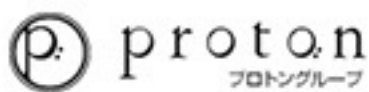


PROTON MAGNETIC FREEZER

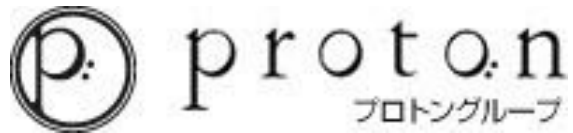


The new freezers generation



proton-
EUROPE

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proton@innovafish.com



THE NEW GENERATION OF FREEZERS: PROTON ®

In today's extremely changing food industry, customers demand quality, seasonal, "newer" products every day, at reasonable prices, with high availability and that comply with all sanitary standards. In order to satisfy all these demands we must use the best technology to process them, keep them fresh, tasty and healthy, even if they have been frozen.

Keeping all the organoleptic properties intact in a thawed product was up to this moment something unthinkable to achieve, because even with the best current freezing (cryogenic) methods, color changes occur and exudates and liquids appear when thawing, causing obvious alterations of the original product due to the damages caused by the size of the crystals formed and by the cell destruction during freezing.



PROTON ® FREEZER belongs to a new generation of freezers, which unlike other systems that also use magnetic fields (CAS), its use is widespread in Japan for its proven effectiveness for the realization of a perfect freezing, when the differences between products disappear defrosted and fresh product and giving rise to a new category:
“the fresh product in frozen”.

PROTON ® FREEZER technology is used in many different types of industries and sectors, not only in Japan, but in many Asian countries.

It is, in short, the most perfect form of freezing that exists today.

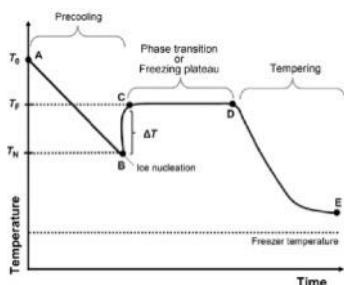


FREEZING

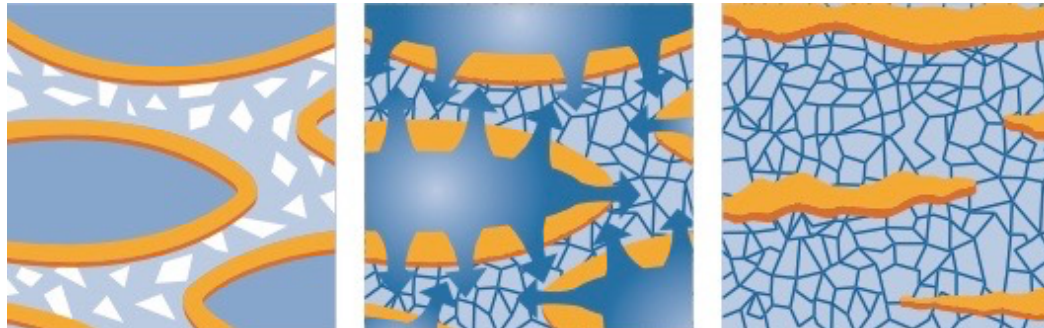
When a food is frozen, there are three stages in the process:

1. The temperature is reduced to the freezing point;
2. The water in the food becomes ice (this phase is also called latent heat);
3. The temperature is further reduced to the final freezing point (usually -18°C)

A slow freeze damages food and cells.



Graph of stages of freezing



1. The free water that surrounds the cells of the food is the first that crystallizes in the methods of slow freezing.

2. As soon as the water balance is destroyed, the water inside the food cells starts to come out of them, destroying the cell wall. The longer the freezing time, the greater the destruction of the cells.

3. Finally, the ice crystals become so large that the cells break completely, causing - among other drawbacks - a high degree of water loss when the product thaws or overheats.

THE CURRENT FREEZE

Currently, there are **3 types of freezers**:

1. Mechanics;
2. Cryogenic;
3. By air jet.
- 4.

These 3 systems, affect:

- the freezing speed and
- the elimination of latent heat,

through different strategies:

- reduction of the temperature of the cooling medium;
- improvement in the coefficient of heat transfer at the surface;
- reduction of the size of the products to be frozen.



THE NEW GENERATION IN THE FREEZE

In Japan they have found that it is no longer enough to use a quick freeze such as nitrogen.

The determining factor in the organoleptic quality of the frozen product is the size of the crystals:

- ➔ With none of the current types of freezers can influence or alter the most important factor: control over the size of ice crystals formed.
- ➔ The ice crystals that form during the freezing process, especially if they are large, severely damage the frozen raw material.

The only proven and effective way to maximize its minimization is through the new generation of freezers: PROTON ® FREEZER technology.

PROBLEMS WITH CURRENT FREEZING (NITROGEN)

1- SIZE OF THE CRYSTALS DUE TO HEAT EXTRACTION SPEED

The freezing process must be carried out as quickly as possible.

The expansion of the volume of the ice crystals occurs when a slow freezing is carried out, that is to say, when the passage time for the formation of the ice crystal is long.

2- CELLULAR DESTRUCTION

The products to be frozen contain a large amount of moisture that includes binding water restricted to particles, such as proteins and free water that move inside the product to be frozen.

At the time of freezing, the free water freezes producing ice crystals that grow, increasing their volume and destroying the structure of the cells contained in the product.

For this reason, at the time of thawing drip losses are produced due to the destruction of the cellular structure, being impossible to restore the same state as in fresh.

3- FREEZING OUTER LAYER





Cryogenic (nitrogen) methods tend to initially freeze the surface layer.

Subsequently, the cooling rate of the interior of the product is controlled according to the heat transfer from the surface, but this is inhibited and a delay occurs due to the presence of that frozen layer crystallized with ice in the surface layer.

Due to this reason, the problem of expanding the volume of the ice crystals inside the frozen product can not be avoided.

4- ELIMINATION OF OXYGEN

With the current freezing methods, the oxygen existing around the periphery of the product to be frozen cannot be completely eliminated, and especially in the case of perishable foods such as meat and fish, since there is a problem that the hemoglobin and myoglobin contained in its component Blood levels are converted by freezing to methaemoglobin and methamyoglobin, which means that their color, once thawed, differs from that of the fresh product.

Tuna : Drip amount comparison		Horsemeat : Drip amount comparison	
Proton Freezer (-40°C)	Conventional Freezer (-45°C)	Proton Freezer (-35°C)	Drip : <1 %
			
Drip : 2%	Drip : 7%		
Additive-free! Amount of drip after thawing is much different on proton frozen!		Conventional Freezer (-25°C)	Drip : >10%
			



5- LOSS OF MOISTURE / CONTENT IN HUMIDITY

All freezing methods cause some degree of moisture loss, during the same freezing process (weight loss by evaporation) and / or during thawing (drip loss).

Weight loss by evaporation:

- reduces the weight, and therefore the value of the product,
- reduces the thermal conductivity of the surface layer and therefore prolongs the cooking time.

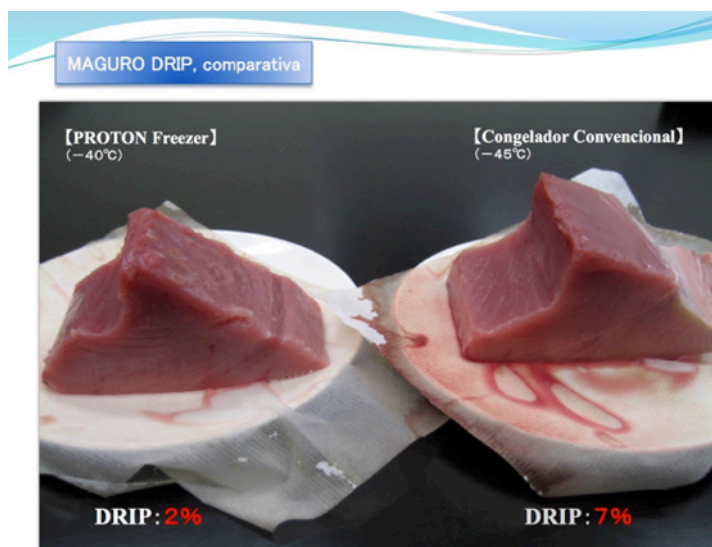
At the same time, surface dehydration influences the texture, color and cooking time of the product.

In most applications, the best way to reduce the loss by evaporation is to reduce the temperature as quickly as possible. A rapid reduction in temperature reduces the vapor pressure of the free water from the food surface and therefore reduces dehydration.

Drip loss occurs during the thawing of a food product if it has suffered cellular damage caused by the formation of large ice crystals.

This loss of moisture:

- It affects the color, flavor and nutritional quality of the thawed product since the lost moisture contains nutrients and pigments.
- Structural damage can also cause a degradation of texture or a reduction in firmness.



6-COLOR LOSS

Freezing affects the color of thawed foods in two ways:

- The first, through the loss of pigments due to leakage, as already explained.
- The second is that as ice crystals form during freezing, a concentration of solutes occurs in the remaining fraction without freezing. This increase in concentration accelerates processes such as oxidation and enzymatic darkening.

The longer the product remains at a temperature close to the freezing plateau (ie, the slower the freezing process), the greater the effects.

Hence the importance of a rapid freezing rate:

- ➡ Reduces both drip loss and pigment drainage
- ➡ Minimizes the darkening of the meat of the product.

7- FREEZING OF ALL TYPES OF PRODUCTS AND DELICATE PRODUCTS

Suitable and specific freezers should be used to handle fragile or delicate products and products, a priori, difficult to freeze, such as rice and some types of soft fruit.

**Through the advances achieved with the PROTON ® magnetic freezing technology
All these problems have been solved.**

1. Damage to muscle structure

- Cell separation: the water that is outside the fibers freezes before the inside, generating an osmotic force that causes liquid to flow from the inside to the outside.
- Damage to membranes and proteins, by the ice crystals formed.
- Protein denaturation due to changes in the non-frozen aqueous matrix: in osmotic pressure, pH, ionic strength, etc.

3. Microbial development

- Much of the flora is sub-lethally damaged.
 - Thawed meat is more susceptible to microbial growth and alteration, so it usually has more contamination than fresh meat (at the same storage time).
- Microbial development stops at -12°C (for certain more resistant fungi)

4. Changes in texture

- Less juiciness and
 - More hardness.
- Associated with changes in muscle protein:
- Shortening by rigor
 - Protein Denaturation
 - Increase in cross-links between proteins (due to denaturation phenomena and the presence of oxidation products that serve as a bridge between functional groups of amino acids).

5. Changes in taste and color

- Decreased flavor intensity due to loss of flavor precursors and aromas in exudates.
 - Possible collection of aromas from outside during freezing, storage and defrosting.
 - Oxidative thickening of fats and discoloration of pigment during storage. Its degree depends on all those factors (intrinsic and extrinsic) that affect it.
- At temperatures between -30 and -40°C , oxidation reactions practically stop.

2. Moisture losses

- Decrease juiciness and make meat harder.
- Altered appearance, taste and texture when freezing burns occur
- Economic losses due to weight loss.

FREEZER EFFECTS

1. Damage to muscle structure
2. Moisture loss
3. Microbial development
4. Changes in texture
5. Changes in taste and color
6. Changes in nutritional value



6. Changes in nutritional value

- Losses of water-soluble nutrients due to exudate (without a significant impact on the nutritional value).
- If there is oxidation there is also loss of nutrients susceptible to oxidation reactions.

PROTON ® FREEZER technology is based on a combination of:

- MAGNETIC FIELD
- ELECTRIC WAVES
- COLD AIR



The foundation of our technology is based on **the arrangement of the water molecules that are formed in the freezing process.**

The determining factor in the organoleptic quality of the frozen product is the size of the crystals.

Through **PROTON ® FREEZER** technology, the product freezes while a static magnetic field and an electric wave are radiated in a predetermined direction.

When freezing, the water molecules are arranged in a constant direction and are ordered uniformly at predetermined intervals due to the unidirectional and uniform static magnetic field.

These molecules, which have a constant fluctuation thanks to the electric wave, are arranged in almost constant conditions making the crystallization happen uniformly (inside and outside) throughout the product, aligning the water molecules keeping their linear structure and avoiding expansion of the volume of ice crystals, inhibiting both the change in moisture volume and the destruction of the cells that contain that moisture at the time of thawing due to drip losses.

