

#### RETAIL CUT

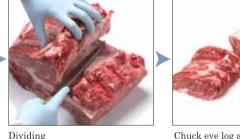


Fold the upper and bottom portions back when packing



Cut A
This portion is closest to the neck. The meat is a little tough and fibrous however has a strong flavor with little fat. (high proportion of lean meat)

Inserting a cleaver between the

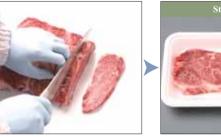


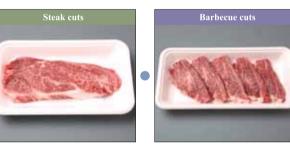
Chuck eye log and chuck flap

Dividing into the chuck eye log and the

■Chuck eye log

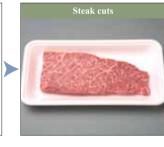
intercostal muscle and the chuck eye log













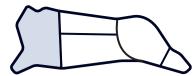




Cutting along the connective tissue

■ Cut C

# Shoulder clod



#### Overview of Raw Meat

The shoulder clod is a well-muscled area with a large proportion of muscle and muscle tissue and is made up of both tough and tender meat. The meat typically has a deep color and a strong flavor. It can be divided into cuts for sukiyaki, barbecuing and steak etc.

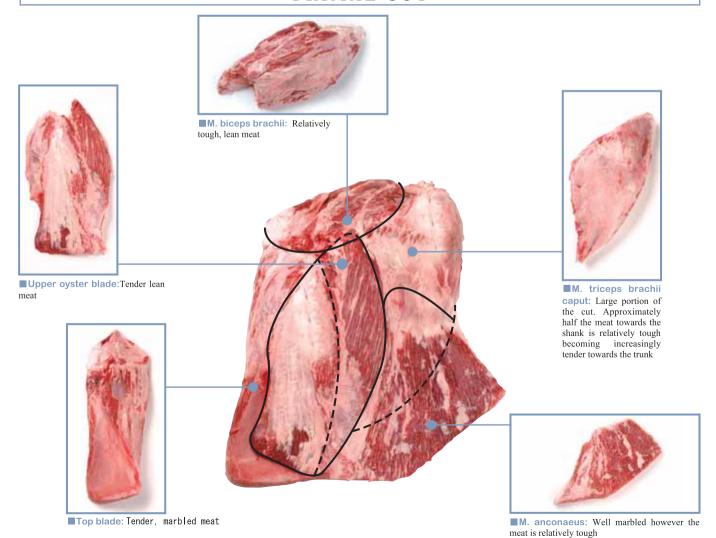


#### Culinary Applications

Steak

Shabu-shabu

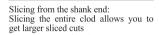
#### PRIMAL CUT



#### RETAIL CUT1











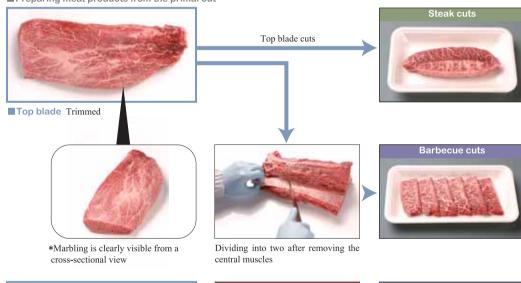




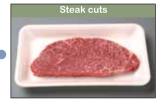


#### RETAIL CUT2









12

■M. triceps brachii caput Trimmed

**■**Other product examples



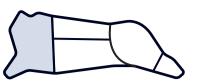
Upper oyster blade



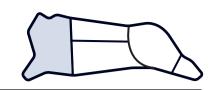
M. biceps brachii



M. anconaeus



Chuck tender



#### Overview of Raw Meat

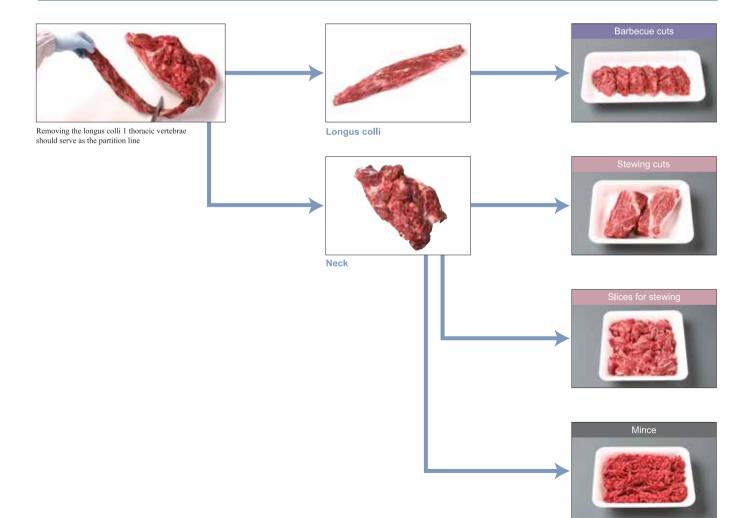
The neck meat comes from the portion of the neck that is well-muscled. The meat is tough, rough-textured, and lean. The meat is also comprised of a large proportion of muscle tissue making it ideal for stewing. It can also be combined with other cuts for BBQ cuts and slices for stewing.

#### Culinary Applications







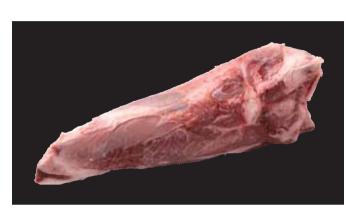


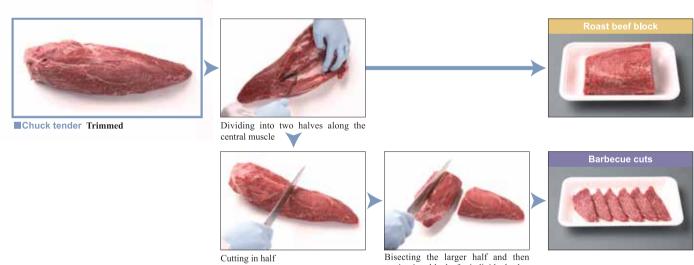
#### Overview of Raw Meat

The chuck tender is rare because only 2kg can be obtained from each animal. This is the part of the forequarter running from the forequarter to the shoulder clod however the meat is similar to round. The chuck tender is well marbled with a subtle, sweet taste that grows stronger the more it is chewed.

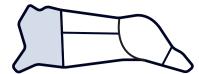


Barbecue





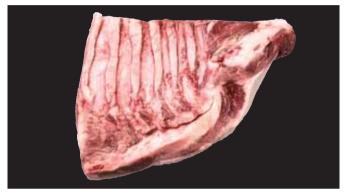
## Brisket



#### **Overview of Raw Meat**

The brisket refers to the chest area of the cow and is made up of cuts with very different meat qualities including fatty and tough pectoral meat, the brisket (A) located under the rib, brisket (pectoral meat) that is lean and tender, and chuck short rib (chuck rib) that has more flavor, marbling and a good appearance.

