

# CAS<sup>®</sup>

**CELLS ALIVE SYSTEM**

Yobuko squid can be eaten  
deliciously nationwide.



**JF** Saga Genkai Fishing Cooperative

**Yobuko CAS Center**

YOBUKO CELLS ALIVE SYSTEM CENTER



# Keep just-caught freshness intact **CAS** freezing

CAS (Cells Alive System) means "the cells are alive". The technology was given this name because cells are not broken down even when food is frozen and its freshness springs back to life after it is thawed. Unlike conventional freezing methods, which freeze food gradually, CAS cools food in a magnetic environment that imparts faint energy to freeze food instantly by pulsating the water molecules inside its cells. Because it freezes the food as a whole at the same time, it does not damage the cells. CAS is next-generation freezing technology that also continues to be applied in medical areas such as tooth-banks, etc.



## Keep just-caught freshness and umami flavor intact

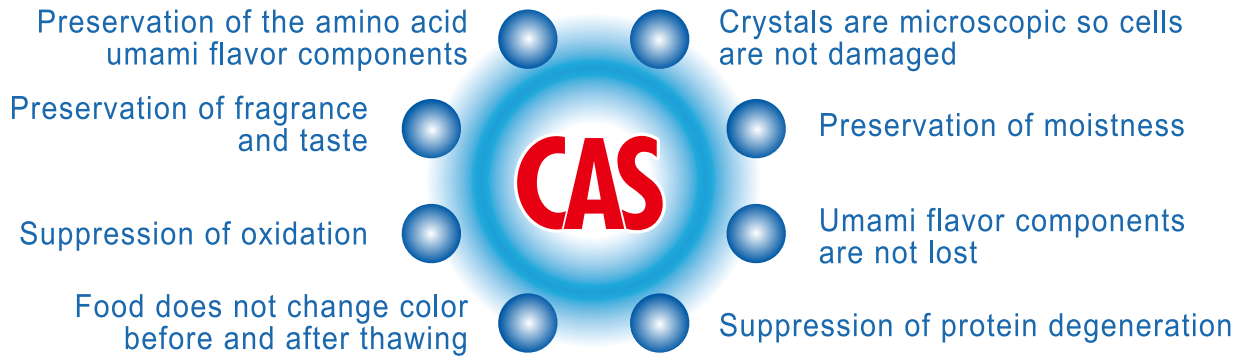
Conventional freezing methods mean expiry dates of half-a-year to a year. Freshness declines irreversibly after freezing too. However, with CAS, long-term expiry dates up to a maximum of 5 years are possible. Because of this, it is possible to reproduce "delicious seasonal flavors" that utilize food cells. CAS enables the reproduction of umami flavor components after thawing, which was not possible with conventional freezing and can maintain a certain degree of freshness after thawing too.



