

- Food
- Food Additive
- Cosmetic
- Quasi-drug



Hokkaido Wakkanai Ray (Rajidae)

『Ray Collagen』 『High Deodorized Ray Collagen』

Technical
Data

Collagen from the Northeast City of Japan



Ray Sashimi

Ray Stew

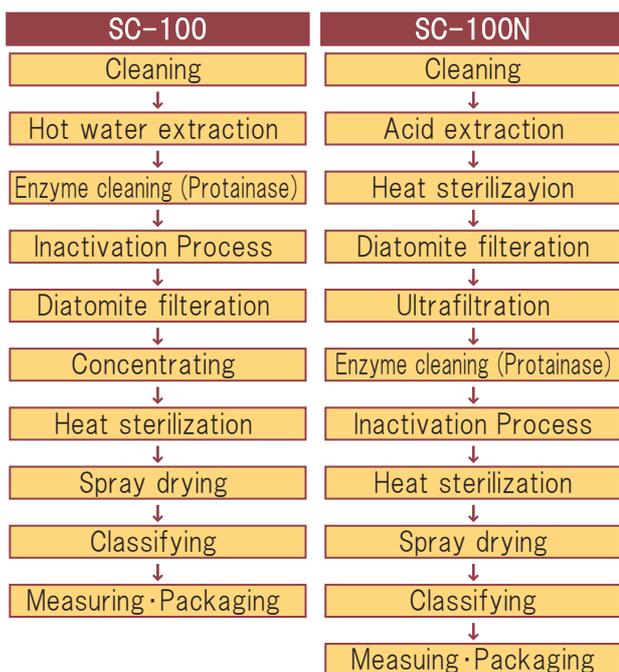
Ray is commonly eaten in Hokkaido and Tohoku region for a long time, and Wakkanai makes up 50% of its haul in Japan. However, the fin part was only consumed, and all the other parts are thrown away.

We focused on this thrown away resources of ray. Research is done based on industry-academia-government collaboration to extract collagen from skin of ray. High Deodorized Ray Collagen is a less odored fish collagen powder.

Expected Function & Recommended Dosage

- ⊙ Maintaining Cell conditions
- ⊙ Improvement of skin moisture
- ⊙ Beauty skin effect
- ⊙ Promoting bone formation
- ⊙ Protecting gastrointestinal mucosa
- ⊙ Inhibiting high blood pressure
- ⊙ Promoting collagen synthesis
- ※ Recommended dosage 300-1,000mg/day (Custom)

Production Process



Uses

- ⊙ Supplements, drinks and processed food for beauty
- ⊙ Supplements, drinks and processed food for joints

Display Name Example

- ⊙ Collagen peptide, Marine collagen peptide

Quality Standard Compositions

Material	Skin of ray (Rajidae)
Property	White to light yellow powder with its original scent
pH (1% water solution)	5.5~7.0
Heavy metal (Pb)	Less than 10ppm
Viable count for bacteria	Less than 3000 pcs/g
Coliform bacteria	Negative
Crystal size	30 mesh pass
Constitution	Ray skin extract 100%

Chemical Analysis Value(/100g)

Energy	384.0	kcal
Protein	96.0	g
Fat	0	g
Carbohydrate	0	g
Sodium	180.0	mg
Collagen peptide	100.0	g

* Numbers are just an analysis example.
It does not guarantee the content of the product.

Other

Quantity	10 kg
Shelf life	2 years from the production date
Storage Condition	Keep in cool dry place, and avoid direct sunlight.

Company Information

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■ Collagen from natural fish: Safe and secure food material

Collagen is made from a variety of sources. They are roughly divided into mammal and fish origin and to be distinguished cultured or natural products. Collagen on the market is ranging from high-quality to low quality materials. In Japanese market, about 60% of the collagen in circulation are derived from pig, about 35% are from fish, and the others are from chicken. Those collagen derived from mammals tend to be difficult to adapt to a human, because the denaturation temperature is relatively high. The denaturation temperature is low for collagen derived from fish, thus they are relatively easier to adopt to human.

The collagen from fish origin is called Fish collagen or Scale collagen. Among the fish collagen, the most of them are made from scale of farm raised tilapia. Tilapia is a southern hemisphere fish which grown rapidly in short period of time, its very

popular farming fish. It has been farmed in China, Southeast Asia and even in hot springs in Japan.

Tilapia is used worldwide as ingredient of fishburger and substitute for a sea bream. The farm raised tilapia could be affected by poor water quality due to density of aquaculture, administration of disinfectant and antibiotics and such. All the collagen derived from ray here is extracted from natural, so you can use it with confidence.

Origin	Cow	Pig	Fish	
Overview	Rarely used after BSE (mad cow disease)	Elements are close to human. Scent is not strong.	Denaturation temperature is low. Relatively easier to adopt to human	
Denaturation temp	39°C	39°C	8~30°C	
Parts used	Skin	Skin	Skin, Scale	
Environment	Farming	Farming	Farming	Natural
Circulation in Japan	Almost 0%	About 60%	About 35%	
Quality	Denaturation temperature is high. Relatively difficult to adopt to human.		Denaturation temperature is low. Relatively easier to adopt to human.	
Safety	Rarely used after BSE (mad cow disease)	Most of pigs eat livefeed (possibly contain gene modified crops) from overseas. Antibiotics are given as well.	Pesticides and antibiotics are given to fish. Water quality of culture pond could be the issue.	Natural salmon origin is the safest option. Sea pollution could be the issue though the risk is fairly low compare to the other materials.

■ Within a 100-meter radius of traceability

After rays are unloaded at Wakkanai fish harbor, fishes are sold at the fish market in front of the harbor. Then they are taking into a fish processing facility just 200 meters away from the market. At the facility, fins of the fish are transported as food and the other parts of the fish are sent to the factory right next to extract collagen. Because whole process are done by such a small area, the traceability of the product is securely kept.



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