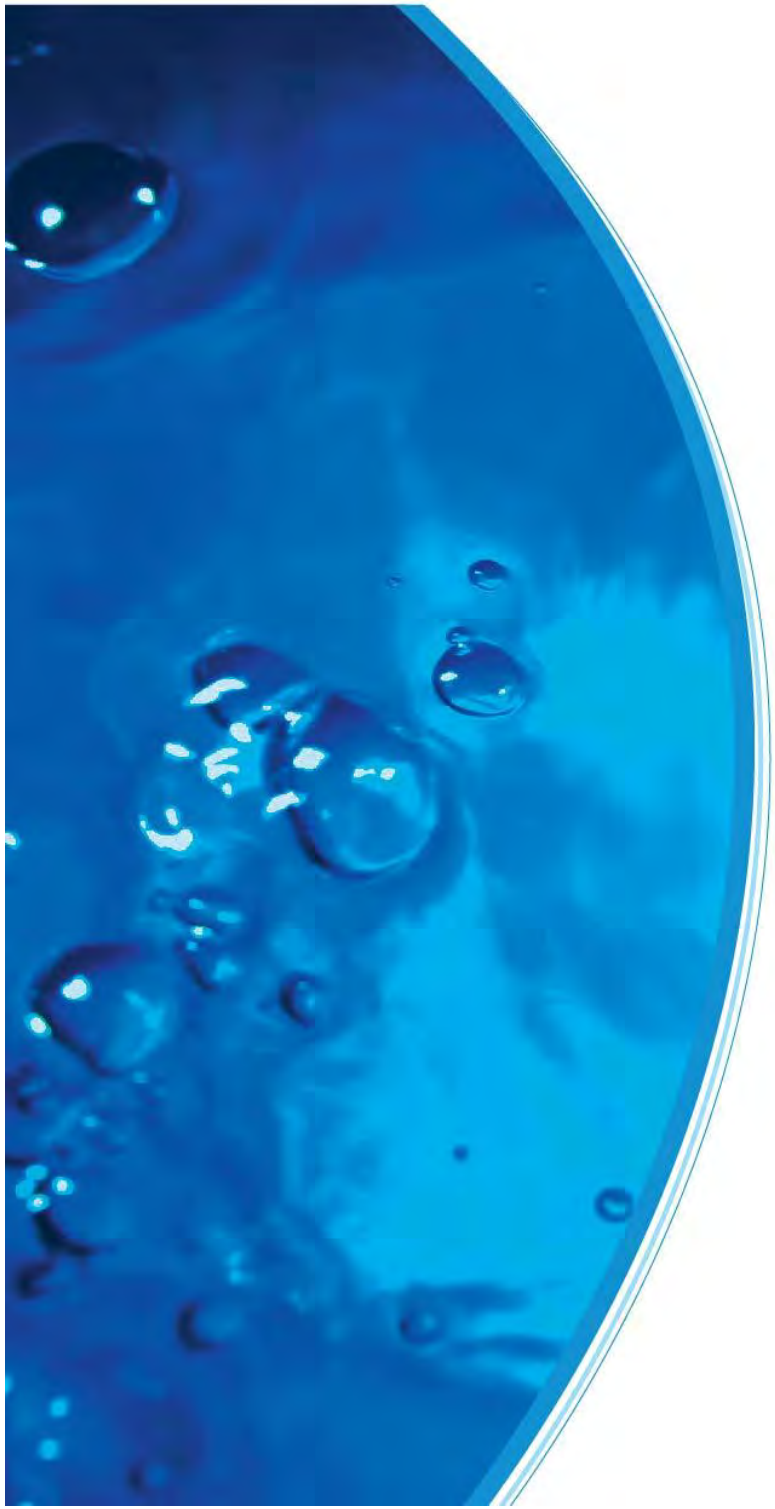


TECHNICAN

To make worldwide frozen foods drip zero (0)%.

TECHNICAN responds to your voices.