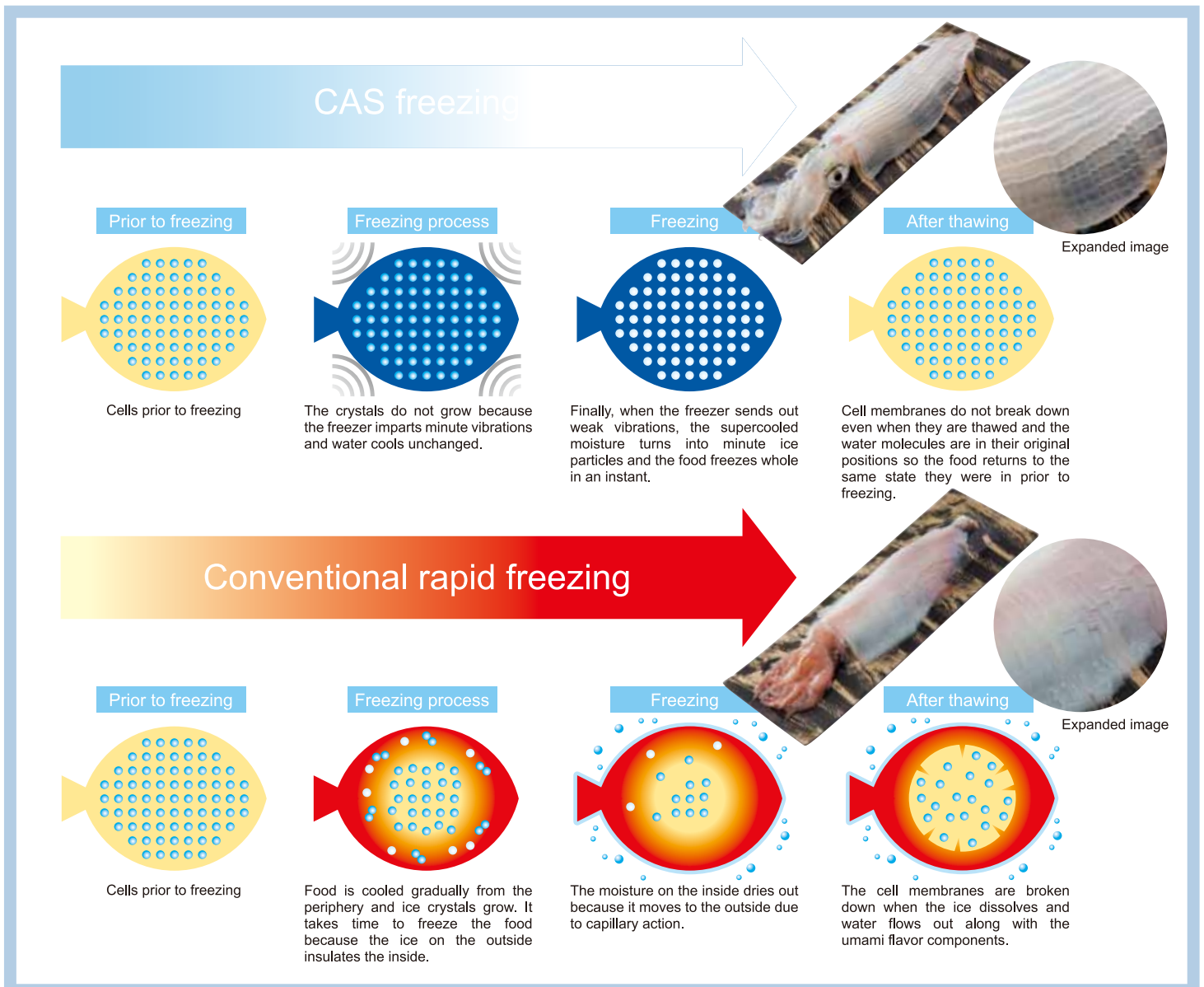
## Stable prices and inventories that are not affected by the seasons or fish catches

The prices and inventories of general circulating fish fluctuate greatly depending on the season and the size of the catch at that time. However, with CAS technology, which enable long-term storage of seasonal fish, both prices and inventories will stabilize. Both menus and standards are easy to determine so quick PR is also possible.

This is freezing technology that uses cell tissue to reproduce fresh delicious flavors.



The CAS technology creates a magnetic field inside the freezer to freeze food while finely pulsating the water molecules inside its cells. When the temperature has dropped sufficiently, the freezer sends small shock waves to freeze the food as a whole all at once. The ice created at this time is accumulations of minute ice particles so freezing does not damage the cell membranes. There is no dripping even when the food is thawed and moisture is not lost from within the cells either.





Combining the CAS function with a rapid freezer, suppresses the accumulation of water molecules inside the cell tissue of the food during freezing and allows the reproduction of delicious flavors because cell membranes and cell walls are not broken down.



**Fishing grounds**

The fresh seafood processed at the CAS Center is transported there from rich fishing grounds of the Sea of Genkai, located at the western gateway to the Sea of Japan.



**Cleaning**

The caught seafood is transported still fresh to the processing center located close to the coast for cleaning with sterilized seawater.



**Pre-processing**

At the processing center equipped with a thoroughgoing hygiene control system, the seafood is processed in short time in order to preserve freshness.



**Processing**

The seafood is processed into raw ingredients such as blocks or fillets, etc., and packed in bags.



**Vacuum**

The bag-packed seafood is vacuum processed immediately.



**Inspection**

Security and safety are ensured by inspection with a metal detector after vacuum packing is complete.



**CAS freezing**

The seafood is then frozen rapidly using the CAS system.



Seafood can be stored for long periods while retaining its just-caught freshness due to CAS freezing. Seafood is eaten as sashimi even after thawing.