\* Cut perpendicular to the muscle



#### Culinary Applications

Barbecue

Stewing



Shabu-shabu

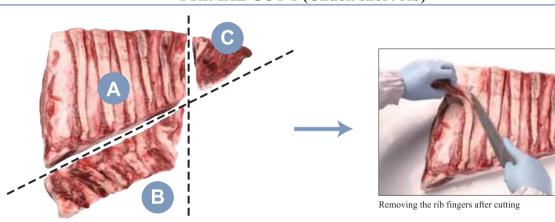




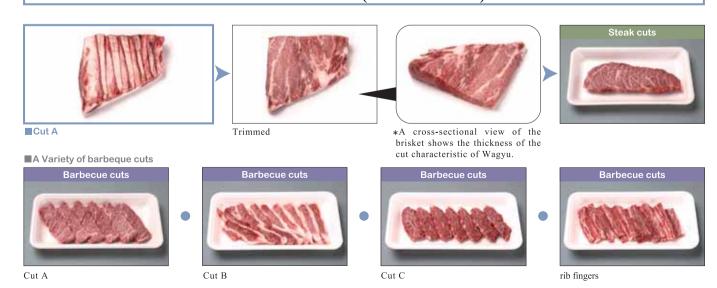
■Chuck short rib

■Brisket

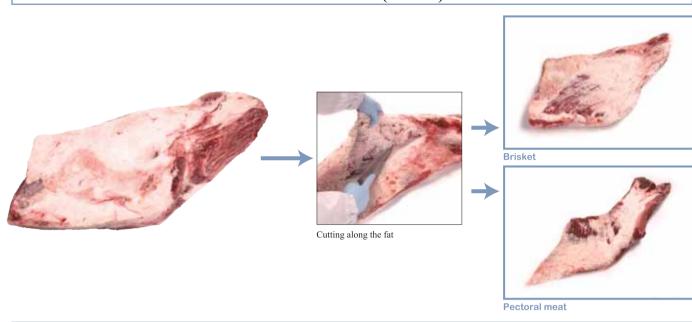
#### PRIMAL CUT 1 (Chuck short rib)



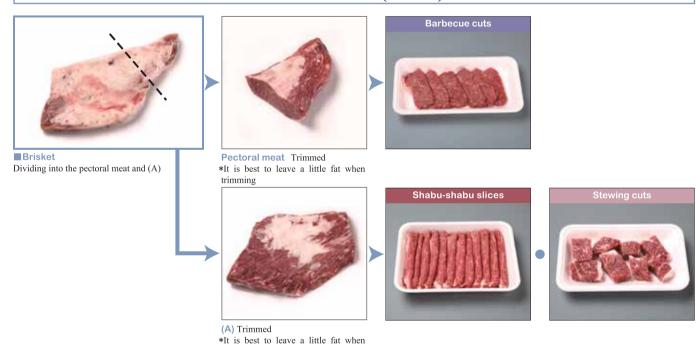
#### **RETAIL CUT 1 (Chuck short rib)**

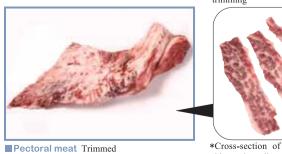


#### PRIMAL CUT 2 (Brisket)



#### **RETAIL CUT 2 (Brisket)**





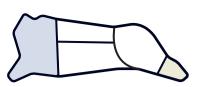
\*Cross-section of slices shows that

this cut is well marbled however it is

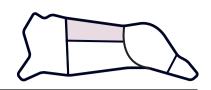
actually very tough





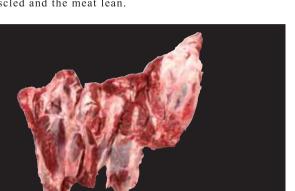


# Fillet\*



#### Overview of Raw Meat

The shank includes the shin and the shank. The shin is wellmuscled and consists primarily of lean meat. Generally it is prepared for ground or chopped meat. The shin can be divided into the shin body and the (C). The shank is also well-muscled and the meat lean.



#### **Culinary Applications**











Removing the (C) from the shin





■Shank meat products (Shin and shank)



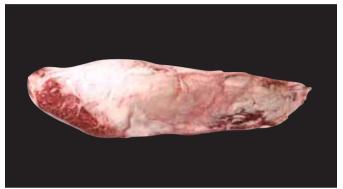
■Photo of Shank





#### Overview of Raw Meat

The fillet is located on the inside of the loin, contains practically no muscle and is characterized by its fine texture, tenderness and low fat content. It accounts for only 2% of the entire dressed carcass and it is a luxury item making it the most expensive cut of beef available. Care needs to be taken as the color of the meat degrades rapidly.



#### Culinary Applications





Preparation: Remove any flap meat from the short plate

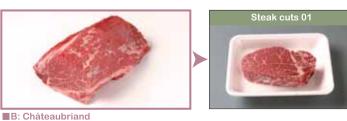




XSide view: The thickness of this cut is characteristic of Wagyu









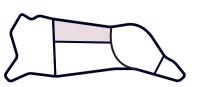


The sinew has been removed from the previous cut leaving only the tender portion giving it a higher commercial value.

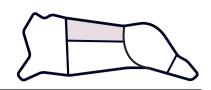




■C: Fillet Mignon



Sirloin



#### Overview of Raw Meat

The ribloin is the loin located next to the chuck at the dorsal side of the rib area. The meat is thick and fine textured. It is often well marbled giving it a full-bodied flavor.



Culinary Applications







Shabu-shabu



■Rib Cap Ribloin

#### PRIMAL CUT







RETAIL CUT







Cutting A large cross section allows for good size steaks



■Rib Cap Dividing the rip cap after

Ribloin Trimmed



#### Overview of Raw Meat

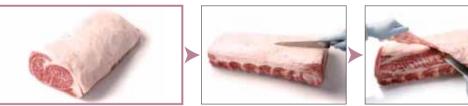
The sirloin, similar to the fillet is considered a high-quality cut and is located behind the ribloin. Its meat is finely textured and tender. It holds it shape well and it is possible to obtain identically sized cuts making it ideal for steak.

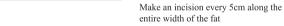


#### Culinary Applications

Shabu-shabu

#### PRIMAL CUT





Removing the upper fat followed by After removing the back strap the back strap

#### RETAIL CUT

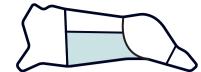


**■Photo** Trimmed





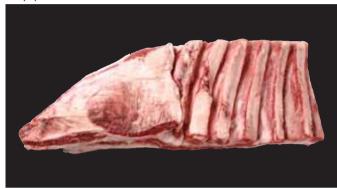
# 2 Rib short rib\*



#### **Overview of Raw Meat**

The 2 Rib short rib is the upper half of the short plate located at the belly. The short plate is well-muscled making the 2 Rib short rib fibrous with a proportionally large amount of connective tissue. The meat has a rough texture however the lean meat and fat are proportionately mixed giving it a rich taste and flavor. The 2 Rib short rib is also made up of a cut known as the flap meat that has a large proportion of lean meat that is well marbled.