TECHNICAN has been solving the customers'problem together with the customers with its axis of know- how for freezing and heat-exchange since its busimess start-up in 1988.

TECHNICAN has developed various kind of machines not only freezing equipment, split meat trolley, minced meat/rib meat freezing machine, meat cleaning conveyor, vegetable water removing machine and various other equipment apparatus in accordance with customers requests. Since its business establishment all the time we make it our company strategy to aim for equipment development of high efficiency and endurance.

Please consult your (customers) requests with us TECHNICAN. We are highly confident to satisfy your requests.

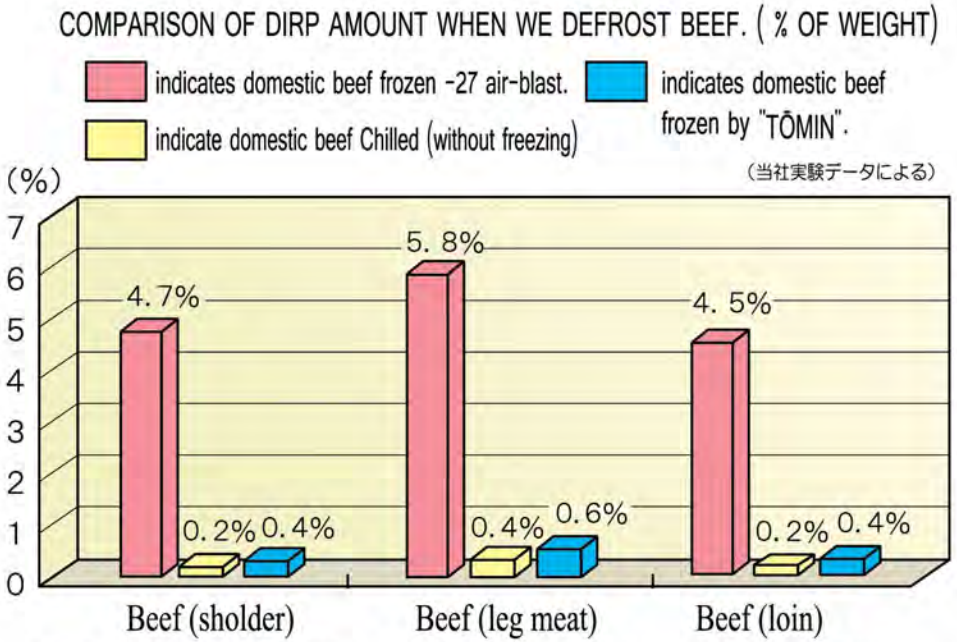
To make worldwide frozen foods drip zero (0) %.

We, TECHNICAN, always aim at making the frozen food closest to raw (original)

We compare"fresh food" and "frozen food by TŌMIN".

(President, Mr Yoshio Yamada)

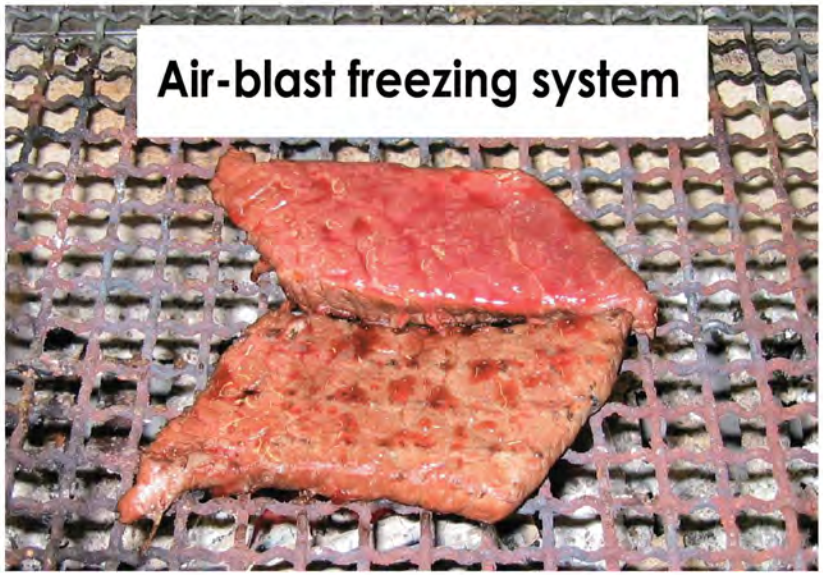
The traditional freezing method is to freeze food using air or freeing by dry-ice or using as cold as -100C nitrogen. However, what usually you talk good or bad are limited only among frozen foods comparison. As for drip amount which is one of important factors to decide the freezing quality, "TŌMIN" is the level to compare its quality with "fresh food".