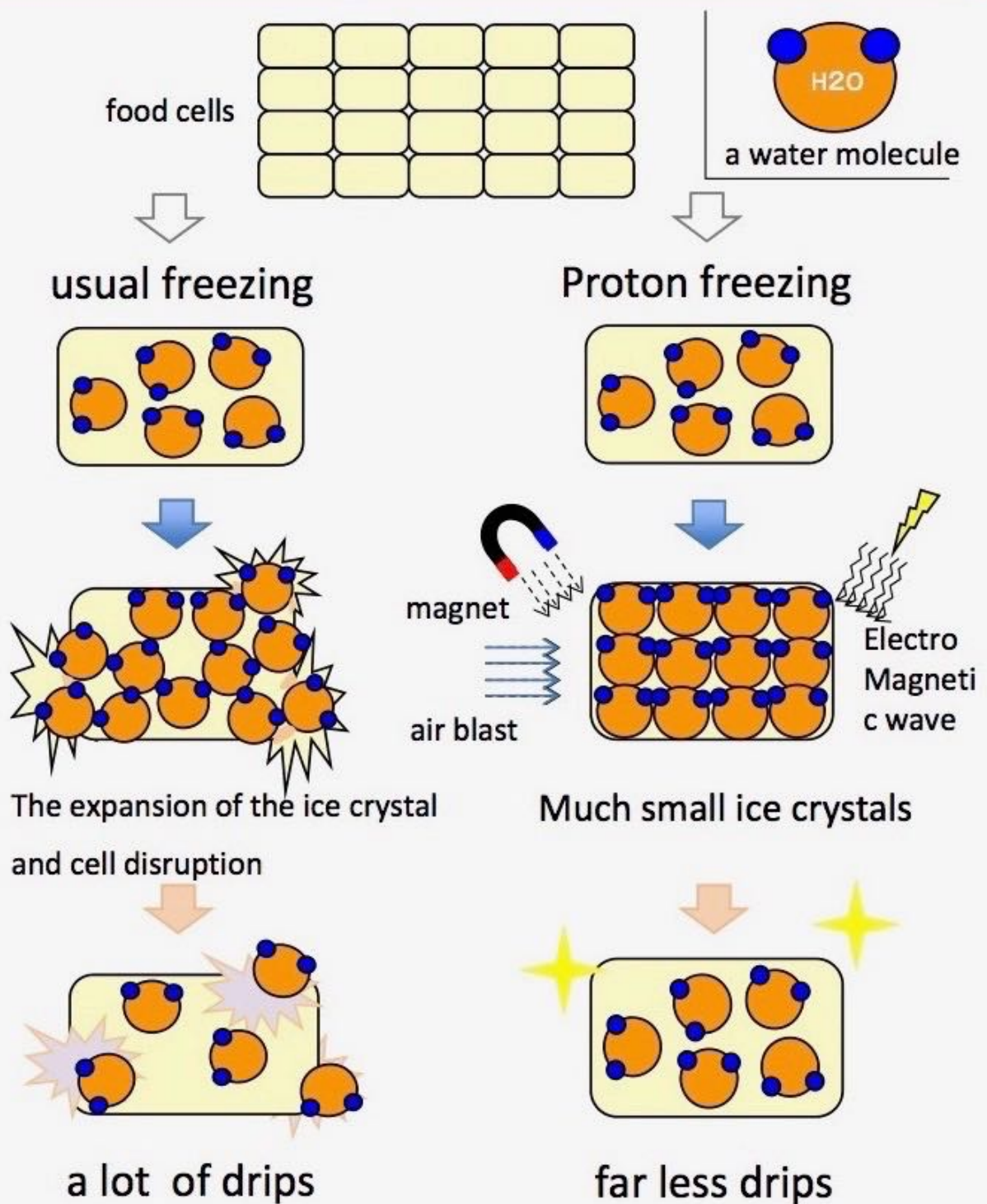
It is, in short, the most perfect form of freezing that exists today.

Latest Freezing Technology "PROTON FREEZING"

PROTON FREEZER is the revolutionary hybrid freezer that combines an environment of evenly radiated electromagnetic wave with cold air. It forms numerous smaller ice crystals at one time, not making larger ice crystals, which effectively prevents cells from being destroyed and reduces drips substantially when defrozen.



Mechanism of Proton Freezing



- ① Under the strong magnetic flux field, randomly scattering water molecules are arrayed in order.
- ② The emitted electro magnetic wave effectively prevents rotating hydrogen atoms from bonding with oxygen atoms, which would make ice crystals much smaller than usual when it is frozen.
- ③ With the variable wind blowing system, foodstuff is frozen evenly and quickly, which would result in far less drips when it is defrosted.

With an effect of electromagnetic wave and equal magnetic flux density environment in ice nucleation, which generates many Nucleus and prevents the growth of large ice crystals.

■ “Proton freezer” is;

Paying attention to that water molecule is an electric dipole, “It is the machine that freezes better” by approach of the quantum-mechanical and electromagnetism.

The electric dipole is that oxygen of the water molecules is electrically charged to plus and hydrogen is minus, and they are electrically coupled to each other. Electricity of plus and minus is the same amount, which results as if they were Zero.

By utilizing a hint of this fact, we have created an electromagnetic wave transmission and equal magnetic flux density environment in the process of freezing. That is, “It is a machine that aims to freeze all new” to implement a new feature of mechanism for controlling the nucleation of water molecules“ onto conventional freezing equipment.

In addition, it is a completely different machine in terms of basic concepts, structure and control software from the one that is referred to as the magnetic field freezing equipment already in the market. Conventional freezer is developed by only focusing on an external environmental mechanism for the purpose of freezing equipment until now to increase the amount and speed of air flow, and to lower the temperature.

It is believed that there is a limit to better frozen state, because it is not a machine which pays attention to the water molecules occupying most of the food composition.

■ “Proton freezer” is;

designed for the purpose of achieving maximum protection against deterioration due to freezing, in order to restore almost its original state . Following improvement is confirmed as a result;

- reducing drip (taste, flavor, ingredient) of fish and meat.
- preventing cooked rice from getting white-waxed, success of frozen Sushi.
- suppressing water evaporation from confectionery.
- realizing special Japanese dishes prepared for the New Year (Osechi), and lunch box.

■ “Proton freezer” is;

a freezing machine equipped with state-of-the art technology enabling;

an inventive step to achieve
reproducibility(Better freezing results)
continuity (possible to obtain the same results, no matter when/who/where it is frozen)

■ “Proton freezer” actual customers distribution is;

Fisheries : 50%
Side dish, cooked rice : 25%
Livestock : 10%
Osechi: 10%
Other (Food for the elderly, vocational aid center, research, etc.): 5%

「Conventional freezing system + Production method」

- Watery when frozen: Syneresis inhibitor
- Discoloration of food: Antioxidant, Coloring
- Food gets dried: Humectant
- Bacterial count of food is a concern: Bacteriostatic agents, pH adjuster
- Not delicious: Seasoning, additives, etc.

「High-grade freezing system + Cooking & Management technology」

Additive-free, cooked with only taste of the material, high quality is possible by combining the technology of cooking + management. **This restaurant model is the "Proton dining" in Nara. Please visit "Proton dining" to experience the possibility of frozen food, and you may be asked to consider business development opportunities.**

「Key of high-quality-freezing is how to Construct "defreezing technology", "cold-logistics" and "proper storage"」

"Frozen locally - Thawed at consumption point", "Frozen in central kitchen and Thawed in the store" etc
To freeze, you need also know-how of thawing.

Stabilization of the low temperature logistics is also important, the leading frozen foods manufacturer has its own distribution network, but should be entrusted to the outside with the small and medium-sized company, there are a lot of trouble in transit.

There is also an example of using the additive to cope with temperature change, but the retention period is affected by the stability condition and storage temperature suitable for food characteristics.

Description of Business

We, the "little food, cherished stock, delicious cooking" in enterprise concept, has been manufacturing and selling the most advanced freshness maintenance "proton freezer and thawing machine" in the basic technology that has been backed by the patent of freezing and thawing. Use our freezer and thawing machine in a French restaurant group companies establish a cooking technique of frozen food, we will pursue the synergy of hardware and software. I have built the business to put further frozen food of local specialty that has been frozen at the installation proton frozen machines across the country to "proton fresh network" system.

Proton fresh network system

	産地	プロトンダイニング (真空フリーズシステムズ)	消費地
生産	魚・野菜・肉の 2次加工 (最終加工まで)	産直2次加工品の 最終加工・調理品製造	卸売会社・ホテル レストラン・病院 etc...
流通			
【プロトン製品】 使用機器	プロトン凍結機 プロトン殺菌機	プロトン凍結機 プロトン殺菌機 プロトン解凍機	プロトン解凍機



PR

Our freeze machine is refrigeration process, and a thaw machine suppresses dryness degradation by overheating by the thaw process by cold vapor spray and plans for freshness maintenance of a food with the system to restrain enlargement of ice nucleation and reduce damage of food material.

Ice crystal polarization photo comparison



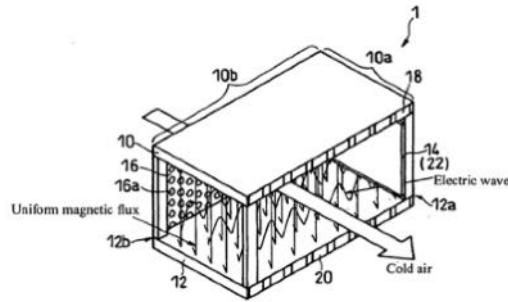
NEEDS

- 1.The traders who ask seafood and freshness maintenance of stockbreeding items and agricultural produce items
- 2.The safety which has no additives, relief and the food-processing person who purchases a delicacy
- 3.The traders long term storage becomes possible to freeze it, and who ask development of a new product of a food
- 4.The traders who consider high plan production of a food and stable production of seasonality

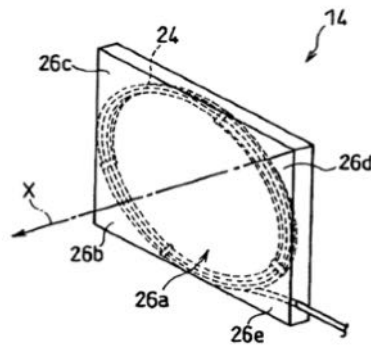
PATENTING WORLDWIDE

The **PROTON**® FREEZER system is patented worldwide.

[Fig. 1]



[Fig. 2]



COMPARATIVE OF THE DIFFERENT FREEZING METHODS

Model □□	Nitrogen freezing	Brine freezing	Air blast freezing (conventional system)	Proton Freezing (Air blast freezing)
Item □□				
Basic freezing method	To freeze materials by making external atmosphere (-196 °C nitrogen) to reach out from the outside	•Same as on the left (-40 °C brine)	•Same as on the left (-30 to -40 °C cold air)	•Same as on the left (-30 ~ -40 °C cold air) •To give an energy onto food moisture for generating small crystals
Freezing method, classification	Nitrogen injection	Brine immersion	Cold air circulation	Cold air circulation Magnet Electromagnetic wave
Effect and Features	Freezing time is very fast	Freezing time is fast	Standard freezing time	Freezing time is very fast
	Drip is less	Drip is less	Drip is normal	Drip is extremely less
	Product degradation is less. There is a case of surface deterioration due to large temperature difference depending on a product	Product degradation is less	There is product degradation	Product degradation is very low
	High running costs About 50 yen to 70 yen / 1kg	Slightly higher running costs About 8 yen / 1kg ※ packing material cost consuming.	Average Running costs About 2 yen / 1kg	Average Running costs About 2 yen / 1kg
	Initials cheap Refrigerator is nor required	Initials cheap. Care needs to be alcohol concentration management.	Many water evaporation	Possible to freeze food that was thought to impossible freezing so far.

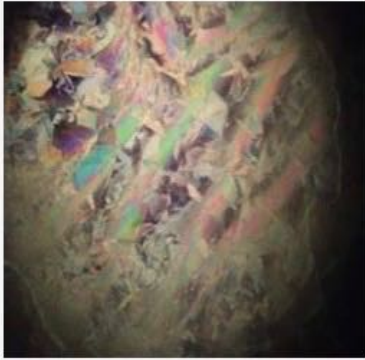
COMPARATIVE OF THE MOLECULAR CRYSTALLINE STRUCTURE

The particles of water molecules frozen with **PROTON® FREEZER** are considerably smaller than those resulting from normal freezing and rapid freezing with nitrogen.


(Sample facilitated by Dr. Mizuno, professor at the University of Hokkaido, Dep. Of Nuclear Chemistry).

Ice crystals size frozen by Proton Freezer compared with others by the polarized light photograph


bigger → smaller



Slow freezing (-25°C)



Usual rapid freezing (-40°C)



Proton freezing (-35°C)

※Photograph by hydrogen technical applied development Co., Ltd.

Nuclei size of ice crystals formed by Proton Freezer is much smaller than that by the usual freezer

The product frozen by **PROTON® FREEZER** technology and once defrosted, keeps the water molecule in the same state as before being frozen, so the freshness, flavor, aroma and original texture of the food is maintained.

With PROTON® FREEZER a new generation of freezers has been born.

プロトン凍結の効果

食品細胞の破壊を防ぎ、解凍時のドリップ量を軽減。食品の弾力を保ちます。

マグロの弾力を示す数値比較

生マグロ25.53

従来の急速凍結



19.67

表面に粘り気があり、キッチンペーパーが張り付く。

プロトン凍結



23.67

キッチンペーパーは張り付かない。

プロトン凍結は生マグロに近い弾力が残る。

鶏レバーの自然解凍でも、ドリップ流出を減少させることが可能。

従来の冷凍

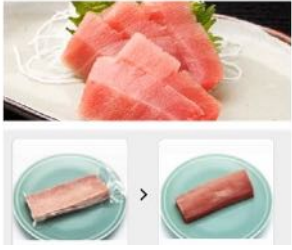




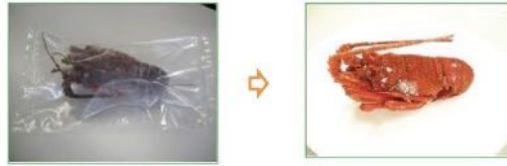
プロトン凍結

FROZEN PRODUCTS

With PROTON ® FREEZER equipment from INNOVAFISH, you can freeze any type of raw material:



FISH



SEAFOOD



MEAT



VEGETABLES



FRUITS



BAKERY



PASTRY



DAIRY PRODUCTS



IV RANGE



SEASONAL PRODUCTOS

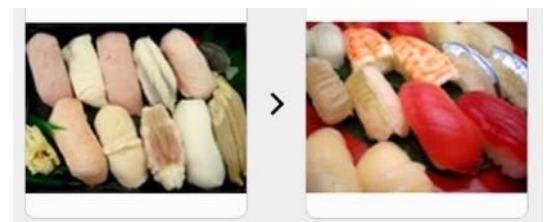


HIGH VALUE PRODUCTS

UNIQUE SYSTEM TO FREEZE **SUSHI**

Rice is a product that loses a lot of quality if it is frozen. Currently, **PROTON ® FREEZER** is the only correct way to freeze rice, and therefore, to freeze sushi.

In Japan it is usually used to make sushi in restaurants and catering.



導入事例 <水産>

プロトン凍結で6次産業化へ!

高鮮度維持プロトン凍結の力!