# The treasured fish of the Genkai sea

## GENKAI UMI NO HOURYOU



**Single-line fished Yobuko squid**

Turned into sashimi, it has a crunchy texture and sweet flavor. Turned into tempura, the hot, soft feeling is irresistible. This is the Yobuko squid that is famous nationwide.

We deliver  
fresh seafood caught  
in the Saga Prefecture  
Genkai region  
to people's dining tables.



**Japanese horse mackerel**

The horse mackerel caught in the Sea of Genkai are the highest standard of the species in Japan. They are particularly delicious and popular during the season when they are loaded with fat.



**Abalone**

The abalone raised on the rich seaweed of the Sea of Genkai are delicious made into sashimi or steamed, while diners also enjoy the increased flavor of sashimi created by the combination of abalone liver and soy sauce.



**Bastard halibut**

This is a representative high-grade white fish. The fin is particularly delicious. It is used in Japanese cuisine such as sushi and also with European-style cooking methods such as meuniere.



**Green tiger prawn**

Also known as the red foot prawn, big specimens can reach as long as 20 cm. Apart from sashimi, they are also perfect for salt-grilling.



**Greater yellowtail**

This fish is filled with fat and has firm flesh so it is excellent made into sashimi. It can also be eaten deliciously grilled by either teriyaki or salt-grilling methods, etc.



**Japanese Spanish mackerel**

This mackerel can be eaten in a variety of ways as it does not have a peculiar flavor, including sashimi, salt-grilled, and steamed in sake, etc. It is also recommended for western-style cooking methods such as meuniere, gratin or foil-baked, etc.



**Marbled rockfish**

The marbled rockfish is also known as "arakabu". It has delicious white flesh that is firm considering how much fat it contains. It can be eaten in nabe-style cuisine, simmered, deep fried, as sashimi or in miso soup, etc.



**Red sea bream**

This is natural red sea bream caught using gochiami nets or by single-line fishing. There are various ways of eating this fish including as sashimi, simmered, salt-grilled or in nabe-style cuisine, etc.



**Yellowtail**

This is yellowtail raised in the Sea of Genkai. The cooking methods are wide-ranging and the sashimi, arani-style of boiling, teriyaki and salt-grilling, etc., are recommended.



**Common dolphin fish**

This fish does not have much fat so it is often used in fish paste products, but it can also be eaten cooked using the salt-grilled, fried, meuniere, or butter-fried methods, etc.



**Oysters**

The oysters raised in the rich fishing grounds of the Sea of Genkai can be enjoyed eaten raw or grilled in the shell and covered with ponzu or soy sauce, etc.



**Common octopus**

There are a variety of cooking methods for octopus including sashimi, deep frying, butter-frying, takoyaki octopus balls and in oden, etc.



**Kamaage cooked whitebait**

Whitebait is plentiful in the Sea of Genkai. Kamaage cooked whitebait has a good reputation and is sent nationwide.



**Barracuda**

The red barracuda and blue barracuda are the two types of barracuda known as genuine barracuda. In early winter, in-season red barracuda can be eaten deliciously salt-grilled, and in summer, in-season blue barracuda can be eaten deliciously as dried fish or fried.





Our Saga Genkai Fishing Cooperative is located in the northwest of Saga Prefecture, bordering on Fukuoka Prefecture to the east and Nagasaki Prefecture to the west. The cooperative incorporates 2 cities, including 6 islands.

The coastline is a richly curved ria-type coastline and most of it is designated as the Genkai Quasi-National Park, while our fishing grounds are the outer fishing grounds of the Iki channel, which falls under the influence of the warm Tsushima current, and the inner fishing grounds of Karatsu Bay and Imari Bay, etc., which are good for many varieties of productive fish stocks.

The main fishing types include line fishing for high-grade fish such as sea bream and yellowtail, etc., small-scale bottom trawling including longline trawling, dragline trawling, and medium to small scale roundhaul fishing, etc., and in the outer grounds there is line fishing for squid and longline trawling for tilefish, etc.



**Saga Genkai Fishing Cooperative Yobuko CAS Center**

1740-12 Yobuko, Yobuko-cho, Karatsu City, Saga Prefecture 847-0303

E-mail: [yobukocas@jf-sagagenkai.or.jp](mailto:yobukocas@jf-sagagenkai.or.jp)

Website: <http://www.yobuko-cas.jp>