#### \*Cut perpendicular to the muscle



#### **Culinary Applications**

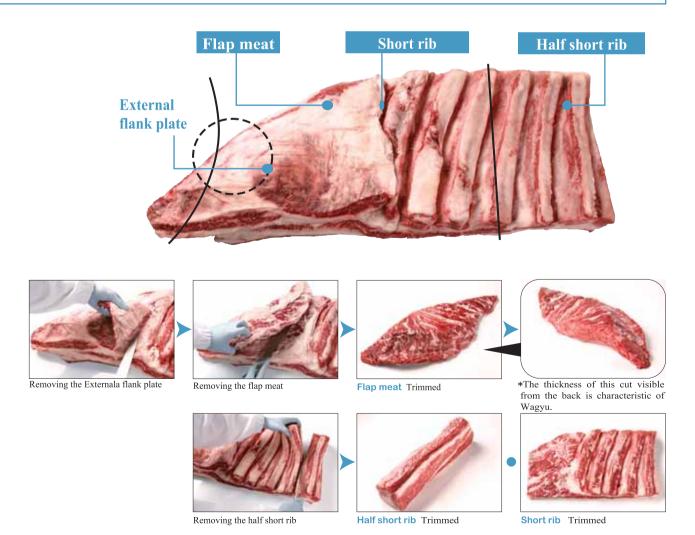
Steak

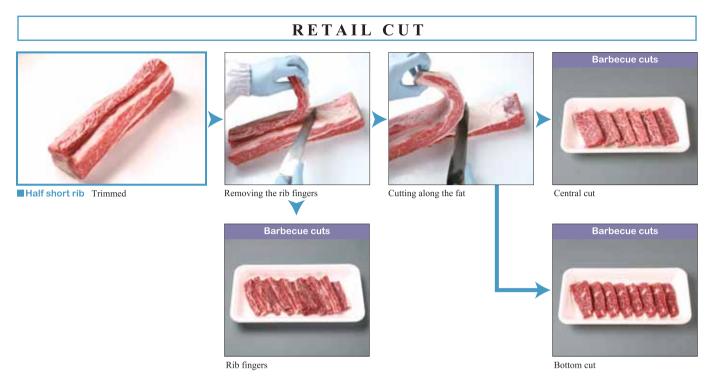
Barbecue

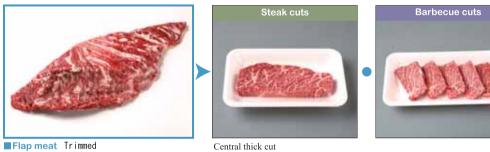
Stewing

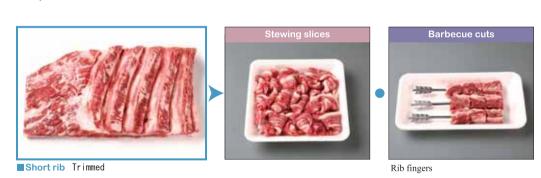
Sukiyaki

#### PRIMAL CUT

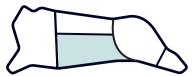






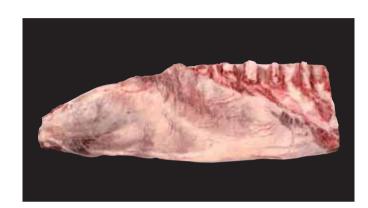


# Short plate\*



#### Overview of Raw Meat

The short plate is the bottom half of the short plate located at the belly. The meat, similar to the 2 Rib short rib, has a rough texture however is characterized by its rich flavor. The?short plate includes a cut known as the flank steak with a proportionate distribution of lean meat and fat.



#### Culinary Applications

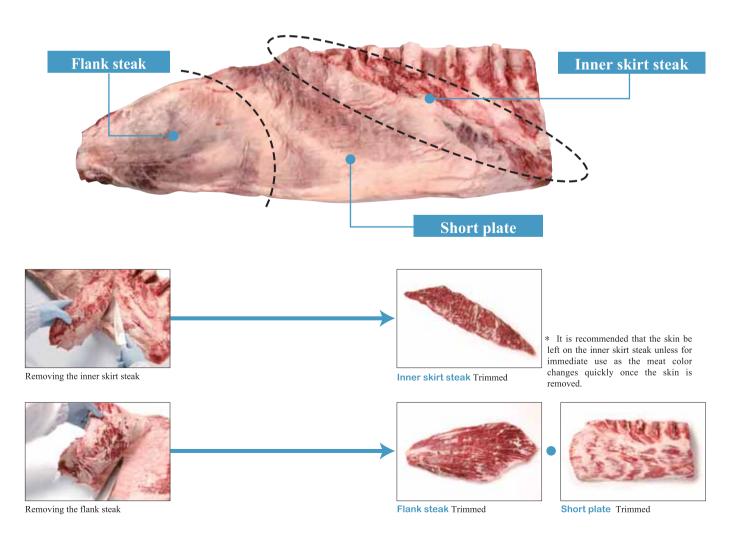
Barbect

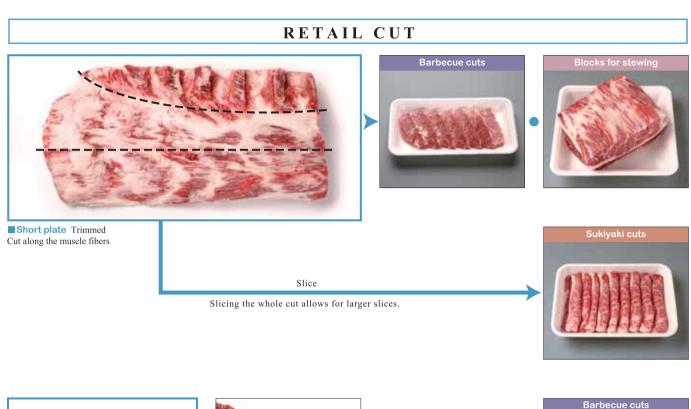
Stewing

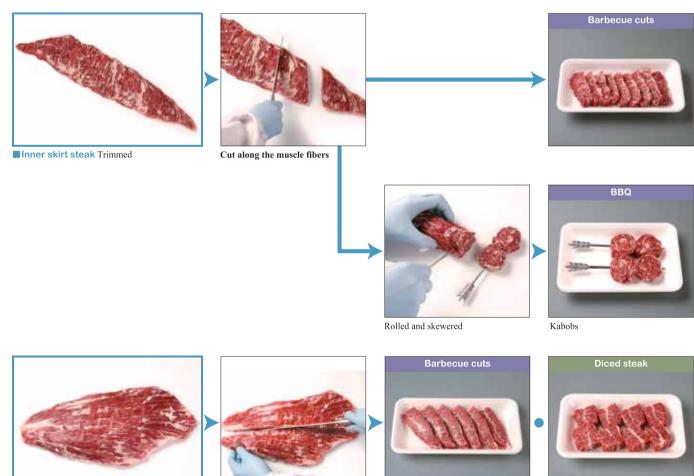
Sukiyaki

Shabu-shabu

#### PRIMAL CUT



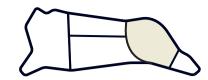




Cut along the muscle fibers

Flank steak Trimmed

# Gooseneck round\*



#### Overview of Raw Meat

The gooseneck round is the lean, well-muscled part of the round. The meat generally has a rough texture and is relatively tough. The gooseneck round is divided into three parts: eye of round, a cut that is paler in color and more elastic than other parts; the heel, a cut prepared for sale after removal of the M. flexor digitorum superficialis located in the center; and the outside round (gooseneck round) that is commonly used for stewing.



#### Culinary Applications

Barbecue

Shabu-shabu





#### PRIMAL CUT







■Heel







Outside round

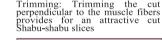


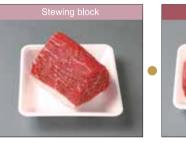




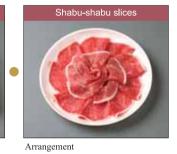
M. flexor digitorum superficialis

# **RETAIL CUT** Slicing the whole cut allows for larger slices Outside round Trimmed









■Eye of Round Trimmed







26

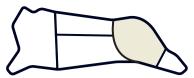
center muscle after trimming



■M. flexor digitorum superficialis Trimmed

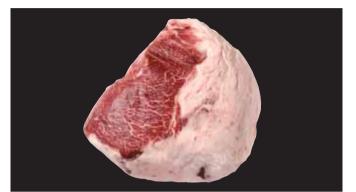
Marketed for stewing due to the large proportion of muscle fibers

# Top-round



#### Overview of Raw Meat

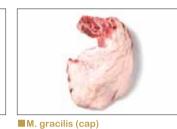
The top-round consists of a large block with a proportionately large amount of lean meat. It has a cover of fat however very little underneath. Meat quality can vary from the outside, towards the gooseneck round to the inside, towards the knuckle. Towards the gooseneck round the meat contains proportionately more fat, however has a rough texture with slightly tough meat. On the other hand, meat towards the knuckle is characteristically tender.