里町漁業・こしきの里 様(飯島 鹿児島)

里中漁業様の声

きびなごは鯛の仲間、本来傷みや鮮度が長持ちしない魚です。遠く離れたみなさんのもとにお届けするには冷凍処理は避けられない魚種なのです。ところが従来の冷凍機では、細胞内の水分が凍結する時にできる氷の結晶が細胞組織を破壊するため、解凍時に融けた水分とともにアミノ酸や各種栄養成分がドリップとして流れ出てしまい、冷凍前の風味には戻せませんでした。プロトン凍結したきびなごは解凍しても新鮮さを失いません。また、生のきびなごも実際に食卓に届くまでは氷で冷やされていますが、その間にも鮮度はどんどん落ちていきます。私たちのきびなごは獲れたてをすぐにプロトン凍結。だから解凍するだけで獲れたての新鮮さが再現できるのです。



プロトン凍結を解凍したきびなご



スーパーで購入した魚獲後7時間経過したきびなご

キョクヨー / 築地魚市場 / 鈴富 様(築地 東京)

荷受・仲買様の声

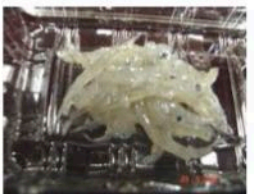
私どもが独自に導入している「プロトン凍結」システムは、鮮魚の冷凍品質向上に大きな効果が認められている、画期的な新技術です。この技術によって、「旬」の良質なマグロやその他の鮮魚を、年中安定した品質でお使いいただく事が可能になりました。すでに、ご購入いただいたお客様から、従来より高評価の「CAS冷凍」を超える品質とのご好評もいただいております。通常の冷凍品を解凍したときに、大量のドリップ(液体分)が流れ出し、食味が大きく損なわれたというご経験はないでしょうか?原因は、凍結時の「氷の粒の大きさ」にあります。大きな氷の粒ができる通常の冷凍技術では、食材の細胞が破壊され、解凍時のドリップ流失が避けられません。「プロトン凍結」は、この氷の粒の大きさを微細に抑え、ドリップを最小にとどめるまったく新しい冷凍法なのです。



にんべんいち / 露屋水産 様(茨城 / 和歌山)

にんべんいち・露屋水産様の声

生しらすは従来、品質劣化が早く流通が難しい商品です。浜で水揚げされた生しらすは浜でしか味わうことができません。プロトン凍結は劣化を防ぎ生しらすを完全再現致します。従来無理と言われてきた生しらすの流通が可能となり、全国への拡販が可能となりました。また、近年しらすは水揚げ量にバラツキがみられ価格が不安定ですが、プロトン凍結で保管することにより価格の安定にもつながります。



佐政水産 様(焼津 静岡)

佐政水産様の声

駿河湾ではアジ・ゴマサバなどの大衆魚やタチウオ・キンメ・手長海老・メヒカリ・ユメカサゴなど100種類以上の魚が漁獲されます。また弊社の鮮魚荷受部門では全国から魚介類を買い付けし、沼津魚市場で販売しています。取扱商品は生加工品からプロトン凍結を使用した凍結品を扱っており鮮度保持、人件費削減、仕入れ・原価安定などお客様に総合的なコストコントロール・労務管理・品質管理を提案いたします。



黒潮市場 様(海南 和歌山)

黒潮市場様の声

黒潮市場では皆様にトレトレの産地直送鮮度と、輸送中の品質低下を防ぐため、プロトン冷凍機を使用しています。プロトン凍結により、食品細胞の破壊を防ぎ・ドリップ量画期的に低下させる事が可能になり解凍後の品質低下を劇的に少なくすることが可能になりました。クエの解体ショー、マグロの解体ショーもプロトン凍結で食材ロス率低減!



高鮮度維持プロトン凍結の力！

畜産業界でのプロトン凍結機導入が急増中です！

畜産業界でプロトン凍結導入急増の理由

- 1、ドリップを抑えた高品質の商品作り
- 2、計画生産で年間作業の平準化
- 3、ギフト商品の安定拡販
- 4、食材ロスの軽減
- 5、値動きに合わせた原価調整が可能

導入事例

株式会社 牛長様(大阪)

チルド流通が主流の畜産業界ですが、牛長様ではアイテムや部位によってプロトン冷凍で商品を流通されています。ギフト品や進物用のスライス肉やステーキ肉は劣化や変色が早くリスクの高い商品ですが、プロトン凍結により従来の品質を保ち、安定した商品を御客様にお届けすることが可能となりました。また、商品のロスを抑えることができました。



株式会社 おおみや様(丹波篠山)

おおみや様では以前アルコールブライン凍結を御採用されていましたが、【解凍時ドリップが多い・ランニングコストが高い・真空包装後でないため凍結できないため商品開発が難しい】等の理由でプロトン凍結機を御採用されました。猪肉は猟期が決まっており1年を通した商品作りが難しいのですがプロトン凍結機導入により年間を通した安定した高品質の商品作りが可能となり、ランニングコストの削減にも成功しました。また不 중요部位を使用した新商品の開発もされています。



導入事例 <お節 その1>



「Hankyu: 阪急のおせち料理」カタログ

「コープ」カタログ



プロトンダイニングで作る「冷凍お節」

プロトン凍結で7つのメリット！

- (1) 従来の冷凍品比べ再現性が高く、高品質の商品が製造可能。
- (2) 製造作業を前倒しすることで、作業の平準化が可能。
- (3) 年末繁忙期の製造人件費の安定(残業費をカット)。
- (4) 添加物に頼らず、無添加の商品作りが可能。
- (5) 食材ロス的大幅軽減。
- (6) お節時期を外した原材料注文で原価を抑える。
- (7) プロトンアライアンスの活用で商品開発、販路拡大。

プロトンお節製造のポイント

□納入先 阪急 高島屋 コープ
 □食材 プロトンユーザー様の食材使用
 □製造のポイント
 10月からユニット(小分け)ごとに集中して製造し、プロトン凍結をして保管をしています。同じ種類のアイテムを集中して製造することにより製造工程を単純化し食材のロスを減らすことが可能です。12月にお重箱に各冷凍ユニットをセットし、包装して再度保管し年末に出荷します。10月からの製造計画により、作業が平準化し人件費も安定します。また、10月からの製造で12月に価格高騰する食材原価を抑えることが可能です。



導入事例 <Sweets>

Sweetsプロトン凍結商品化6つのメリット！

- 1、無添加の商品作りが可能
- 2、スポンジ類もふんわりと
- 3、動物性純正クリームも再現性抜群
- 4、ムース類の凍結商品化
- 5、和菓子などの高価値食材も可能
- 6、カスタード・チーズ類の高復元性



洋菓子も和菓子もプロトンで商品化



株式会社フラワー様(大阪)

本来純生クリームは添加物が必要でしたが、プロトンで無添加の純生クリームの凍結が可能となりました。パイ生地も本来の冷凍では解凍後生地が湿ってしまい食感がなくなりますが、プロトン凍結するとパイ生地・タルト生地の食感を残したまま凍結できます。スポンジもしっとりとした食感が残りふんわりと仕上がります。本来食感が悪くなるなど冷凍に不向きなスイーツ食材もプロトン凍結により可能となり商品開発と販路が広がります。



導入事例 <お節 その2 車えび>

名店「たん熊」で導入されているプロトン車エビ



品名 081

京料理「たん熊北店」
和風おせち 5A箱一箱
税込15,750円(送料別)15,000円
【販売予定数373】

品名 082

京料理「たん熊北店」
和風おせち 5A箱一箱
税込26,250円(送料別)25,000円
【販売予定数361】

品名 083

京料理「たん熊北店」
和風おせち 5A箱一箱
税込57,750円(送料別)55,000円
【販売予定数21】

「Hankyu: 阪急のおせち料理」カタログ

たん熊北店

谷津地区、吉野地区の文人に愛された、昭和二年から続く京料理の名店。深みのある出汁をベースにした上品な味付けが多くの食通を魅了しています。厳選された山海の素材、伝統の技から生まれた、風味豊かな逸品をご賞味ください。

- 1、たん熊様のお節に採用されている車エビは、五島列島産のプロトン凍結されたものです。
- 1、たん熊様では、プロトン凍結の車エビを高く評価して頂き、年々受注数が増加しています。
- 1、プロトンダイニング店で五島列島産のプロトン凍結車エビを仕入れ、つや煮に加工し、再度プロトン凍結処理をしています。
- 1、2012年度の処理量は35000尾。
- 1、五島列島のプロトンユーザー「拓水」様は凍結機(Pr-c15型)を5台導入されており、養殖の車エビを凍結されています。
- 1、養殖の車エビは死ぬと価値がなくなる為、常時ピックアップし凍結されロスを軽減し全国に拡販されています。
- 1、たん熊様はお節自体の「プロトン凍結」や「プロトン凍結の食材」のOEM先を探しておられ、高品質化を目指しておられます。



導入事例 <野菜 惣菜>

野菜はプランチングで高付加価値商品化

旬の野菜をプロトン凍結で加工し高付加価値商品へ！

野菜惣菜凍結状態

野菜惣菜 解凍後



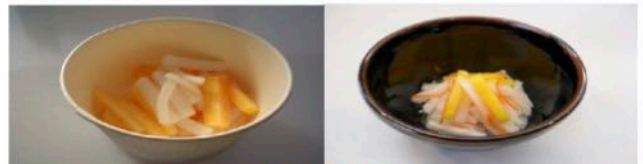
マコモダケのきんぴら



カボチャのそぼろ鮎かけ



筑前煮



柿と大根のピクルス

某食品メーカー(静岡)

加熱後の野菜類は、おおむね冷凍が可能で、多くの「調理済み冷凍食品」がありますが、ほとんどが解凍時の離水防止のために添加物を使用しているのが実態です。プロトン凍結機を使用すると、この離水防止剤が不要になる特徴があります。

実例:くわいの煮物

おせち料理と言えば、最近では「取り寄せるもの」という考え方が一般化し、冷凍おせちが大変多くなりました。おせち料理に欠かせない食材に「クワイの煮物」がありますが、クワイは大変やわらかい芋で、冷凍には弱い食材です。最近では冷凍目的に軽く煮るので味が入らず、味の無い冷凍クワイの煮物が出回っております。料理人のしっかりした味付けで煮た「クワイの煮物」を普通の冷凍機で冷凍すると、解凍後には歯ごたえないフニャフニャの煮物になってしまいますが、プロトン凍結機で冷凍すると、解凍後も「ホクホク」で、味のしっかりした煮物を楽しむことができます。



FROZEN PRODUCTS

● 取扱商品

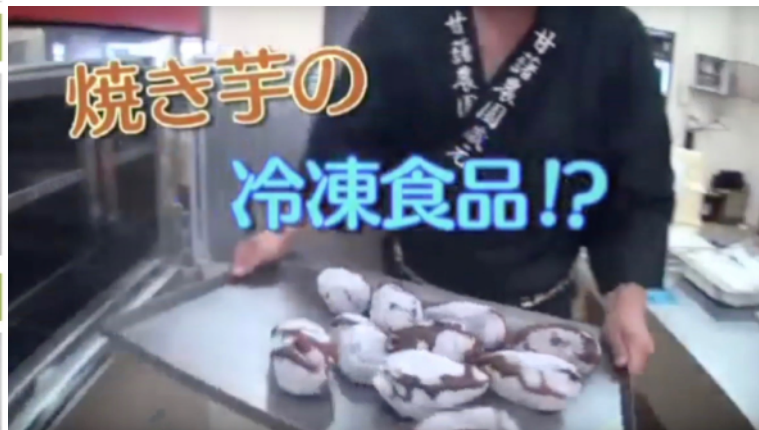
ぶなしめじ

茨城県銚田市にて『ぶなしめじ』を栽培しております。県内産オガ粉を主原料に菌床をつくり、農薬ホルモン剤は使用せず栽培しております。色、形、そして味にこだわり良い品種の選定をし、皆様に安心安全はもちろん、新鮮でおいしい『ぶなしめじ』をお届けできるよう努めております。どのような形態にも対応致します。



銀杏

ぶなしめじを収穫した後の廃オガを肥料として育てた銀杏です。鬼澤食菌センターでは、循環型農業(リサイクル活動)にも力を入れています。



Latest Freezing Technology "Proton Freeze"

導入事例 <野菜 惣菜>

旬の野菜をプロトン凍結で加工し高付加価値商品へ!

某食品メーカー(静岡)

加熱後の野菜類は、おおむね冷凍が可能で、多くの「調理済み冷凍食品」がありますが、ほとんどが解凍時の離水防止のために添加物を使用しているのが実態です。プロトン凍結機を使用すると、この離水防止剤が不要になる特徴があります。

事例:くわいの煮物

おせち料理と言えば、最近では「取り寄せるもの」という考え方が一般化し、冷凍おせちが大変多くなりました。おせち料理に欠かせない食材に「クワイの煮物」がありますが、クワイは大変やわらかい芋で、冷凍には弱い食材です。最近では冷凍目的に軽く煮るので味が入らず、味のない冷凍クワイの煮物が出回っております。料理人のしっかりした味付けで煮た「クワイの煮物」を普通の冷凍機で冷凍すると、解凍後には菌ごたえないフニャフニャの煮物になってしまいますが、プロトン凍結機で冷凍すると、解凍後も「ホクホク」で、味のしっかりした煮物を楽しむことができます。

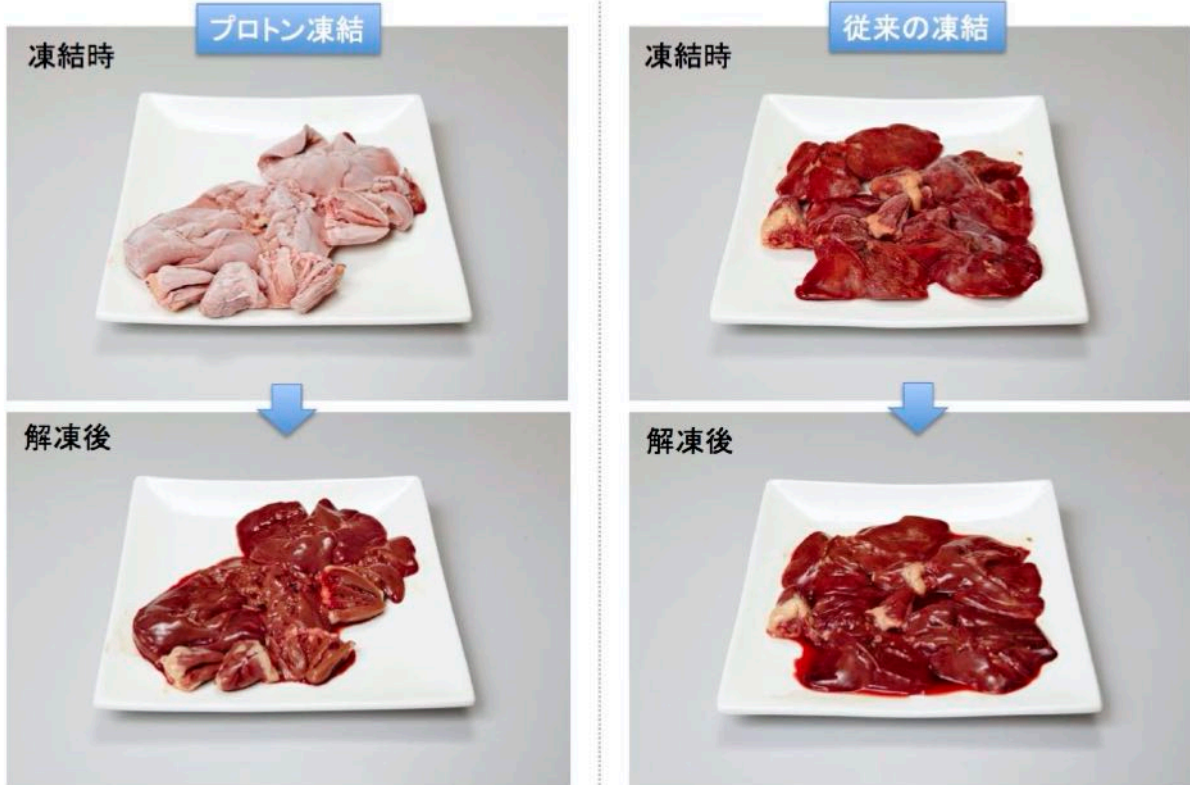


県内すべてのファーマーズに独自のトレーサビリティシステムを導入しています。



ADVANTAGES OF PROTON® MAGNETIC FREEZING

鶏レバーの比較



ドロップが著しく少なく、変色が無い(黒ずみが全くみられない!)