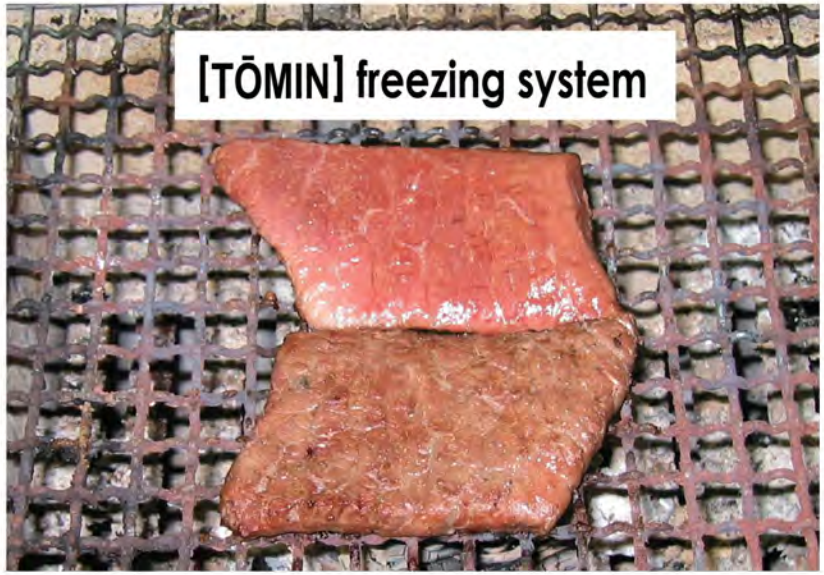
※ Drip means a red water you may find when defrosted firozen meats and fishes. The drip contains protain, aminoacid, salt and vitamin etc. These are base of flavor taste and nutrition.

"TŌMIN" suppresses drip !!

The reason why meat drip comes out from grilled meat (left picture) is because the meat was frozen by slow freezing method and meat cell was destructed. From the meat frozen by "TŌMIN", any drip does not come

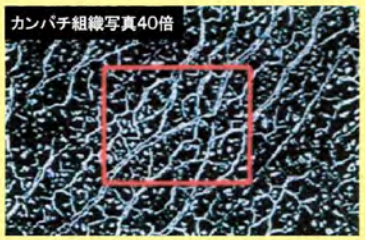


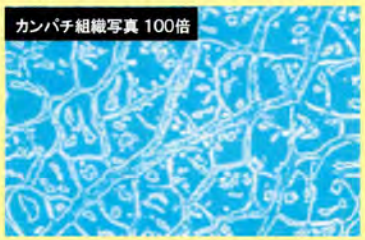
Lose juicy flavor taste with drip



Maintain juicy flavor taste

Technican freezing mechanism(eledctric microscope)





Data from Japanese major fishing company.

"TŌMIN" suppresses bacteria increase.

"TŌMIN " water suppresses general bacteria increase and no colon bacillus was detected.