#### Culinary Applications







PRIMAL CUT



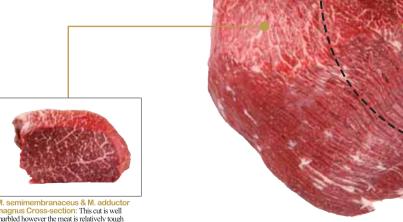


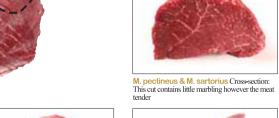




Division (Cap Off)











the connective tissue

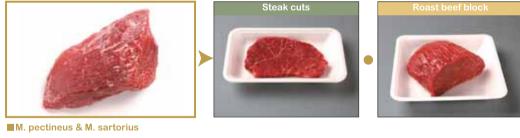


adductor magnus

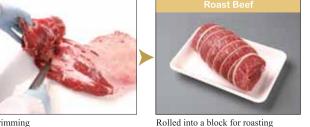


M. pectineus & M. sartorius

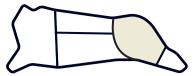
# RETAIL CUT ■Top-round & M. adductor magnus Cutting the blocks for sale







# D Rump



#### Overview of Raw Meat

The D Rump can be divided into the sirloin butt that runs into the sirloin and the top sirloin cap that runs into the gooseneck round. The D Rump has a very attractive color, is lean, finely-textured and is characterized by the proportionate fat and tender quality. The top sirloin cap has a deep color and a strong flavor however it is important to pay attention to the direction of muscle fiber when



#### Culinary Applications











■Sirloin butt ■Top sirloin cap

#### PRIMAL CUT







Top sirloin cap



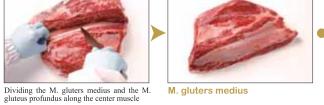
29







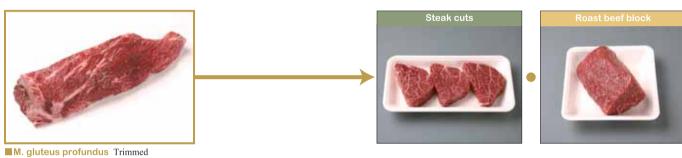
Removing the M. piriformis

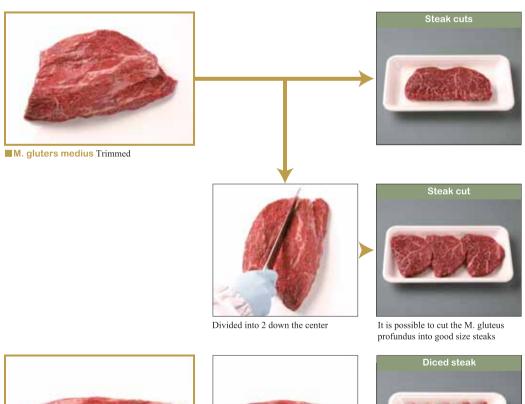


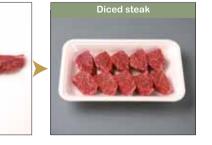


M. piriformis Flipped over to show the Trimmed

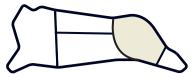
# RETAIL CUT Barbecue cuts \*A cross-sectional view shows that the muscle fibers form a radial pattern ■Top sirloin cap Trimmed







# Knuckle



#### Overview of Raw Meat

The knuckle is spherically-shaped and consists primarily of lean meat. It consist of four parts: the inside knuckle muscle, slightly deep in color and tender; the knuckle main muscle that has muscle running into the center, is fine textured and tasty; the outside knuckle that is deep in color and slightly tough; and the tri-tip that has some marbling but is not as tender as would be expected from the appearance.



#### Culinary Applications

Barbecue









#### PRIMAL CUT







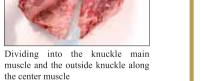


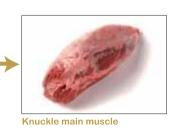
Removing the inside knuckle muscle



Inside knuckle muscle

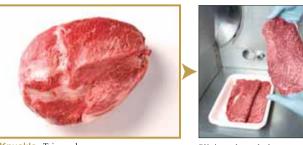






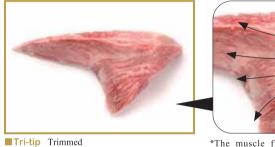


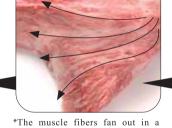
#### RETAIL CUT



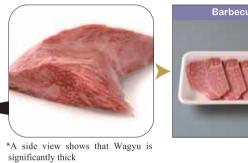


larger slices



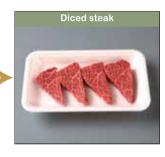


radial pattern



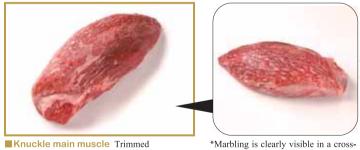


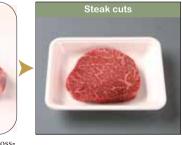




■Inside knuckle muscle Trimmed

Divided into three along the center muscle





sectional view from the back



■Outside knuckle Trimmed

# How to slice Wagyu to achieve maximum value

In addition to general cutting methods, there is a technique to slice Wagyu and optimize its fine texture and tenderness with a special slicer. Following are some guidelines to using the slicer and arranging the sliced meat effectively.

#### Slices and Off-cuts

Slices are thin slices taken from large blocks of one particular cut. Off-cuts are smaller pieces or slices from a combination of differing cuts and are used in accordance with the cooking method and the particular cut. Slices are ideally suited to dishes like shabu-shabu and sukiyaki while off-cuts are perfect for stewing. Off-cuts in particular produce a full-bodied flavor in just a short time making them convenient for use in quickly prepared meals such as stews.

#### Guidelines for arranging sliced meat



Fold both the right and left sides inwards

Fold the top and bottom edges under the

#### Examples of effective arrangement





#### Guidelines to using the slicer



Lean cuts and fatty cuts are placed Seen from above: uniform cuts



alternately. This will help to achieve The topmost front side of the meat will form the "face" of the product so it is best to use attractive looking cuts.





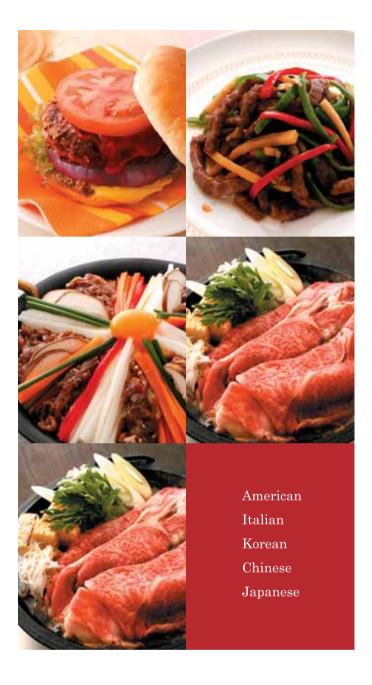
Lean cuts and fatty cuts are placed in groups. This will result in inconsistent lean and fatty cuts in the finished retail



Be careful not to try and slice too much meat at one time. The blocks in the photo to the left have also been placed with the muscle fibers sitting parallel to the blade. This will result in an unfavorable texture when eating. (The meat will be tough)







# Tasty Suggestions for Wagyu in Cuisine from Around the World

■American Cuisine ■Italian Cuisine ■Korean Cuisine ■Chinese Cuisine ■Japanese Cuisine

The following pages introduce recipes incorporating Wagyu into signature dishes from around the world. In particular, recipes take a diverse approach to incorporate relatively unused cuts, expanding your possibilities in the kitchen giving rise to a new dimension of flavor.

### **American Cuisine**

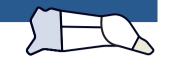
Popular American home-cooked cuisine. Juicy flavor and tenderness of a BBO or stew that only Wagyu can provide.