Latest Freezing Technology "Proton Freeze"

Copyright (C) Fyoh

MEAT

白米(寿司シャリ)の比較

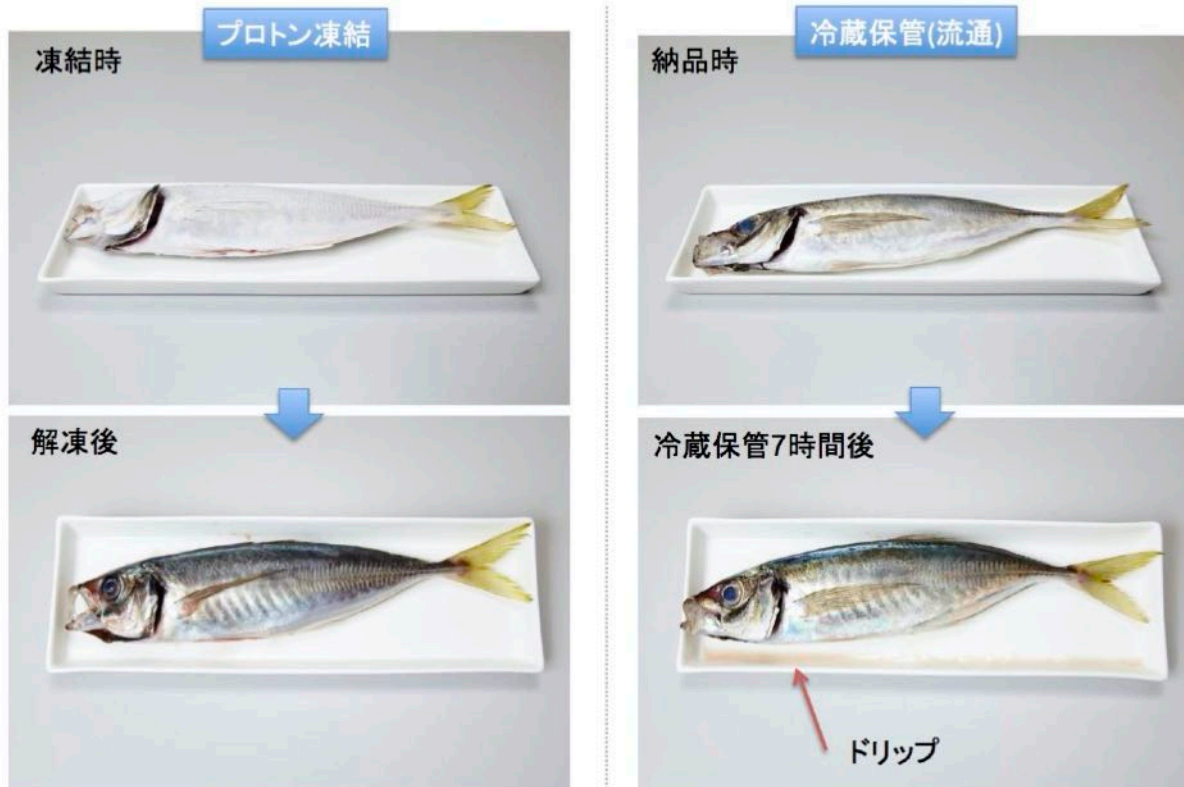


飯の粒が潰れず、白く固まる現象が起きない(白蠟化現象)

RICE

ADVANTAGES OF PROTON® MAGNETIC FREEZING

鰺(あじ)の比較 [凍結とチルド]



ある時間交点を境に、良い凍結品は生のモノを上回る。(ドリップ現象・目玉の色・エラの色・魚体の艶 etc..)

Lateset Freezing Technology "Proton Freeze"

Copyright

FISH

純生クリーム(ホイップ前)の比較



乳成分の分離が少なく、質感(食感)が損なわれない。

DAIRY

AND THE MOST IMPORTANT:

DIFFERENTIATE COMPETITION



INCLUDE IN YOUR PRODUCTS a seal that specifies the technology used to freeze your products.

At first sight, it will give its products a distinction and a differentiation from the rest of the products, moving them away from the products of the competition and allowing them to reach new market segments.

Buyers will immediately perceive this difference and will associate their company as a leader in innovation and in the use of successful technologies from the traditionally more technologically advanced country: Japan.

In short, they will perceive a unique product, that when tasting it, will confirm the idea of quality that we want to contribute to it.

You can find in us and in our manufacturer, all the help for the development of promotional marketing of this technology.

DIFFERENCES BETWEEN PROTON® AND "CAS"

The basis of the freezing by CAS, manufactured by ABI, is based on the generation of a low frequency vibration in the water molecules that make up the food. CAS works on the simple principle that water molecules cannot be added if they are in continuous motion during the freezing process, using rotating electric fields to rotate the water molecules.

PROTON® FREEZER has perfected the use of magnetic fields, using magnetic force to order water particles by minimizing the ice crystals produced in the cells when they freeze, leaving far behind the simple vibration of CAS.

According to Laura Otero, CSIC scientist, in her study "Effects of magnetic fields in freezing: application to biological products" the low resistance of magnetic fields applied in ABI freezers (generally lower than 1 mT) cast doubt on the effects that these extremely weak magnetic fields may have on the supercooling, the freezing kinetics and / or the quality of the food products thus frozen.

Thanks to the **PROTON® FREEZER** magnetic freezing technology, the differences between defrosted product and fresh product disappear, giving rise to a new category: "The fresh product in frozen"



PROTON® FREEZER represents the definitive advance in the field of magnetic freezing initiated with CAS

産地で1・2次加工し、調理工場で最終商品まで調理加工。その商品を国内・海外消費地で直接販売。本ビジネスモデルにご支援・ご支持くださる事業者の方々とも、ビジネスマッチング致します。



JAPANESE COMPANIES THAT USE PROTON®




Inmediatamente después del procesamiento del paquete de vacío de congelación de protones, se transfiere al congelador del compartimento congelador y se congela.
 ※ Se usa congelación de protones.
 ※ Los productos enviados en crudo no se congelarán.

ISO 22000 認証
 ISO 22000取得工場から生み出される
 安心・安全な加工ライン完備
 名古屋市内にある岐阜種工場で唯一の ISO 22000 (食品の安全に保つための体系づくりに関する国際規格) 認定工場



ISO 22000 取得工場
 品質管理を徹底した工場で一貫加工しています。

Es solo nuestra fábrica que procesamos la prefectura de Aichi "jumaneme Nagoya Cochín" (pollo vivo) en la ciudad de Nagoya. Además, es la única fábrica con certificación ISO 22000 en la fábrica de procesamiento de aves vivas ubicada en la ciudad de Nagoya ("Norma internacional para construir un sistema para mantener la seguridad alimentaria"). Delicioso, por favor disfruta con confianza.



プロトン冷凍で鮮度保持
 これ以上ない新鮮な名古屋コーチンをお届けします

Los ingredientes congelados mantenidos frescos por protones congelados tienen menos probabilidades de romperse cuando se congelan, por lo que puede reproducir la frescura del congelado tal como está. Es económico y se puede aplicar a varios menús porque es fácil de guardar.



トップページへ▲

弊社では専ら、TV等メディアで多くの注目を受ける「プロトン凍結機」を業界で先駆けて導入しました。これは「牛肉の鮮度を確保せずに冷凍出来るため、解凍してもドリップがほとんど出ず、まるで生のような鮮度と美味しさを再現出来る」。これまでの常識を覆した革新的な冷凍機です。また、自社ファーマーズビルトでは「HACCP」の体制を日直し、最新鋭の衛生的な設備で牛肉加工を行っています。プロトン凍結機の詳しい解説はこちら

牛匠とは



専用加工ライン
 名古屋コーチンだけを加工する体制を整えています。

En la fábrica de la sede, procesamos Nagoya Cochín de recibimos de manera consistente, para que no se realicen otras carnes y osos gérmenes presentes en las carnes no se adhieren. Como resultado, es posible lograr el mayor nivel de control de higiene y podemos ofrecer Nagoya Cochín de alta calidad y fresca en la ciudad.



JAPANESE COMPANIES THAT USE PROTON®

最高の素材を 高い状態で お届けします!

プロトン冷凍は、生鮮食品の品質を最大限に保ち、高い状態でお客様へお届けします。最新の冷凍技術と厳格な品質管理により、新鮮な食材をいつでもどこでも提供いたします。

最新冷凍技術

1. 急速凍結
2. 低温凍結
3. 真空凍結
4. 凍結安定化
5. 凍結検査
6. 凍結包装
7. 凍結出荷

フィレ物工場ライン

プロトン冷凍のフィレ物は、最新の冷凍技術と厳格な品質管理により、新鮮な食材をいつでもどこでも提供いたします。

漁師の約束

新鮮な魚を、漁師の約束で。プロトン冷凍は、漁師の約束を守り、新鮮な魚をいつでもどこでも提供いたします。

見ればわかる! すべて新鮮! 漁師直伝 喜びなご料理

新鮮な魚を、漁師の約束で。プロトン冷凍は、漁師の約束を守り、新鮮な魚をいつでもどこでも提供いたします。

※佐水産協が作成された資料より抜粋

※飯島漁協が作成された資料より抜粋

原料入荷：解凍

- ・ 外壁からの虫侵入対策：高圧シャッター
- ・ 水漏れ：遮水（色）、障壁（サビ）
- ・ 湿気：換気対策

下処理工程

- ・ 生ごみ発生期ルート、保管について
- ・ 凍結ホウの系統、確認工程
- ・ 低温空調、作業着手元の温度確保

製造

- ・ 調味、加熱、揚げ作業
- ・ 産色区分、ボイル等の電気設備対策
- ・ 乾燥対策、作業着手元の温度確保

下処理工程

- ・ 凍結品の温度管理：低温空調
- ・ 凍結仕上げ工程、凍結での温度確保
- ・ ダンボール等の凍結対策、出荷検査の検討



Frozen Octopus Slice Manufacturing process

1. Carrying in/Freeze/Defrosting
2. Seasoning with salt and soaking /Rice washing
3. Washing
4. Cut
5. Heating
6. Refrigeration
7. Slice
7. Slice
7. Slice
8. Measurement
9. Bag filling
10. Freeze
11. Vacuum package
12. Metal detection
13. Packing
14. Shipping

与力水産株式会社

English 日本語 "土佐の美味しい魚"

企業概要 事業内容 当社への視察 Q & A 採用情報

凍結の比較

従来の急速凍結の水 vs プロトン凍結の水

プロトンなら

従来の急速凍結の水 vs プロトン凍結の水

プロトンなら

従来の急速凍結の水 vs プロトン凍結の水

プロトンなら

導入事例 <水産> プロトン凍結で6次産業化へ!

高鮮度維持プロトン凍結の力!

最新冷凍へしきの産 種(飯島 飯尻島)

キャクワ / 産地市場 / 産地 産地 (産地 産地)

いんべい / 産地市場 種(産地 和歌山)

産地市場 種(産地 静岡)

産地市場 種(産地 和歌山)

マグロの弾力性を示す数値比較

生マグロ25.53

従来の急速凍結 vs プロトン凍結

19.67 vs 23.67

表面に粘りがあり、キッチンペーパーが張り付く vs キッチンペーパーは張り付かない。

プロトン凍結は生マグロに近い弾力が残る。

JAPANESE COMPANIES THAT USE PROTON®

株式会社 福岡魚市場

一般社

一課題

導入後

ホテルイカの販路拡大

生食可ホテルイカの 通年販売を目指して!

導入前

導入後

EBADA Fishery

PF-150型

導入前

導入後

パチ式急速冷凍機 プロトン凍結機:リ・ポーン

【地方の銘品】老舗和菓子店

現状

課題

プロトンで解決

高鮮度維持プロトン凍結の力!

畜産業界でのプロトン凍結導入が急増の理由

導入事例

株式会社 牛長橋 (大阪)

株式会社 おおみや (兵庫県)

おせち料理冷凍の時代に!!

おせち料理販売実績

導入事例

株式会社 寿司・宴会

三田産 鮭本家

導入前

課題

導入後

リ・ポーンオーダー!!