(Water quality inspection report)
水質検査報告書

第 105K0138 号

平成 17年 11月 14日

株式会社テクニカン 様

飲料水 水質検査業 [illegible]16水第56-2-35号
環境計量証明事業 埼玉県知事登録第553号
株式会社 [illegible] ラボラトリー
〒365-858[illegible]県[illegible]市天神3－673
TEL 048-54[illegible] FAX 048-543-7255

件 名 水質検査

採取年月日 平成 17年 11月 8日 10:00
採取場所 屋上
試料名 未処理(生のまま)
試料採取区分 受取

検査責任者 山下

平成 17年 11月 10日 受付の水質検査結果は次の通りであったことを報告いたします。

試験項目	単位	試験結果	水質基準
一般細菌	個/mL	1.2×10^4	
大腸菌群数	個/mL	4	
以下余白			

(Water quality inspection report)
水質検査報告書

第 105K0140 号

平成 17年 11月 14日

株式会社テクニカン 様

飲料水 水質検査業 [illegible]16水第56-2-35号
環境計量証明事業 埼玉県知事登録第553号
株式会社 [illegible] ラボラトリー
〒365-858[illegible]県[illegible]市天神3－673
TEL 048-54[illegible] FAX 048-543-7255

件 名 水質検査

採取年月日 平成 17年 11月 8日 10:00
採取場所 屋上
試料名 ノーマルリキッド
試料採取区分 受取

検査責任者 山下

平成 17年 11月 10日 受付の水質検査結果は次の通りであったことを報告いたします。

試験項目	単位	試験結果	水質基準
一般細菌	個/mL	9.4×10^3	
大腸菌群数	個/mL	不検出	
以下余白			

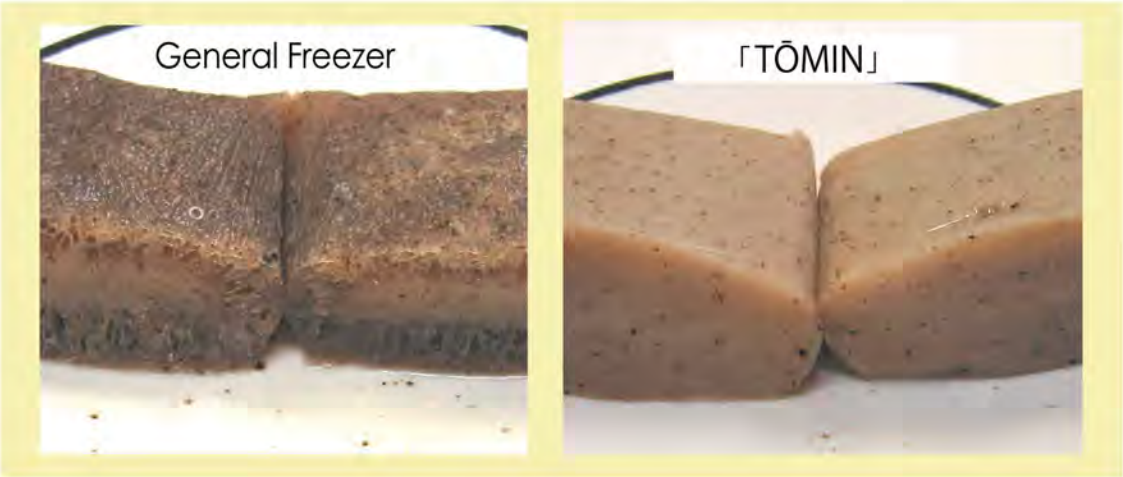
Two samples of water quality inspection reports are shown. These reports were issued by Japanese special organization to certify that colon bacillus was not found.

What is TŌMIN.

The characteristics of TŌMIN.	● **Approx. 20 times quicker freezing speed** (compared with general freezing) Overwhelming time saving such as tempering before slicing. ● **Minimization of Drip** Production efficiency increases and suppresses drip which becomes bacteria's hotbed. ● **Ice Crystallization 5 micron** (General freezer 100-200micron) TŌMIN can freeze product which after its freezing has almost no difference with raw (original) because tiny crystals do not destroy product cells. ● **Working Environment Improvement** You can reduce works inside the cold freezing area and as the result you can reduce the work load.
The stock method and defrost method afterTŌMIN's freezing.	● **The stock method and defrost method after TŌMIN's freezing.** If you obtain product material during inexpensive period, you can achieve cost saving. ● **"TŌMIN" does not select defrost methods.** Defrost under general temperature/Low temperature Defrost/Heat (Putting into hot water) Defrost/ Running Water Defrost All are applicable.