■ Measurement conversions 1cm=0.39inch/100q=3.5oz/1kq=35oz/1tsp=0.1pt/1tbs=0.3pt/100°C=212F

★=Specially recommended cuts



#### **Recommended cuts**









#### **Ingredients**

500g beef mince 1 large egg 2-4tbs fresh bread 2tbs Salt & pepper to taste ½ onion 1tbs garlic powder

1 red onion Tomato ketchup 4 lettuce leaves 4 slices tomato

4 hamburger buns

Butter

Salad oil

#### Method

**BBO** 

- 1. Roughly chop onion and thickly slice red onion and tomato into 1cm rings.
- 2. Soak bread crumbs in milk until soft.
- 3. Heat oil in frypan and sauté onion over medium heat and leave to cool.
- 4. Combine beef mince, sautéed onion from step 3, garlic powder, bread crumbs from step 2, egg, salt and pepper in a bowl.
- hands to remove air.
- Cook both sides of red onion slices.
- lettuce leaf and hamburger patty on the bottom half of the bun. Add tomato, red onion slice and tomato ketchup.
- 8. Cover with top half of the bun.

#### 5.Rub oil on hands and form generous sized hamburgers patties. While shaping hamburger patties gently pat with

# 6. Heat oil in frypan and cook on both sides over medium heat. 7.Butter hamburger buns, add mustard if desired and place







**Recommended cuts** 









#### **Ingredients**

400g beef 1 zucchini 1 red onion 4 mushrooms 1/3 red pepper

Lemon (or lime)

150cc tomato ketchup 1 medium onion

25cc brown sugar A 2tsp apple vinegar

1tbs salad oil 1tbs whisky

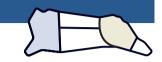
1 clove garlic ½tsp mustard

#### Method

- 1.Cut beef into 5cm cubes.
- 2.Cut zucchini into 1cm thick slices. Cut red onion into 1cm squares and remove excess dirt from mushrooms. Remove seeds and inner membrane from red pepper and cut to same size as the red onion. Finely chop onion and garlic for the grilling sauce.
- 3. Heat oil in pot and sauté garlic and onion over low heat. Sauté until onion is slightly opaque, then add remaining ingredients and simmer for approximately 10mins or until sauce reduces.
- 4.Place beef in grilling sauce and leave to cool in the fridge for 30mins.
- 5.Place beef and vegetables on steel skewers and grill while basting with grilling sauce.
- 6.Season with lemon (or lime).



Recommended cuts





◆ Chuck roll\* ◆ D Rump



#### **Ingredients**

1kg block beef 4 potatoes 80g baby carrots 5 sticks celery 1 onion

1 clove garlic 400cc chicken stock 1tbs salt

> 1tbs pepper 3tbs salad oil

#### Method

- 1.Cut beef in half and rub with salt and pepper.
- 2.Cut potatoes, with skin on, into eights and celery into 2cm pieces. Remove skin from onion and cut to same size as the potato pieces. Finely chop garlic.
- 3. Heat oil in heavy pot over medium heat. Increase heat to high and sear beef on both sides. Once nicely browned add vegetables.
- 4. When vegetable are lightly cooked, add chicken stock, 200cc of water and bring to the boil over high heat. Remove scum, replace lid and simmer for 50mins over low heat.
- 5. Season with salt and pepper, remove beef and cut into 2cm pieces. Serve meat onto plates together with cooked vegetables.
- \*Top with remaining gravy sauce as desired.

#### Chilli Con Carne



#### **Recommended cuts**











36

#### **Ingredients**

200g beef mince 200g chorizo sausage 2tbs olive oil 1 large onion ?3 Bay leaves 1 stick cinnamon <sup>№</sup> jalapenos L 2 red and 2 yellow peppers 2 cloves garlic 1 can (400g) red kidney

beans

2 cans (800g) tomatoes 50cc chilli

2tsp cumin

Salt & pepper to taste Grated cheese

#### Method

- 1. Roughly chop onion and cut jalapenos in half vertically and remove seeds. Finely chop garlic.
- 2. Wrap ingredients from A in gauze and tie off with cooking
- 3. Heat olive oil in pot and add beef mince. When cooked through, add garlic and onion and cook until onion is lightly browned. Add chilli, cumin and red kidney beans.
- 4.Add remaining ingredients, except cheese, including the gauze pack, and simmer over low heat for 2 hours. Every so often remove scum from surface while simmering.
- 5. Serve onto plates and top with cheese. Enjoy with crackers or bread.

### Italian Cuisine

■ Measurement conversions 1cm = 0.39inch / 100g = 3.5oz / 1kg = 35oz / 1tsp = 0.1pt / 1tbs = 0.3pt / 100°C = 212F

**★**=Specially Recommended Cuts

#### Ragout of Beef



#### Recommended cuts











#### **Ingredients**

500g-1kg block beef ½ onion

½ carrot

½ stick celery 2tbs olive oil

500cc red wine

200cc canned tomatoes

4 tomatoes

Salt & pepper to taste

Lard

Flour

#### Method

- 1. Finely chop onion, carrot and celery.
- 2. Sauté onion, carrot and celery until soft.
- 3. Season beef with salt and pepper and coat with flour.
- 4. Place lard in frypan and cook beef over high heat until both sides are lightly browned.
- 5. Transfer beef to large pot and add vegetables from step 2. Add red wine and leave over high heat to burn off alcohol.
- 6. Peel and seed tomatoes and mash while adding to the pot together with the canned tomatoes. Add with water until ingredients are just covered.
- 7. Lightly season with salt and pepper and simmer gently for approximately 1 hour.

#### 8. Season with salt and pepper to taste.

#### Beef Red Wine Stew



#### Recommended cuts













#### **Ingredients**

400g block beef

1/2 onion

1/3 carrot

1 small stick celery

1 clove garlic

A 1 bay leaf

2 sprigs Italian parsley 1 sprig sage and rosemary Flour

400cc red wine

1 can tomatoes 2tbs olive oil

Salt & pepper to taste

Lard

#### Method

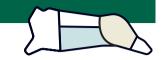
- 1.Cut beef into generous bite size pieces. Finely chop onion, carrot and celery and remove skin from garlic and cut into halves.
- 2. Heat olive oil in frypan and sauté onion, carrot and celery until soft. 3. Season beef with salt and pepper and coat with flour. Place lard in separate frypan and cook beef over high heat until browned on both
- 4. Transfer beef to oven-proof pot and add sautéed vegetables from step
- 2. Add red wine and cook over high heat to burn off alcohol. Add ingredients from A and the can of tomatoes, bring to the boil and reduce to low heat.
- 5. Lightly season with salt and pepper and replace lid. Transfer pot to oven preheated to 200°C and bake for approximately 90mins.
- 6.Remove soup and reduce until slightly thickened. Serve meat on plates and top with thickened sauce.

Italian cuisine that effectively uses the inherent flavor of beef can be further enhanced with Wagyu. Italian cuisine provides a wide range of uses for block meat in an extensive range of recipes.

#### Beef Tagliata



#### Recommended cuts











#### **Ingredients**

- 1 (200g) block beef
- 3-4 sprigs endives 3 mushrooms
- 20g parmesan cheese

Salt & pepper to taste

100cc olive oil 1tsp balsamic vinegar

1 sprig rosemary 1 clove garlic

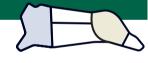
#### Method

- 1. Combine finely chopped rosemary and garlic in a bowl. Dress with olive oil, salt, pepper and balsamic vinegar and mix well.
- 2.Cut endives into bite size pieces, slice mushrooms and use a peeler or grater to slice parmesan cheese.
- 3. Season both sides of beef strongly with salt and pepper, heat olive oil in fry pan and lightly sear beef over high heat on both sides.
- 4. Remove beef from frypan and slice thinly.
- 5. Serve endives onto plates and top with sliced beef, parmesan cheese and mushrooms. Drizzle with dressing prepared in step 1.