【ポイント】

【地方の銘品】老舗和菓子店

現状

課題

プロトンで解決

老舗仕出し弁当店「天ふら計画生産の実現」

悩み

改善

導入前

導入後

作業時間の短縮

Tajima Kankitsuen

人生1度の晴れ舞台 < 婚礼料理 >

導入前

導入後

フルコースを全て凍結/解凍お手軽提供

人生1度の晴れ舞台 < 婚礼料理 >

導入前

課題

導入後

フルコースを全て凍結/解凍お手軽提供

導入事例 < Sweets >

Sweetsプロトン凍結商品化6つのメリット!

現状

課題

プロトンで解決

JAPANESE COMPANIES THAT SELL PROTON® PRODUCTS

**高鮮度維持凍結機（プロトン）
ふるさと納税返礼品のお手頃！**

高鮮度維持凍結機（プロトン）は、鮮度を最大限に保ちながら、長期間冷凍保存が可能です。ふるさと納税返礼品として、地域の特産品を全国へお届けすることができます。

**南伊勢町 (伊勢まぐろ (雄雄本まぐろ))
株式会社ブルーフィン三重**

内容
伊勢町産「伊勢まぐろ」の雄雄本まぐろ。伊勢町産の新鮮なまぐろを、冷凍してお届けいたします。雄雄本まぐろは、伊勢町産の新鮮なまぐろを、冷凍してお届けいたします。

**本館詰合せ5点セット (80g×3 100g×2) 南紀串本よした
株式会社カネヨシ**

内容
南紀串本よしたの新鮮なまぐろを、冷凍してお届けいたします。南紀串本よしたの新鮮なまぐろを、冷凍してお届けいたします。

**おおい町 (若狭くし刺身 300g (プロトン急速冷凍))
大島漁業協同組合**

内容
若狭くし刺身の新鮮なまぐろを、冷凍してお届けいたします。若狭くし刺身の新鮮なまぐろを、冷凍してお届けいたします。

**お手製神の葉ずし買戻セット
~のどごろなど計5種~
株式会社三丹本店**

内容
お手製神の葉ずし買戻セットの新鮮なまぐろを、冷凍してお届けいたします。お手製神の葉ずし買戻セットの新鮮なまぐろを、冷凍してお届けいたします。

**浜松市 (浜名湖産白焼き)
株式会社海老仙**

内容
浜名湖産の新鮮な白焼きを、冷凍してお届けいたします。浜名湖産の新鮮な白焼きを、冷凍してお届けいたします。

**金目鯛みそ漬の焼酎
株式会社ファブリック**

内容
金目鯛みそ漬の焼酎の新鮮なまぐろを、冷凍してお届けいたします。金目鯛みそ漬の焼酎の新鮮なまぐろを、冷凍してお届けいたします。

**山梨市 (飛弾牛A5等級ロース肉すき焼き)
川辺物産株式会社**

内容
飛弾牛A5等級の新鮮なロース肉すき焼きを、冷凍してお届けいたします。飛弾牛A5等級の新鮮なロース肉すき焼きを、冷凍してお届けいたします。

**春日井市 (「二段重」おせち料理)
株式会社三丹本店**

内容
「二段重」おせち料理の新鮮なまぐろを、冷凍してお届けいたします。「二段重」おせち料理の新鮮なまぐろを、冷凍してお届けいたします。

**富山市 (岩瀬漬特産 富山の宝石
白えびの刺身と昆布巻、焼付き)
株式会社 シェアード北陸**

内容
岩瀬漬特産の新鮮なまぐろを、冷凍してお届けいたします。岩瀬漬特産の新鮮なまぐろを、冷凍してお届けいたします。

**「おおいと牛」ヒレステーキ
有限会社肉のなかおか**

内容
「おおいと牛」ヒレステーキの新鮮なまぐろを、冷凍してお届けいたします。「おおいと牛」ヒレステーキの新鮮なまぐろを、冷凍してお届けいたします。

**国東市 (豊後ハモの骨切りと産揚げ用1kg)
ハナマル食品株式会社**

内容
豊後ハモの骨切りと産揚げ用の新鮮なまぐろを、冷凍してお届けいたします。豊後ハモの骨切りと産揚げ用の新鮮なまぐろを、冷凍してお届けいたします。

**南三陸町 (三陸天然あびとめかぶのセット)
株式会社マユヤ洋水産**

内容
三陸天然あびとめかぶの新鮮なまぐろを、冷凍してお届けいたします。三陸天然あびとめかぶの新鮮なまぐろを、冷凍してお届けいたします。

**大洗町 (大洗しらす 食べくらセット)
株式会社にんべんいち**

内容
大洗しらすの新鮮なまぐろを、冷凍してお届けいたします。大洗しらすの新鮮なまぐろを、冷凍してお届けいたします。

**三田市 (三田牛切り落とし (冷凍品))
株式会社三田置本家**

内容
三田牛切り落としの新鮮なまぐろを、冷凍してお届けいたします。三田牛切り落としの新鮮なまぐろを、冷凍してお届けいたします。

**新温泉町 (冷凍白いか1KG入 (5杯前後))
浜坂漁業協同組合**

内容
冷凍白いかの新鮮なまぐろを、冷凍してお届けいたします。冷凍白いかの新鮮なまぐろを、冷凍してお届けいたします。

**泉佐野市 (特選もも焼肉食べ比べセット 700g)
株式会社松源**

内容
特選もも焼肉食べ比べセットの新鮮なまぐろを、冷凍してお届けいたします。特選もも焼肉食べ比べセットの新鮮なまぐろを、冷凍してお届けいたします。

**篠山市 (ぼたん鍋特選セット (冷凍))
株式会社おとみや**

内容
ぼたん鍋特選セットの新鮮なまぐろを、冷凍してお届けいたします。ぼたん鍋特選セットの新鮮なまぐろを、冷凍してお届けいたします。

**浜田市 (浜田開府400年記念) 3-11(1) 人気
のどごろ干物と浜田自産の魚をお届け)
株式会社シーライフ**

内容
浜田開府400年記念の新鮮なまぐろを、冷凍してお届けいたします。浜田開府400年記念の新鮮なまぐろを、冷凍してお届けいたします。

**日本海輝映漁業倶楽部・プロトンセット
株式会社日本海輝映漁業倶楽部**

内容
日本海輝映漁業倶楽部の新鮮なまぐろを、冷凍してお届けいたします。日本海輝映漁業倶楽部の新鮮なまぐろを、冷凍してお届けいたします。

**新津市 (【一粒焼】本格おこわ20パック詰合せ)
株式会社 康寿米穀 浜五斎事務所**

内容
【一粒焼】本格おこわ20パック詰合せの新鮮なまぐろを、冷凍してお届けいたします。【一粒焼】本格おこわ20パック詰合せの新鮮なまぐろを、冷凍してお届けいたします。

**大船渡市 (大船産産 刺身用あび 500g & 煮タコ 1kg)
野村海産株式会社**

内容
大船産産の新鮮な刺身用あびと煮タコを、冷凍してお届けいたします。大船産産の新鮮な刺身用あびと煮タコを、冷凍してお届けいたします。

**熊本市 (居酒屋八蔵名物「鶏もも炭火焼」)
株式会社アオキ**

内容
居酒屋八蔵名物の新鮮な鶏もも炭火焼を、冷凍してお届けいたします。居酒屋八蔵名物の新鮮な鶏もも炭火焼を、冷凍してお届けいたします。

**国ぶりの刺身 (棒状) 約600g
有限会社さくや水産**

内容
国ぶりの刺身の新鮮なまぐろを、冷凍してお届けいたします。国ぶりの刺身の新鮮なまぐろを、冷凍してお届けいたします。

**新富町 (宮崎のちみれ鶏しょうまい和風点々焼)
株式会社大特 (やとり大特)**

内容
宮崎のちみれ鶏しょうまい和風点々焼の新鮮なまぐろを、冷凍してお届けいたします。宮崎のちみれ鶏しょうまい和風点々焼の新鮮なまぐろを、冷凍してお届けいたします。

**京丹後市 (丹後とり貝 開きボイル加工品特大サイズ)
京都丹後 海鮮の匠 魚政**

内容
丹後とり貝の新鮮なまぐろを、冷凍してお届けいたします。丹後とり貝の新鮮なまぐろを、冷凍してお届けいたします。

**志布志市 (霧島湧水 鱈棒寿司)
株式会社アオキ**

内容
霧島湧水の新鮮な鱈棒寿司を、冷凍してお届けいたします。霧島湧水の新鮮な鱈棒寿司を、冷凍してお届けいたします。

**プロトン冷凍準海老)
株式会社那国町**

内容
プロトン冷凍準海老の新鮮なまぐろを、冷凍してお届けいたします。プロトン冷凍準海老の新鮮なまぐろを、冷凍してお届けいたします。

**和歌山県 (とらふくセット (唐揚げ付))
株式会社 ほてい**

内容
とらふくセットの新鮮なまぐろを、冷凍してお届けいたします。とらふくセットの新鮮なまぐろを、冷凍してお届けいたします。

RESTAURANTS WITHOUT KITCHEN "PROTON DINING"

Both in Japan and recently in China, Malaysia and Korea are developing restaurants where they have no kitchen, They are called "PROTON DINING" (www.proton-dining.com).

In these restaurants it is **only regenerated**, thawing and plating previously cooked and magnetically frozen dishes in a central kitchen, which offers them wide margins of maneuver due to the reduction of investments (saving investment in kitchen) and the costs of processing and personnel of kitchen.



Overview of Proton Dining Business

a) To provide Know-how of operating a restaurant based on Proton equipment and frozen foodstuff



Proton Dining in Nara



Rockyaon Dining in Nara-Saho Univ.



Rockyaon Dining in Dalian China



b) To supply more than 500 items developed at Rockyaon Dining



2012 Special Gift of Hankyu Department Store
Bouillabaisse of fresh seafood of which foodstuff were directly shipped from local producer

All of seafood (ex. prawn, squid, red sea bream) were frozen in local production areas. After cooking in Rockyaon, shipped with proton frozen

c) To operate a kitchen without chef



COOKED DISHES

RESTAURANTS WITHOUT KITCHEN "PROTON DINING"

従来では凍結に不向きとされる食材の中には、プロトン凍結なら可能なものもあります。

	凍結時	解凍時	Point
魚屋さんでは			<ul style="list-style-type: none"> ・鮮度そのまま ・旬の味をキープ
肉屋さんでは			<ul style="list-style-type: none"> ・鮮度そのまま ・夏冬の需要調整に
洋食屋さんでは			<ul style="list-style-type: none"> ・空き時間に仕込みが可能 ・人材配置の平均化
弁当屋さんでは			<ul style="list-style-type: none"> ・小ロット対応 ・当日オーダーも可能に
ケーキ屋さんでは			<ul style="list-style-type: none"> ・イベント対応も可能に ・2週間分をまとめて製造

For Gift, rice seasoned and cooked with various ingredients



Frozen



Thawed by microwave

2013 Nara Coop Osechi



2013 Takashimaya Osechi



2013 Iron chef Mr. Sakai Spring Bento



2012 2013 Takashimaya Year-end Gift
Iron chef Mr. Sakai
Consomme soup of lobster



Frozen



Served Image

2013 Ristorante Honda, Honda Tetsuya deals with
Terrine of herring roe and salmon roe



2012 Hankyu Department Store
Osechi



COOKED DISHES

"PROTON DINING" COOKED DISHES

anLi DISH (A single portion deli foods)



※ Size of the showcase : H197×W117×D65(cm)

Japanese, Western and Chinese chefs use the most advanced technology and collaborates with the production area to reduce food loss without relying on additives.



Can be installed in small spaces



Effective use of free space

◆ How to enjoy *anLi* DISH



Keep it frozen!

These Products should be stored at -18°C or less. These can be stocked in regural freezers.



Heat it up!

Cut the package and warm it up in the microwave for 45seconds to 2minutes. The defrosting time is listed on each package.



Enjoy!

You can combine any variety for your meal. ※After defrosting, please enjoy it as soon as possible.

◆ Examples of *anLi* DISH



※ Sautéed Salmon with Bourguignon Butter



※ Fried Yellowtail with Basil mayonnaise



※ Fried Chicken with Ham



Roasted Pork



※ Kimpiragobou with Kabocya Shira ae (a salad dressed with ground white sesame seeds and TOFU)



※ Garlic Chicken and Chile Beans



※ Red, Yellow and Green pepper with Sweet and Sour Pork with Black Vinegar



※ Stir-fried Shrimp with Chili Sauce



※ White Fish with Vegetable Ankake



※ Stir-fried eggs and spinach with butter



※ Salmon with leek miso and beans



※ Braised pork with marinated spinach



※ Grated Carrots with Roasted Chicken seasoned with Japanese Pepper



※ Koya Tofu and Hijikini



※ Sukiyaki Rice

FROZEN DISTRIBUTION CHAIN

PROTON technology has been present in the Japanese market for many years. One of the most important applications made with PROTON technology was its implantation in some of the most important chains of distribution of frozen products at a national level. It is currently present throughout Japan.

姫路白浜店 店長：不在
フード担当：たげざわ様



神戸本店 店長：不在
フード担当：あらた様



宜野湾店 冷凍担当：大野様
※1月より沖縄3店舗スープ導入



うるま店 冷凍担当：座喜味様
※1月より沖縄3店舗スープ導入



松原店 店長：不在 社員：休み
アルバイト：しずたに様



深江橋店 店長：不在 社員：休み
アルバイト：たきい様



豊橋店催事出店 食品担当：佐々木様



箕面店 店長：不在
フード担当：やままつ様



茨木店 店長：不在
フード担当：たかみ様



USE OF PROTON ® AT THE POINT OF SALE

HABITS OF CONSUMPTION (80% OF THE POPULATION)



INNOVATIVE SERVICE: FREEZING AT THE POINT OF SALE



Through the **PROTON ®** magnetic freezing technology the differences between thawed product and fresh product disappear, giving rise to a new category: "the fresh product in frozen".

ADVANTAGE

- SERVICE**
 - EXCLUSIVE: Sale of fresh product already frozen
 - DIFFERENTIATOR: Service that differentiates you from the competition
- PRODUCT**
 - AVOID BAD FREEZING at home
 - MAINTAINS ORGANOLÉPTIC ORIGINAL QUALITIES
 - Free of ANISAKIS (fish)
 - Power SALE of FRESH PRODUCT
 - FREEZE ALL TYPES OF PRODUCTS (fish, seafood, meats, vegetables, pastries, sushi, etc.)
- OTHERS**
 - MUSHROOM USE
 - INCREASE OF PROFITABILITY

USE OF PROTON ® MOBILE

In Japan, magnetic freezing technology is widely recognized for its advantages and for the quality of the frozen products.

There are multiple applications in different types of industries, there are even **mobile freezing equipment** in the form of a freezer truck, which travel to the places of origin of the raw materials to carry out an on-site freeze with this technology,



POTENTIAL CUSTOMERS (FOOD SECTOR)

PROTON ® FREEZER equipment from INNOVAFISH is indicated to a large number of potential customers in the food sector:

- **RESTAURANTS:** High-end or with Michelin stars and Japanese restaurants where they must freeze food to eliminate the anisakis and
- **QUICK FOOD:** To defrost and consume (see "RESTAURANTS WITHOUT KITCHEN")
- **PRODUCERS:** Of high value products and seasonal products
- **FISH AUCTION:** To take advantage of the freshness of freshly landed fish
- **FISH AND SEAFOOD COMPANIES**
- **SUSHI PRODUCERS:** The only correct way to freeze rice
- **FOOD PROCESSORS:** Improve the quality and management of your products and stocks
- **MEAT**
- **VEGETABLES**
- **FRUITS**
- **PRODUCTS WITH DAIRY PRODUCTS AND EGGS**
- **BREADING**
- **PASTRY SHOP**
- **ICE MANUFACTURERS**
- Etc.

MEDICAL SECTOR CUSTOMERS

In Japan, magnetic freezing technology has been used in multiple investigations in medicine and pharmacy, especially in the field of cryopreservation. Several investigations have been carried out, both with human and animal materials, related to the following **medical fields of freezing**:

- CELLS
- EMBRYOS AND PRE-EMBRYOS
- FIBERS AND FABRICS
- SEMEN
- BONES
- TEETH
- Etc.

Exhibited Products / Technologies

NEW DEMO Cell Freezing Machine

Ryoho Freeze Systems. Co.,Ltd (Japan)

*By controlling special wavelength and magnetic field, the damage to cells at freezing is suppressed.

*It has already been used by our customer and succeeded in thawing with a survival rate of 90%.



MEDICAL JAPAN 2017

> Japanese

3rd International Medical Expo & Conference

Dates: Feb. 15 [Wed] - 17 [Fri], 2017

Venue: INTEX Osaka

Organised by: Reed Exhibitions Japan Ltd.

Supported by: Union of Kansai Governments

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INABATA & CO., LTD.

[Request Appointment](#)

Exhibition: **Regenerative Medicine Expo & Conference Japan** Booth No. : 14-6

Our cell freezer helps for your cryopreservation of cells.

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Cell Freezing Machine
Ryoho Freeze Systems. Co.,Ltd (Japan)

NEW DEMO

*By controlling special wavelength and magnetic field, the damage to cells at freezing is suppressed. *It has already been used by our customer and succeeded in thawing with a survival rate of 90%.



[>> Detail](#)

PROTON® RANGE

SPECIAL RESTAURANTS



PF-15
15 KG/HOUR

HIGH CAPACITY



PF-30
30 KG/HOUR



PF-60
60 KG/HOUR



PF-150
150 KG/HOUR

INDUSTRIAL

The Latest Freezing Technology "Proton Freeze"

Continuous : PROTON STRAIGHT FREEZER

Efficient Straight Freezer With Proton freeze function

Proton Freeze Patent No 424693

Freezing capacity 300kg/h ~

- High freshness maintenance level due to proton Freezer
- High speed flow specification, easy to clean design
- Compact design allows mass processing
- Chamber, nozzle, fan, cooler can be cleaned

Maintenance aisle in the cabinet

Freezer exit

Freezer entrance

Blowout chamber

Cooler

300kg/h freezing Outline Specification

- Overall dimension / 2300*1200*2140±1H
- Electrical / 3φ200V Main body/3WV (Selector Unit/37W)
- Water supply / 4SA (Waste water required)
- Net size / Effective dimension 1400W x 910D

KYORO FREEZE SYSTEMS CO., LTD.

TU-300
300 KG/HOUR

RE-BORN

REBORN RANGE

The REBORN range allows the application of magnetic freezing technology in existing freezing chambers, from the simple installation of a REBORN unit inside a normal freezing chamber.

They exist for two freezing capacities:

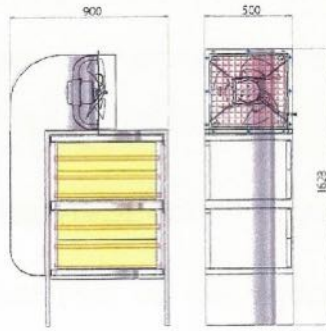
40 kg. (10 trays of 600x600)

60 kg. (15 600x600 trays)

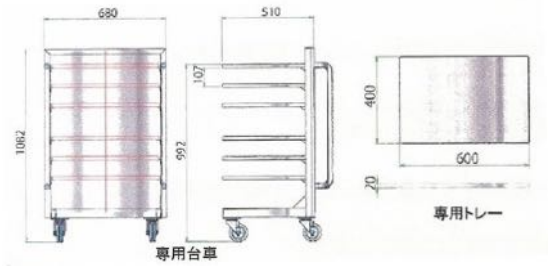
For the installation of the REBORN unit, it is necessary to raise the inside temperature of the freezing chamber to a minimum temperature of -35°C .



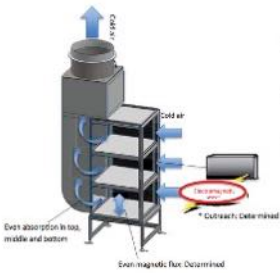
Producing even products : High quality



TAKE
ADVANTAGE
OF YOUR
CURRENT



Various standards have been set for our proton freezer to produce stable food.



- (1) Maintains even and appropriate temperatures of cold air and economic wind velocity
- (2) Effective height to generate stable even magnetic flux is 330 mm or less.
- (3) Design for the outreach of electromagnetic wave.

Our proton freezer is patented.
Patent No. 4424963



It is possible to utilize existing the refrigeration chamber.



Free space used for storage.



Effortless process with special door

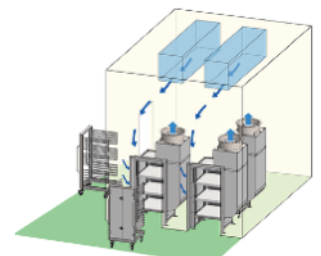
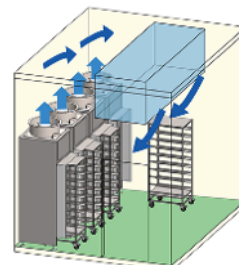
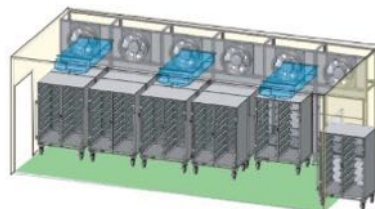
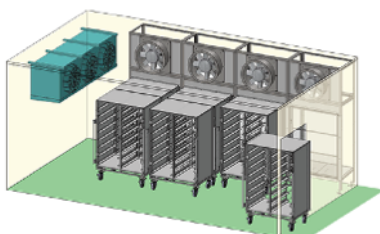
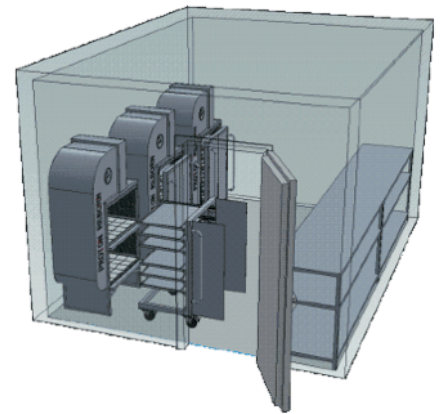
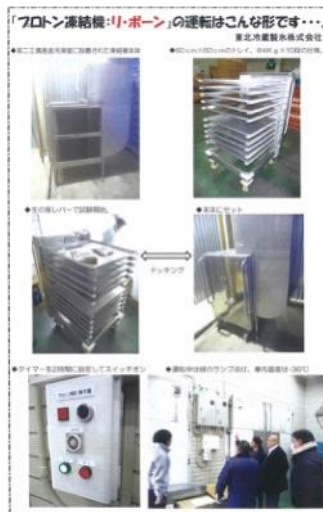
01 Mass freezing process is possible!

02 Low cost!

03 Trucks type makes operation easier!

Freezing capability is possible up to about 300 kg / h

Whether existing or new



FUSION® DEFROSTING

As important as freezing is defrosting. To perform a perfect defrost, we have developed the FUSION range. The FUSION DEFROSTER defroster defrosts frozen food using the condensed latent heat of 539 Kcal / kg. This latent heat is generated when steam is sprayed on its surface from -20 ° C to 0 ° C to transform it into drops of water.

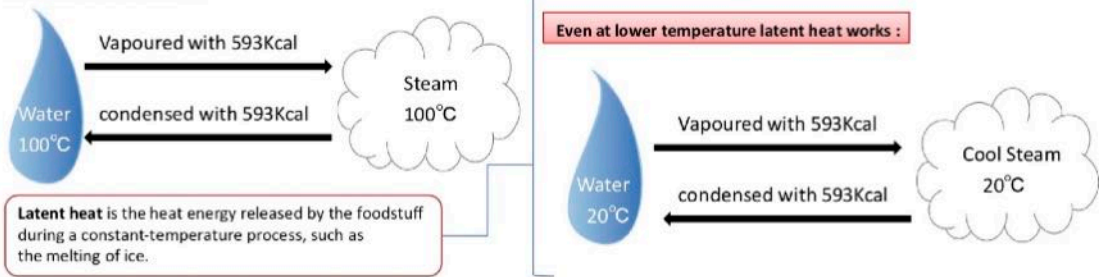
By using the large energy of latent heat, faster defrosting occurs with adequate humidity, and more efficient, with better performance and of the highest quality, preventing loss of color and flavor.

Principle of Proton Fusion Defreezing Technology

Proton Fusion Defreezer melts the frozen foodstuff utilizing the condensed latent heat of 539 Kcal/kg generated when steam is sprayed onto its -20°C to 0°C surface to transform to waterdrops.

By utilizing the very big energy of the latent heat, we perform the most efficient defreezing with better yield and of the highest quality.

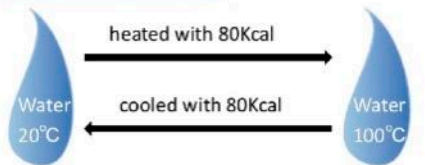
Latent heat illustration :



Latent heat is the heat energy released by the foodstuff during a constant-temperature process, such as the melting of ice.

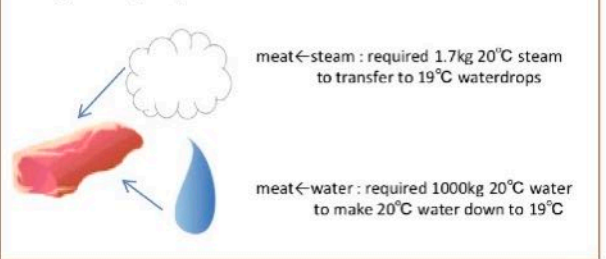
Even at lower temperature latent heat works :

Sensible heat illustration :



Sensible heat is the heat energy consumed for a change of the temperature without changing the form of material.

Example : for giving 1000Kcal to the frozen meat



The FUSION range includes both defrosters designed for catering and industrial.

Proton Thawing Machine Truck type

Proton Thawing
Patent No 4535341

Defrost fast , without losing flavor!!

"Chunk of 60 pound meat" can also be thawed overnight!

Decompression scale
2 Trucks ~ large capacity

High quality Defreezer
Proton Defreeze
Fushigi-na *New!*
kinoko
Movable type

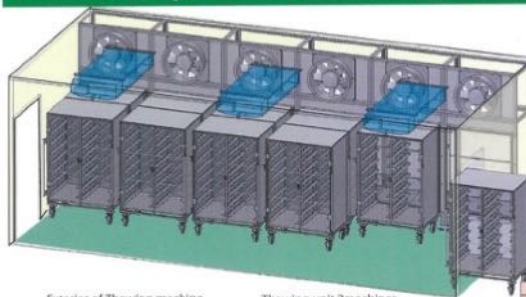
Latest Defreezing Technology Proton Defreeze

Keep the flavor
[Restore the flavor to before freezing]

Keep the color
[Restore the color of the food to before freezing]

Keep the savor
[Defrost without losing savor]

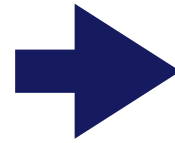
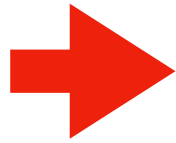
Movable proton Defreezer that allows frozen foods to defrost in best form ever!