#### Milan-style Cutlets



#### Recommended cuts











#### **Ingredients**

4, 80g beef steaks 100g fine bread crumbs 50g parmesan cheese 5g garlic

1/2 tsp Italian parsley

2 eggs

Salt and pepper to taste 200cc Olive oil

Lemon

#### Method

- 1. Combine bread crumbs, finely chopped garlic, Italian parsley and grated parmesan cheese in a shallow tray/bowl.
- 2. Wrap beef in plastic and gently stretch out with a meat mallet, removing excess sinew and season with salt & pepper.
- 3.Combine egg with 1tbs of water.
- 4.Place flour, egg and combined bread crumbs from step 1 into separate trays/bowls. Coat individual beef steaks in flour, egg and bread crumbs (in that order).
- 5.Use back of knife to create a lattice pattern on steaks.
- 6. Heat olive oil in frypan and when bubbling, add steaks and cook over medium heat on both sides until golden brown.
- 7. Remove oil and serve onto plates with lemon slices. X Serve with salad if desired.

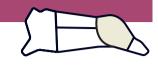
### Chinese Cuisine

■ Measurement conversions  $1 \text{cm} = 0.39 \text{inch} / 100 \text{g} = 3.5 \text{oz} / 1 \text{kg} = 35 \text{oz} / 1 \text{tsp} = 0.1 \text{pt} / 1 \text{tbs} = 0.3 \text{pt} / 100 ^{\circ} \text{C} = 212 \text{F}$ 

**★**=Specially recommended cuts

# Spicy Beef and Tomato Stir Fry









#### **Ingredients**

200g Stir fry beef

2 tomatoes

1/2 lettuce

Ginger

1 clove garlic Beef Seasoning:

Salt & pepper to taste

2tbs cooking sake

2tsp corn starch 1tsp oil

Sauce:

2tbs tomato ketchup, cooking sake

1tsp soy sauce

1tbs chili bean paste

2tsp corn starch Oil

#### Method

- 1.Place tomatoes in boiling water to remove skin and cut into quarters. Wash lettuce, drain excess water and tear using hands into bite-size pieces. Finely chop ginger.
- 2.Cut thinly sliced beef into easy-to-eat pieces and season lightly with salt and pepper.
- 3. Rub ingredients from step 1 in the beef seasoning in the order of salt, pepper, cooking sake and oil. Quickly sauté lettuce, remove from pan and drizzle with hot water to remove excess oil.
- 4. Quickly sauté beef (removed from pan when beef begins to change color).
- until aromatic, add beef and tomatoes. While stirring gently crush tomatoes with a ladle, however leave with some distinguishable shape.
- 7.Add corn starch dissolved in water and cook until sauce thickens.

#### 5.Heat oil in wok, add crushed garlic, ginger and chili bean paste and sauté

- 6.Add lettuce and sauce.

#### Shredded Beef with Green Pepper













2 Shoulder clod 4 Chuck tender 12 Gooseneck round

#### **Ingredients**

150g beef

6 green peppers (of which 1 should be red) 100g bamboo shoots in spring 1 clove garlic

Ginger

3tbs salad oil Beef Seasoning: 1tbs Shaoxing rice wine, soy sauce 1tsp sugar

1tbs oyster sauce

1tbs Chinese soup stock (powder) Beef Seasoning:

1tbs Shaoxing rice wine, soy sauce 1tbs salad oil

Salt & pepper to taste

2tsp corn starch

#### Method

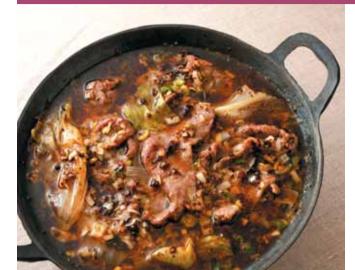
- 1.Cut beef into 1cm strips. Combine sauce ingredients.
- 2.Slice green peppers and bamboo shoots into 5mm strips. Finely chop garlic and ginger.
- 3. Rub beef seasoning into beef.

#### 4. Heat oil in wok and sauté garlic and ginger over low until aromatic. Add beef and cook over medium heat.

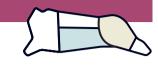
- 5. When the meat begins to brown, add vegetables and cook over
- 6. Add sauce and cook until heated through.

The most appealing of Chinese cuisine, also referred to as the art of flame and fire is the stir fry. The full-bodied flavor of Wagyu after it is cooked is exquisite. The rump used in the following recipes was whole cuts and is a very easy-to-use cut of beef.

#### Poached Sliced Beef in Hot Chili Oil



#### Recommended cuts











#### **Ingredients**

200g thinly sliced beef 1/2 lettuce Beef Seasoning:

1tsp sov sauce

1tbs corn starch. Shaoxing rice wine

1/2 egg white

Chili Oil: 200cc salad oil

2tbs Szechuan pepper 10 red chilies (whole) 10cm shallots

1/2 clove garlic

1tbs chili bean paste, soy sauce

1/2tbs black bean paste 3tbs Shaoxing rice wine

2tsp salt

500cc Chinese soup stock

#### Method

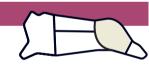
Method

- 1.Cut beef into 5cm widths, rub with beef seasoning and leave to stand in fridge for 30mins. Tear lettuce into bite-size
- 2. Add salad oil, Szechuan pepper, seeded chili and finely chopped shallot and garlic to wok and cook over low heat until aromatic and oil colors. (be careful not to burn ingredients) Strain oil using extremely fine colander or gauze into separate pot and finely chop remaining spices.
- 3.Add chili bean paste to wok and cook until oil turns a red color, add black bean paste and sauté quickly, add Shaoxing rice wine and soy sauce.
- 4. Once sauce thickens slightly add 500cc Chinese soup stock, taste and add salt if required.
- 5. Cook over high heat, adding lettuce when mixture comes to the boil. Remove lettuce when soft and serve onto deep plates or bowls.
- 6.Add beef to remaining soup gently stirring until just cooked. (approx. 1min)

#### Beef in Oyster Sauce



#### Recommended cuts







#### **Ingredients**

200g beef **Shaoxing rice wine** A Soy sauce Pinch salt, sugar 1/2 egg white 1tsp corn starch

2tsp oyster sauce

**□1tsp Soy sauce** B 1tsp Shaoxing rice wine, sugar 1tbs Chinese soup stock (Powder)

4 baby bok choy leaves

**□**1 clove garlic

C Ginger

<sup>L</sup>5cm shallot Shallot for garnish

- 1. Combine ingredients from A, rub into beef and leave to stand in fridge for 20mins. Score a cross into the stem of the bok choy leaves, finely chop ingredients from C. Take the shallot (for garnish) and with sharp scissors, cut the green top down to where the hard stem starts to make a curl.
- 2.Dissolve 1tsp of corn starch in 2tsp water. Combine egg white with beef from step 1 and mix in corn starch mixture. The trick is to mix quickly so as to avoid the mixture turning gluggy.
- 3. Place bok choy in boiling water with a pinch of salt and a little oil and boil until soft.
- 4. Heat oil in wok to 150°C and sauté beef until just cooked (approx.
- 5. Heat oil in frypan and combine with oyster sauce.
- 6.Add ingredients from C, sauté until aromatic and reduce to medium heat. Add ingredients from B, beef and cook until sauce
- 7. Serve beef and bok choy on plates and garnish with shallots.

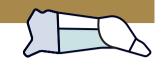
## Korean Cuisine

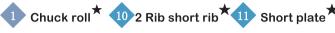
■ Measurement conversions 1cm=0.39inch/ 100g=3.5oz/ 1kg=35oz/ 1tsp=0.1pt/ 1tbs=0.3pt/ 100°C=212F

★=Specially recommended cuts

# Bulgogi

#### **Recommended cuts**







#### **Ingredients**

600g thinly sliced beef 2tbs sugar 1 large onion

- 1 large carrot
- 3 shiitake mushrooms 1/2 bunch Welsh onion
- 3tbs sesame oil Marinade:
- 5tbs soy sauce

- 2tbs Shaoxing rice wine, honey 3 cloves garlic
- 1/4 apple (or pear)
- 1-2tbs pepper
- 2tbs white sesame seeds
- 1/4 onion

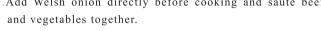
#### Method

- 1. Cut beef into bite-size pieces. Thinly slice onion, carrot and shiitake mushrooms and cut Welsh onion into 3-4cm lengths. Grate garlic, apple (or pear) and onion.
- 2. Combine sugar with beef and leave to stand for 30mins.
- 3. Combine all ingredients for the marinade.

# 4. Dip each piece of meat in marinade individually. Place 3-5hrs.

5.Add Welsh onion directly before cooking and sauté beef and vegetables together.

#### beef into a sealable container with vegetables except, Welsh onion, layered over the top. Drizzle with sesame oil, seal container and leave to stand in the fridge for



12 Gooseneck round\* 13 Top-round

# Yuke Jang

#### **Recommended cuts**



#### **Ingredients**

200g beef

2 cloves garlic

1 shallot (green half) Seasoning:

11/2 tbs soy sauce 2tbs shallots (chopped)

80g royal fern (in water)

2 shallots

1 egg 50g chives Sauce:

3tbs salad oil 1tsp-1tbs chili powder (add to preference)

1 clove garlic

1tsp soy sauce

1tbs sesame oil

#### Method

- 1. Finely chop shallot and garlic for seasoning. Grind sesame seeds. Cut royal fern and chives into 5cm lengths. Cut bottom half of shallot into diagonal lengths and parboil.
- 2.Heat salad oil in frypan, add crushed garlic, chili powder and sauté over low heat. Once aromatic, add soy sauce, sesame oil and remove from heat. Leave to stand for approx. 20mins.
- 3. Place beef in heavy pot, add green half of shallot, garlic and water until ingredients are just covered and cook over high heat. When mixture comes to the boil reduce to low heat and simmer for 2hrs
- periodically removing scum from the surface. Remove shallot, garlic and simmer for a further 40mins. Remove beef from soup and use hands to break up into bite-size pieces.
- 4. Combine beef, royal fern, and shallot with seasoning.
- 5. Using a separate pot, add 1tbs of sauce and gently sauté royal fern. Add soup, beef and shallots.
- 6. Season to taste with soy sauce and salt (extra) and add sauce to suit individual preference. (Sauce will make soup spicier)
- 7.Stir in lightly beaten egg and add chives when egg is just cooked.

Korean cuisine is made up of a multitude of recipes that utilize an extensive range of beef cuts. The tender, sweet flavor of Wagyu makes it perfect for yakiniku (Korean BBQ) and ideal for use in combination with vegetables and soups.



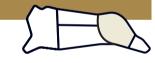
#### Method

- 1.Cut carrot and green chilies into thin slices, slice garlic and onion and leave onion slices to stand in water.
- 2. Arrange prepared vegetables on a large serving dish.
- 3. Combine sesame oil and salt and leave on a small dipping plate. Arrange gochujang on a separate dipping plate plate.
- 4. Broil beef over a hotplate and place on lettuce and perilla leaves. Use leaves to wrap meat with garlic and other vegetables and dip in sesame oil (with salt) or gochujang as preferred.

#### Spicy Korean Hotpo



#### **Recommended cuts**







#### **Ingredients**

300g thinly sliced beef Seasoning: 2tbs soy sauce 1tsp finely grated garlic 1tbs white sesame seeds 1tbs sesame oil 1tsp sugar Pepper

2tbs cooking sake 20cm Chinese radish 100g carrot 1/2 bunch (20g) Welsh onion 6 fresh shiitake mushrooms 1/2 onion 1/2 red pepper

- 1.Cut thinly sliced beef into 1cm widths, combine seasoning ingredients and use hands to rub seasoning into beef.
- 2.Cut Chinese radish, carrot, red pepper and Welsh onion into 7cm lengths. Thinly slice shiitake mushrooms and onion.
- 3. Line bottom of pot with onion and arrange beef, and other vegetables in a radial pattern. Break raw egg and place in

2 eggs

- 4. Place over heat and eat while combining ingredients once simmering.
- \* Add additional water if ingredients start to burn.

# Japanese Cuisine

Measurement conversions  $1 \text{cm} = 0.39 \text{inch} / 100 \text{g} = 3.5 \text{oz} / 1 \text{kg} = 35 \text{oz} / 1 \text{tsp} = 0.1 \text{pt} / 1 \text{tbs} = 0.3 \text{pt} / 100 ^{\circ} \text{C} = 212 \text{F}$ **★**=Specially Recommended Cuts

# Japanese Beef Mince Cutlets

#### Recommended cuts









#### **Ingredients**

400g beef mince 120g onion 1 egg

10g bread crumbs

Nutmeg Salt & pepper to taste

**Bulldog sauce** 

Batter: Flour

1 egg 1tbs water

Salt & pepper to taste Bread crumbs

#### Method

- 1. Place beef mince, finely chopped onion, egg, bread crumbs, nutmeg, salt and pepper in a bowl and mix well.
- 2. Using both hands, shape 4 equal sized patties tossing between hands to remove excess air. Patties should be an oval shape with a thickness of approx. 7-8mm.
- 3. Lightly beat egg and add water, salt and pepper.
- 4.Dip patties in flour, the egg mixture from step 3 and finally coat with bread crumbs.
- 5. Heat deep frying oil to 170°C and fry the patties until
- 6. Serve onto plates and drizzle with Bulldog sauce.

#### Japanese Beef Carpaccio



#### Recommended cuts







#### **Ingredients**

300g block beef Chinese radish sprouts 1 Japanese ginger

Grated Chinese radish (sprinkled with chili powder)

50cc soy sauce 50cc cooking sake

50cc mirin

50cc bonito stock

#### Method

- 1. Rub salt into beef and leave to stand for 5mins.
- 2.Cut Chinese radish sprouts into 4cm lengths. Cut Japanese ginger into thin strips, stand in water, remove and drain
- 3. Place sauce ingredients in pot and bring to the boil, remove from heat and allow to cool
- 4. Lightly sear beef on all sides and while still hot leave to stand in prepared sauce for 3-4hrs.
- 5. Before serving, slice beef into 3mm slices and serve on plates together with Chinese radish sprouts, Japanese ginger and grated Chinese radish (sprinkled with chili powder).

Japanese cuisine is extremely varied and includes raw, stewed and fried dishes. Signature Japanese beef dishes maximize the characteristics of Wagyu including its freshness, tenderness and full-bodied flavor through improvements to the way beef is thinly sliced and ground



#### Recommended cuts





#### ◆ Chuck roll\* ◆ Gooseneck round\*

#### **Ingredients**

800g thinly sliced beef

2 shallots

300g shirataki noodles

1/2 bunch shungiku

(Garland Chrysanthemum)

8 shiitake mushrooms

4 eggs

20g beef fat

Sauce:

4tbs brown sugar

200cc soy sauce

100cc mirin

200cc cooking sake

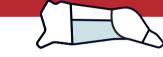
#### Method

- 1. Diagonally slice shallots. Boil shirataki noodles for 5 minutes, drain and cut into easy-to-eat lengths. Remove leaf and soft stem from shungiku. Cut stalk from shiitake mushrooms and using a sharp knife, score a cross in the mushroom head. Cut grilled tofu into 2cm thick cubes.
- 2.Place sauce ingredients into pot and cook over medium heat until sugar dissolves. Remove from heat and leave to cool.
- 3. Place sukiyaki pot over high heat, add beef fat and spread fat over the entire cooking surface.
- 4. Add beef to pot, cook slightly and add a little of the cooled sauce and caramelize.
- 5.Add shirataki noodles and combine with beef and slightly caramelized sauce then add remaining ingredients.
- 6. Serve sukiyaki into bowls with a separate serving bowl containing slightly beaten egg.
- \*The point to making good sukiyaki is not to add too much of the sauce at once. Gradually add sauce while cooking.
- XYou can always add extra stock or cooking sake if cooking sauce boils down too much.