- High humidity of patented technology. The use of latent heat makes the thawing speed faster.
 - Proton is the only thing Chunk of 60 pounds can be thawed overnight.
 - The yield rate and profit improves.
 - It is possible to set the temperature program suitable for the thawed product.
 - After thawing, it can be used as a refrigerator.
 - Outstanding cleaning capacity.
- Thawing program know-how
- Process 1 : Frozen storage
Process 2 : Thawing process
Process 3 : Thawing process
Process 4 : Refrigerated storage

Model Type	BF-3215(10carts) 4carts/500kg/B	BF-3225(20carts) 8carts/1000kg/B	BF-3242(31carts) 12carts/1500kg/B
External dimensions			
Frontage	3200	3200	3200
Depth	1500	2800	4300
height	2100/3000(above the ceiling)		
Thawing process	The first step The second step The third step The fourth step		
Capacity	In-door 3Φ 200v 2.2kW 0.2MPa 40kg/h 2SA	3Φ 200v 3kW 3Φ 200v 2.2kW 0.2MPa 80kg/h 2SA	3Φ 200v 8kW 3Φ 200v 3kW 0.2MPa 120kg/h 2SA
Steam amount max. size	With drainage inside the room		
Option	Exclusive cart 84 sheets/16 sheets/cart	8 truck warehousing 128 sheets/16 sheets/cart	12 truck warehousing 192 sheets/16 sheets/cart For rest or extra

THE PROTON & FUSION CYCLE: FREEZING + DEFROSTING



FRESH RAW MATERIALS

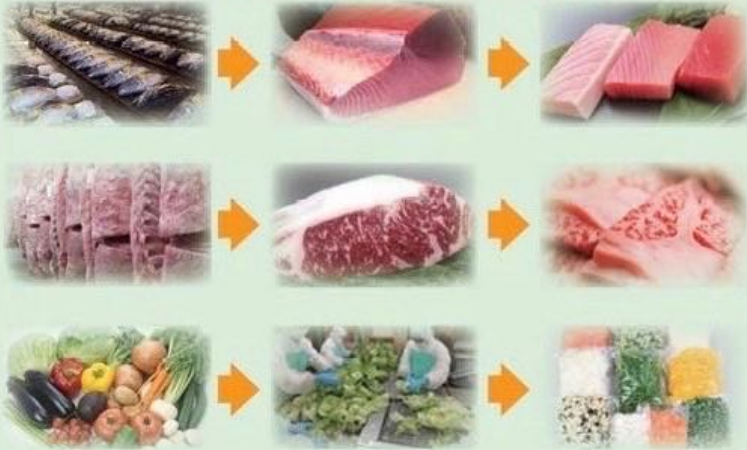
FREEZING
MAGNETIC
PROTON

DEFROSTING
FUSION

FRESH PRODUCT IN FROZEN

原料産地

原材料一次加工および二次加工



調理工場

凍結状態

最終商品まで調理加工



プロトン凍結機

国内・海外消費地

解凍後盛り付け

国内・海外消費地で販売



プロトン解凍機

最先端技術プロトン凍結機・解凍機活用
※全ての過程でプロトン凍結機・解凍機を活用します。

PROTON® TECHNICAL SERVICE

For your complete peace of mind, we have a specialized technical service in Spain and Japan for the maintenance and repair of PROTON® freezers distributed by INNOVAFISH.

In Spain, PROTON® OFFICIAL TECHNICAL SERVICES is provided by MULTISERVICIOS ALMAGRO SL with headquarters in Jerez de la Frontera (Cádiz) and P.E.C. PROFESSIONAL EQUIPMENT CONSULTING with offices Girona and Barcelona, in addition to being PROTON® OFFICIAL DEALERS.



Our Technical Service is specialized in PROTON® technology and in addition to our own technical personnel, it is associated with several Engineering to obtain the best solutions in terms of installation, breakdowns, parts, and any problem that may unlikely arise in the life of our machinery. .

Logically, it is in close connection with our manufacturer in Japan for the resolution of any problem as well as for obtaining the best solutions for the implementation of PROTON® technology in your company.

In its facilities of more than 3,000 m2. We can also perform any freezing test that you need apart from those that you can also perform in our Show-Room in the C.I.B. Culinary Institut of Barcelona.

Our freezer deliveries include:

Freezer assembly and assembly

Test operations test

Final connection and commissioning work.

Depending on the freezer model, we have the assistance of technicians from Japan.

(Included in the budget).

We perform (if you wish) an annual maintenance contract that includes an annual review.

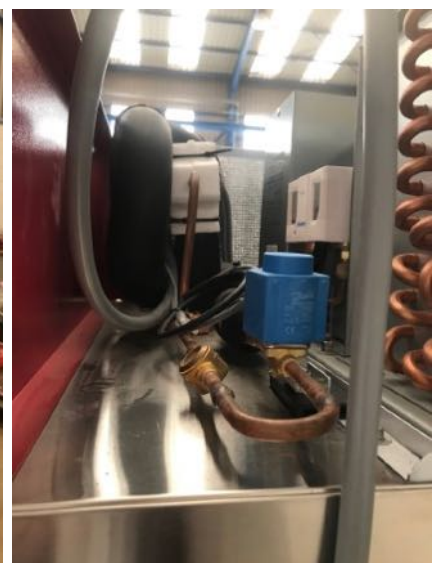
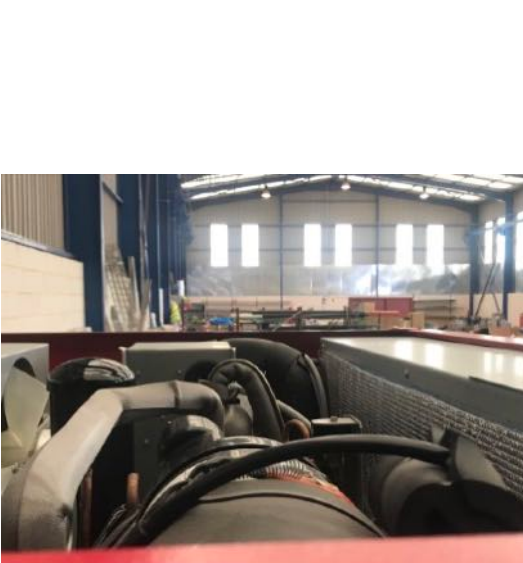
Additionally, our technicians can also carry out the primary construction works:

for the drain pipe,

electric,

of water.

Also, we can supply the condensing unit (BITZER brand) suitable for each freezer model (if the model needs it).



MANUFACTURER INFORMATION

Company data:

Japanese name: **LIFOUFREE FREEZE SYSTEMS CO., LTD.**
English name: **RYOHO FREEZE SYSTEMS CO., LTD**
Capital: 43.15 million yen
Corporate purpose: Design, manufacture and sale of refrigeration equipment (industrial freezers) and defrosting machines) for food

Locations:

- **Head Office:** 6-3-10 Omiya-machi, Nara-shi 630-8115 Edificio de Fujimoto. Nara (Japan)
- **Tokio Branch:** 3-3-6-10 Shibaura Minato-ku Tokio 108-0023 Tamachi Sun Heights 703. Tokyo (Japan)
- **Tohoku Sales Office:** N°3, distrito 28-7 de Katagishi-cho. Kamaishi, Prefectura de Iwate (Japan)

Subsidiaries outside of Japan:

SINGAPUR: PROTON DINING CO., LTD. PROTON DINING SINGAPORE PTE.LTD.

MALASIA: Anritsh Food Industry Co., Ltd. SHINSEN PD MALASIA SDN.BHD.

CHINA: Proton Equipment Manufacturing Co., Ltd.
Yongling (Dalian) International Trade Co., Ltd.

Partners in Asia: (in alphabetical order, the honorary title is omitted)

ASO CORPORATION - ICHIBANYA, ITOHAM CO.LTD. - ORION BEER CO.LTD. - KEWPIE CORPORATION - CORP FOODS CO.LTD. - COLO WIDE MD CO.LTD. - SUMITOMO CORPORATION - MASINEX CORPORATION - TAKAHASHI CARNE DE GANADO CO.LTD. - TSUKIJI FISH MARKET CORPORATION TOKYO - SHAKYA CO.LTD., - NAKASHOKU CORPORATION - NARA CORP INDUSTRY - NIPPON HAM CO.LTD. - HANKYU DELICAAI CO.LTD. - HANKYU BAKERY CO.LTD. - HOKUTIN CORPORATION - ISETAN MITSUKOSHI HOLDINGS CO.LT

Partners in Europe:

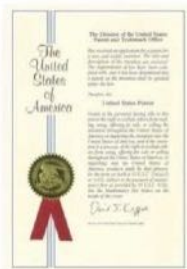
INNOVAFISH SL. Ribera del Guadiana 1. 21400 Ayamonte (Huelva). SPAIN

PRIZES AND PATENTS

There are many awards received in Japan for their contribution to the Japanese economy.

特許 Patents

- 2009年 日本特許取得(冷凍装置)
- 2010年 日本特許取得(解凍装置)
- 2012年 米国特許取得(冷凍装置)
- 2013年 日本特許取得(冷凍装置)
日本特許取得(解凍装置)
- 2014年 韓国特許取得(解凍機)
- 2016年 中国特許取得(解凍機)



経済産業省
Ministry of Economy, Trade and Industry

LTD FREEZE SYSTEMS CO., LTD fue elegida como una "compañía regional de tracción futura".

2018.01.15

受賞 Awards

- 2006年 ユースフル・フリーザーが社団法人関西ニュービジネス協議会【NBK大賞：日本経済新聞社賞】受賞
- 2008年 奈良県成長分野産業等育成チャレンジ事業に認定される。
- 2007年 経済産業省近畿経済産業局【新連携事業】に認定される。
- 2009年 【奈良県ビジネス大賞：最優秀賞】受賞
- 2010年 【奈良県オンリーワン企業】に認定される。
- 2017年 経済産業省より【地域未来牽引企業】に選定される。



地域未来牽引企業

地域未来牽引企業

Nos complace informarle que, desde el 22 de diciembre, Heisei 20, "Ministerio de Economía, Comercio e Industria" fue seleccionada como una "empresa regional de tracción futura".

"Compañías de remolque futuras regionales" significa participar activamente en negocios que lideran el crecimiento económico regional mediante la creación de un alto valor agregado aprovechando las características de la región y ejerciendo un efecto económico en los operadores de negocios locales. Es una compañía que se espera que se despliegue o que se plantee abordar en el futuro.

Continuaremos contribuyendo activamente al desarrollo de la región.

REPORTS ON TV

PROTON ® FREEZER technology, being an innovation in the Asian continent, is the center of attention of the media of several countries, appearing continuously in different TV programs in Asia, mainly in Japanese television and also in Korean TV and Vietnam.

メディア掲載一覧



【沸騰ワード 10】放映

「進化する冷凍食品」というものです。
プロトンダイニングは、番組の最後にランク1位で扱って頂きました。
「作りたて・冷凍と思えない」とのコメント内容です。



林先生が驚く初耳学」にプロトン凍結が登場！

今人気の林修先生がメインをつとめる「林先生が驚く初耳学」で、プロトン凍結機の驚きの性能を紹介。
プロトンダイニングの料理をスタジオゲストが試食し、冷凍とは思えないその美味しさに驚愕しました。



“FOOMA JAPAN 2019”

Exhibitors in the past "FOOMA JAPAN 2019 International Food Industry Exhibition", the most important machinery fair in Asia, held recently in Tokyo from 9 to 12.07.2019 where the public could experience the power of **PROTON ® FREEZER**.

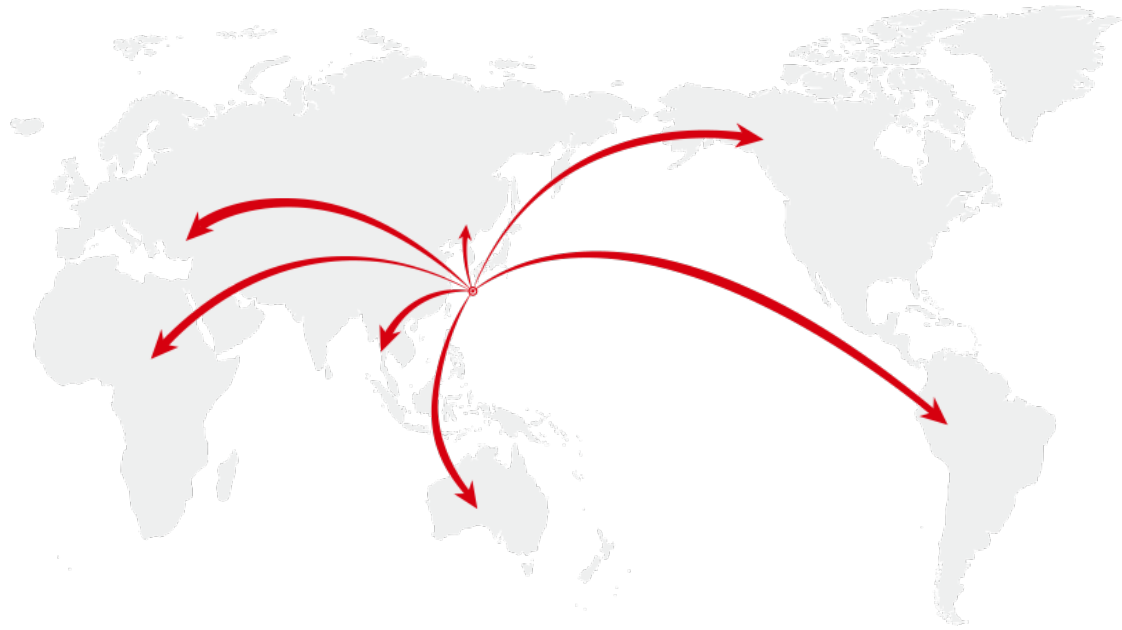


SOON

FOOMA
JAPAN INTERNATIONAL FOOD MACHINERY
& TECHNOLOGY EXHIBITION
2019国際食品工業展
7/9火 12金
東京ビッグサイト
西1~4ホール・南1~4ホール

主催：一般社団法人 日本食品機械工業会
後援：経済産業省、農林水産省、厚生労働省、東京都、
日本貿易振興機構（順不同、予定）

The new generation of PROTON® FREEZER is the most used freezing technology in Japan and with further expansion in China and Southeast Asia (Singapore, Malaysia, Vietnam, and Korea)



Millions of people in Asia already rely on this new generation of PROTON® FREEZER

SUSTAINABLE DEVELOPMENT GOALS
世界を変えるための17の目標

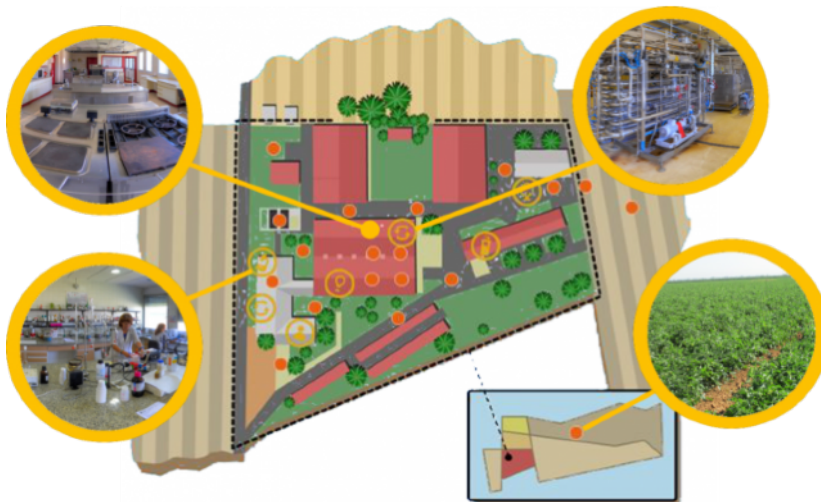
1 貧困をなくそう 	2 飢餓をゼロに 	3 すべての人に健康と福祉を 	4 質の高い教育をみんなに 	5 ジェンダー平等を実現しよう 	6 安全な水とトイレを世界中に
7 エネルギーをみんなにそしてクリーンに 	8 働きがいも経済成長も 	9 産業と技術革新の基盤をつくろう 	10 人や国の不平等をなくそう 	11 住み続けられるまちづくりを 	12 つくる責任 つかう責任
13 気候変動に具体的な対策を 	14 海の豊かさを守ろう 	15 陸の豊かさを守ろう 	16 平和と公正をすべての人に 	17 パートナシップで目標を達成しよう 	SUSTAINABLE DEVELOPMENT GOALS 2030年に向けて 世界が合意した 「持続可能な開発目標」です

TECHNOLOGICAL AGREEMENT WITH CTAEX

PROTON ® technology is the most cutting-edge technology that currently exists in the field of freezing. Its applications are multiple in the food and medicine sectors.