#### Japanese Beef and Potato Stew



#### Recommended cuts









#### **Ingredients**

200g sliced beef

100g shirataki noodles

300g potato

½ carrot 1 onion

40g snow peas

20g beef fat

Stock: 500cc bonito stock

2 ½tbs soy sauce

2/3tbs sugar

1 1/2tbs cooking sake

1 ½tbs mirin

- 1. Peel potatoes and cut into thirds or quarters and leave in water. Remove skin from onion and cut coarsely into sixths. Peel carrot and cut into bite-size chunks. Boil shirataki noodles in water for 5mins, drain and cut into easy-to-eat lengths. Remove string that runs down the back of the snow peas.
- 2. Heat beef fat in deep pot, add shirataki noodles, potato, carrot, onion and beef in that order and cook gently.
- 3.Add bonito stock, bring to the boil and remove scum from the surface. Simmer over medium heat for 5 minutes. Increase heat to high and boil until soups gets a shiny luster. Add remaining stock and cover ingredients with lid. Simmer over low heat until stock is reduced to 1/3. Add snow peas and simmer until just soft and remove from

#### **■ BSE Prevention Measures in Japan**

Japan maintains the following stringent regulations and inspections as a measure against BSE.

#### Thorough removal of infection sources through legislation

#### Prohibition of the use of Meat and Bone Meal (MBM)

As of October 2001, the use of Meat and Bone Meal, thought to be one source of BSE infection, was prohibited by law. Currently only grains such as rice straw, wheat and corn are used as cattle feed.

#### Compulsory removal and incineration of Specified Risk Materials (SRMs)

As 2001 the Ministry of Health, Labor and Welfare implemented the removal and incineration of cattle heads, (excluding the tongue and cheek flesh), spinal cords, vertebral column and distal ileum of cattle in slaughterhouses.

#### Strictest standards in the world for BSE inspections

From October 2001, all cattle became subject to BSE inspections. In May 2005, the age of cattle subject to BSE inspections was lowered to 21 months and has been recognized as the most stringent inspections in the world in comparison to

#### Inspections and guidance at breeding and fattening farms

Inspectors with veterinary qualifications from prefectural livestock hygiene service centers periodically visit breeding farms (farms that raise calves to 8-9 months old) and fattening farms (farms that raise calves purchased at cattle sales to maturity from between 18-20 months) to conduct inspections and offer guidance and evaluations, including BSE inspections, are carried out on cattle at risk of BSE.

#### **2** Slaughterhouse inspections

Cattle taken to the slaughterhouses are subject to stringent inspections by inspectors from meat inspection centers and only carcasses that pass can be further processed. At the slaughterhouse, screening tests are carried out on all cattle in order to weed out all the BSE risk cattle. Samples of accumulations of prions and medulla oblongata are taken for testing with the enzyme-linked immunosorbent assay, (\*1ELIZA method). In the event of a positive result, further tests are carried out using (\*2Western Blot tests) or (\*3Immunohistochemistry tests). Cattle that show a positive specialists, are incinerated while specific parts are kept for research purposes, result to these tests and are given a definite diagnosis following discussions by a council of national specialists, are incinerated while specific parts are kept for research purposes.

#### \*1 The ELIZA Method

The ELIZA Method is used to treat sample prions taken from the medulla oblongata with protein breaking enzymes. Any remaining abnormal prion proteins are then extracted and concentrated. A reagent that will react to the abnormal prion proteins is then added to produce a colorimetric reaction and the concentration of the color measured. As results are available in as little as six hours, this method is currently used all around the world. It is effective as a screening test to detect risk cattle from the large number of subjects and is used as a means of diagnosis to proceed to more accurate tests in the event of a positive result.

#### \*2 Western Blot tests

Up until the point of concentrating abnormal prion proteins, this test is identical to the ELIZA method. Proteins are then separated by electric charge, transferred onto a membrane and checked for an immune response. This is determined by the occurrence of a colorimetric reaction, protein transferal and shape of the band. It is said that the process generally requires approximately 12 hours.

#### \*3 Immunohistochemistry tests

Immunohistochemistry tests generally require more than two days and are a method of detecting BSE by adding reagents that will react with BSE abnormal prion proteins to create a colorimetric reaction. In order to achieve a more accurate diagnosis, they are commonly used in unison with Western Blot tests however are not common practice in the EU.

#### Establishment of a traceability system

Japan has established a traceability system providing records of production and distribution from the time of birth of all domestic cattle right up until the time it is supplied to the consumer. This highly transparent system, allowing access to information to any one at any time, enables prompt detection of the source in the event of a problem and protection of the

Beef traceability Homepage Address: https://www.id.nlbc.go.jp/english/top.html

## 1 Individual identification numbers for

All cattle born in Japan and live cattle imported into Japan are given a clearly identifiable 10 digit individual identification number fixed to the ear of the cattle. In the years to come, this number, together with the cattle, will pass through a variety of distribution channels before reaching the

#### Cattle database (enacted December 1, 2003)

Individual identification numbers are registered upon submission of data concerning cattle from the producer. Information for each head of cattle including the date of birth, sex, breed, name and address of the owner, fattening method used, ancestry and date of slaughter is recorded and compiled into a database and this data formed into a "Family Register" of the

Following initial registration, information is further added to the database from breeding farms, fattening farms, meat wholesale centers and retailers.

#### Display of the identification number

Following slaughter, the carcass is processed into cuts and dressed meat and through the distribution process the individual identification number is displayed on the product by each individual distributor and the information of retailers etc. recorded and stored in the database.

#### Access to production and distribution records

By means of step 1-3 above, consumers are able to search for and gain access to production and distribution records over the Internet based on the individual identification number provided on Wagyu meat products.

#### Traceability System Distribution and safety ✓ CHECK! Date of birth, sex. breed, producer data Inspection and and fattening method ancestry etc hygiene centers ✓ CHECK! Farm information Inspection and hygiene centers 00000-00000 CHECK! Live inspection **DNA** data inspection 00000-00000 Auction yard Slaughterhouse (supplier) and processing plant (distributor) data 00000-00000 ✓ CHECK! Post processing Removal of SMRs Access to data over the Internet 00000-00000 00000-00000 Retailers/Restaurants Homepage Address:

https://www.id.nlbc.go.ip/english/top.htm

#### **■** Freshness management and bacteria control

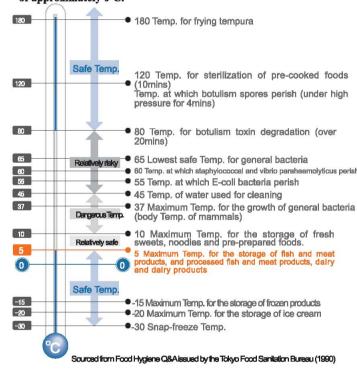
#### Total temperature control to preserve freshness

Temperature control is necessary in order to prevent decay and increases in bacteria.

Beef is frozen or refrigerated and is maintained at a low temperature through all the stages of distribution from production, processing, fabrication and retail up until the time it reaches the consumer in what is referred to as a cold chain. For example, even where the meat is cut or packed, it is maintained at a temperature of approximately 0°C. Work rooms are also maintained at low temperatures and work completed quickly. Meat is also distributed in refrigerated transport maintaining total temperature control.

#### Safe and risky temperatures for food storage

#### ■ Meat products should always be stored at a temperature of approximately 0°C.



#### Prevention of food poisoning causing bacteria

Cattle, goats and sheep are known to carry enterohemorrhagic Escherichia coli, one bacterium that is known to cause food poisoning and originate from domestic livestock. As one measure to prevent food poisoning, the intestinal tract is ligatured to in order to avoid contamination of meat from the contents of the intestines during meat fabrication at slaughterhouses.