The **CTAEX (EXTREMADURA AGRIBUSINESS TECHNOLOGY CENTER)** wants to apply this technology in the Projects and Investigations that it will develop with its clients and for this reason, we have signed a Collaboration Agreement for the joint development of the PROTON ® technology in different products to be investigated.



SHOW ROOM AT THE C.I.B.



- We have signed a collaboration agreement with the CIB CULINARY INSTITUT BARCELONA for the use of PROTON technology in its classrooms and as a permanent show-room and where we will also develop different activities:
-
- Use of space for presentations, demonstrations and business sessions
- CIB as ambassador of our brand
- Disposition of the machine to freeze at school
- Space in the store for students and people linked to the CIB (exhibition and sale)
- Interrelation of both brands in social networks and digital world
- Development of creativity workshops with PROTON technology
- Collaboration with scientists and R + D development
- Organization of events of our brand
- Special offers of our machines for CIB clients both in the CIBLAB and in OUTCIB

El gastrònom Pep Nogué impulsa una nova escola privada de cuina, el Culinary Institute of Barcelona, CIB

L'objectiu és crear un nou format d'ensenyament, que no sigui competencial de cap altra escola.



El CIB és el resultat d'una nova escola de cuina privada que té com a objectiu crear un nou format d'ensenyament, que no sigui competencial de cap altra escola.

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14/11/2019

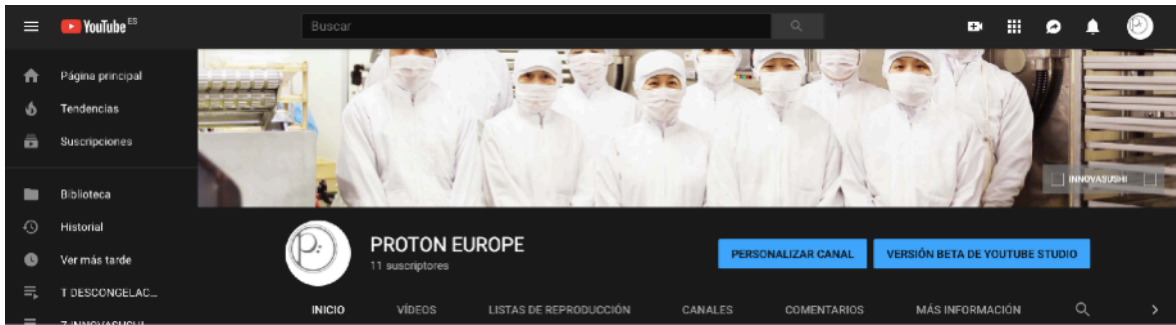
El gastrònom Pep Nogué impulsa una nova escola privada de cuina, el Culinary Institute of Barcelona, CIB

trobat en algunes cuines d'estrella Michelin.

Sí, era una premissa essencial nostra. En una sala de demostració tenim fogons d'inducció, que poden fer bullir l'aigua en un minut. A la resta tenim fogons de gas. Les neveres tenen la possibilitat de convertir-se en congelador: només s'ha de prémer un botó per transformar-les d'una opció a l'altra. També tenim cambres de fermentació, una altra cambra de maduració de carn, un congelador magnètic i un laboratori d'investigació científica. És a dir, creiem que la tecnologia ha de ser eficient; ha de funcionar tot a la perfecció, perquè necessitem precisió per ensenyar als alumnes a cuinar.



YOUTUBE VIDEOS AVAILABLE



In our **YOUTUBE** channel **PROTON EUROPE** you can watch several videos of PROTON technology subdivided into **7 playlists** (click on the link to see them):

PROTON magnetic freezing technology

<https://www.youtube.com/playlist?list=PLhc3J73BTE24YircK367R6EcpWlt3a-gs>

FROZEN PRODUCTS magnetically with PROTON

<https://www.youtube.com/playlist?list=PLhc3J73BTE24YircK367R6EcpWlt3a-gs>

PROTON CAR

https://www.youtube.com/playlist?list=PLhc3J73BTE278rQ6oIVoN6SH62_lydoNV

PROTON DINNER (Restaurant without kitchen)

<https://www.youtube.com/playlist?list=PLhc3J73BTE26-TVdPLpQBOAJi4ppyg-7U>

PROTON Reborn model

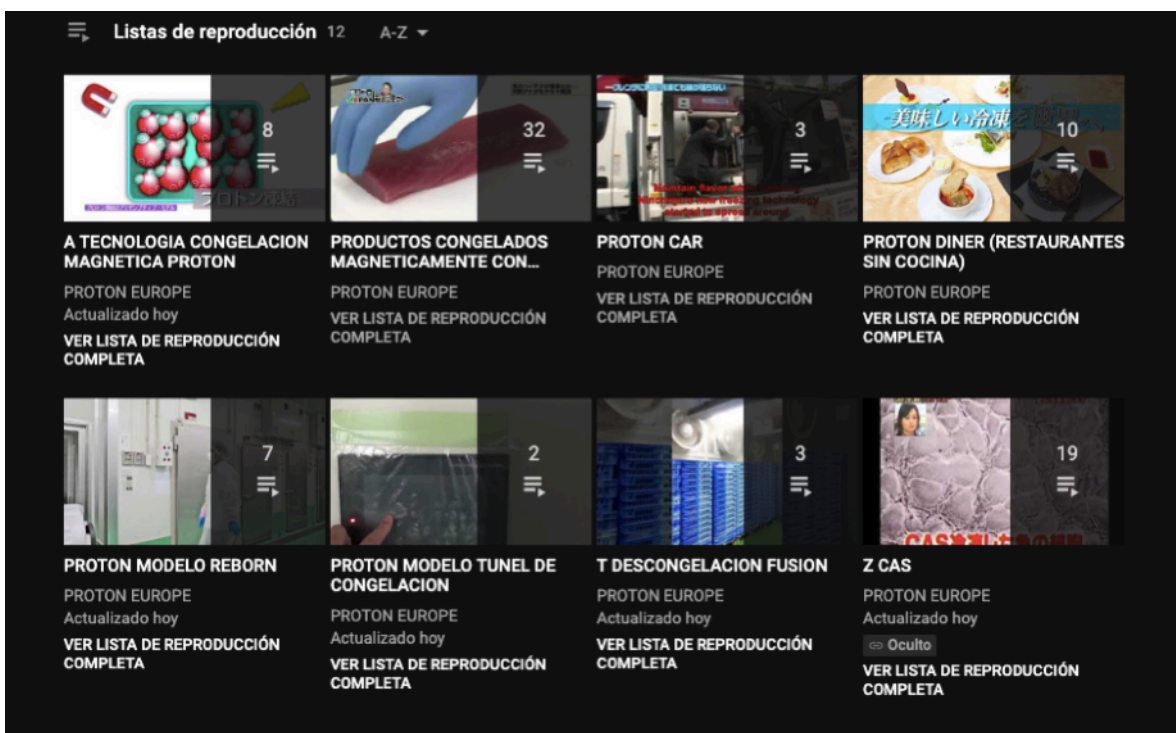
<https://www.youtube.com/playlist?list=PLhc3J73BTE26xpiCKyTHb3nBXta-n4qkx>

PROTON freezing tunnel model

<https://www.youtube.com/playlist?list=PLhc3J73BTE27AqrAGATgkIO1q6y8Z0NOI>

FUSION defrost

<https://www.youtube.com/playlist?list=PLhc3J73BTE24DAxObuljCw1QCPGXS-Jhe>



EXPORT YOUR PRODUCTS TO JAPAN

In other sections of this Dossier you have checked the wide variety of products that are currently frozen with PROTON technology.

Our manufacturer freezes many of them in its facilities in Okinawa.

These products are present in many outlets throughout Japan, from gourmet quality spaces to grocery stores in department stores, through the typical "konbinis" (コンビニ) or convenience stores open 24 hours a day, 7 days a week.

Among the most prominent clients are the following:

- ASO CORPORATION.
- Coop Foods Corporation.
- COLOWIDE MD Co., Ltd.
- HANKYUDELICA-I. INC.
- HANKYU BAKERY Co., LTD.
- HOKUCHIN Co., Ltd.
- ICHIBANYA Co., Ltd.
- Isetan Mitsukoshi Ltd.
- Itoham Foods Inc.
- Kewpie Corporation.
- MORINAGA MILK INDUSTRY CO., LTD.
- Mie Gyoren
- Nakasyoku Corporation.
- Nara Coop Sangyou Corporation.
- NH Foods Ltd.
- ROYAL HOLDINGS Co., Ltd.
- Takahashi Chikusan Corporation.
- TSUKIJI UOICHIBA CO., LTD.
- Tokyo Syojikiya Corporation.
- YORONOTAKI CO., LTD.



In addition, recently, PROTON has signed an agreement with the giant chain **DON QUIJOTE HOLDING** (known as DONKI) with planned sales for this year of 1.37 trillion yen.

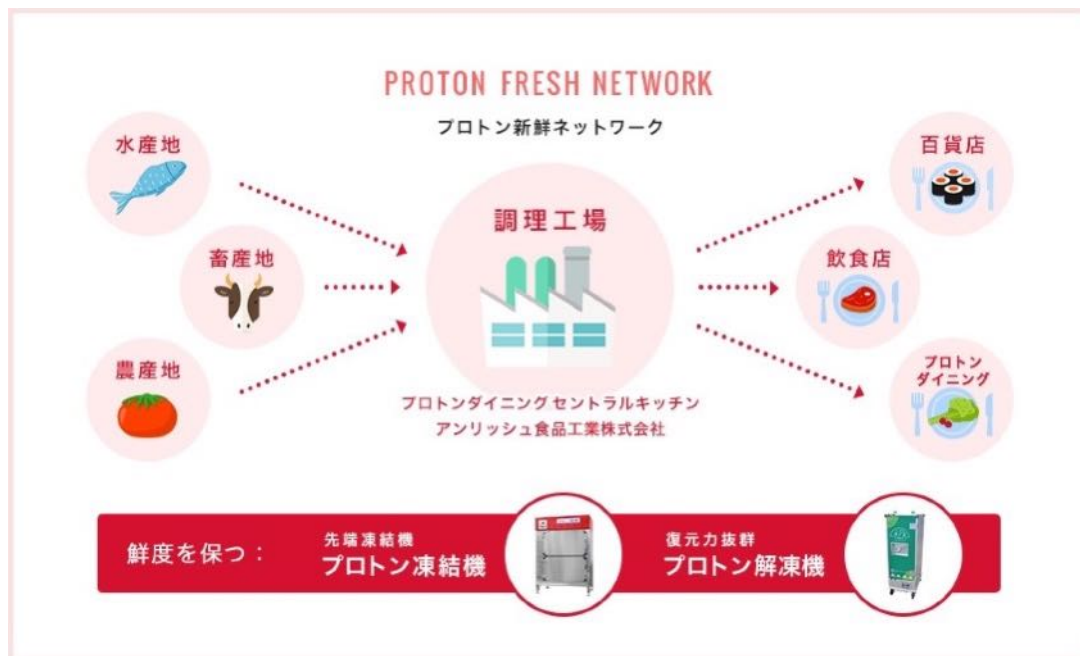


We understand that all frozen products made in Spain or in other countries and frozen with PROTON already have quality standards that are high enough to enter this market, and that thanks to the above, **we are trained to help your products have a direct access to the Japanese market.**

In addition to Japan, our manufacturer is present in China, Malaysia and Singapore, so we can also facilitate entry to these markets.

Express your desire to enter the Japanese market and we will proceed to the study of your frozen product with PROTON and the possibilities of introduction depending on the product in question as well as the possible changes to be made (labeling, packaging, etc.) so that your product can be sold in Japan. This assistance is at zero cost and is included as an additional service in the sale of PROTON technology.

With PROTON, we will not only help you improve the quality of your frozen products but also offer you the opportunity to export them to Japan or other markets in Southeast Asia.



JAPAN DOES NOT MISUSE. TAKE ADVANTAGE OF VD. ALSO OF ALL THE ADVANTAGES

Latest Freezing Technology "Proton Freeze"

機械ビジネスと食品ビジネスの融合

先進性冷熱機器（プロトン凍結機・解凍機共に特許取得済）を基礎に新しく・美味しいプロトン凍結品の提供を行います。

冷熱機器製造・販売
研究・開発

食品製造・販売
レストラン経営

 proton
 フロトングループ >  RFS RYOHO FREEZE SYSTEMS

innova
fish

 proton-
EUROPE

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 NARA (JAPAN) - BARCELONA (SPAIN)
 T: +34 627 925 103
proton@innovafish.com