Various kind of "TŌMIN" freezing crystallization

Foods which can be frozen only by "TŌMIN"	Fish Freezing	Crustacean Freezing	Meat Freezing	Vegetable/Fruit Freezing	Heat Cooked goods freezing
Konnyaku (a gelatinous food made from devil's tongue starch) as shown in the left picture below cannot be frozen completely even if using high-technology applied freezer. After defrost, water portion is lost and it becomes sponge status. However, we can freeze konnyaku almost same status (as shown in the middle picture). We cannot find any big change though it becomes a bit harder.	Process before freezing 1. Strangling the fish first 2. Cooling beforehand (30-40minutes under approx.+3℃ ice water) * The temperature difference between fish-temperature and frozen liquid shall be within 40℃. (This is to prevent any possible crack.)	As process before freezing, we put lobsters into ice water (approx.+3℃) for 30-40 minutes (cooling anesthesia). If cooling time is shorter, we cannot expect sweat taste and lobsters' hands/legs/ mustache are easy to drop. In case of freezing without bag, please arrange grace process.	For Beef, Pork, Chicken, Duck, Horse Meat, Edible Internal Organ, TŌMIN is widely used in all food meat industries.	TŌMIN can freeze also vegetables/fruits in the almost same status before freezing through applying either of following procedures. ①Apply steaming instantly (just very short time) ②Boil for a short time after putting into calcium hydroxide ③Pack as it is (raw), thereafter, apply low temperature heat sterilization	Please put into TŌMIN as quickly as possible. While, generally the number of live bacteria inside general freezer is approx.10,000/g, that of TŌMIN is only 800/g. TŌMIN is proved that TŌMIN has far less number.



TŌMIN's overwhelming potentiality

Freezing Method	Quality	Speed	Running Cost	Installation Space	Merit	Demerit
「TŌMIN」	◎	◎	¥ 5 ~ 8 /kg	◎	① Almost no drip at defrost ② No work needed in cold area ③ Able to freeze high temperature cooled food, etc.	① Depending product, pack is needed
「TŌMIN」 LIQUID CONVEYOR	◎	◎		○	① Able to produce high quality product in a big volume and systematically ② Able to freeze ribs: also IQF	① Depending product, pack is needed
General Freezer	×	×	¥ 5 /kg	×	① Introduction Cost is inexpensive ② Operation is easy	① Long time required for freezing ② Many drips, freshness and taste drops ③ Quality deterioration due to defrost ④ Due to dirp, production efficiency drops
Tunnel Freezer	△	△	¥ 5 ~ 1 0 /kg	△	① Systematic production line available ② Suitable for ribs:IQF freezing	① Waiting time before freezing is needed ② Production stops due to defrost ③ Large space is required
Spiral Freezer	△	△	¥ 7 ~ 1 2 /kg	○	① Systematic production line available ② Long freezing line is available	① Waiting time before freezing is needed ② Defrost is required ③ Bad freezing efficiency
Air-Blast + Dielectric	△	△	¥ 5 0 /kg	×	① Good product available if quantity is very small	① Running cost is very high ② Quality is not equal
Nitrogen Gas Freezing	◎	◎	¥ 4 5 ~ 5 0 /kg	○	① High quality product is available ② Suitable for ribs:IQF freezing	① Nitrogen gas stock room required ② Crack of product with above 12mm thickness ③ Running cost is very high ④ Large space is required (tunnel)

TŌMIN equipment line-up

Model name	S-220W
Freezing Capacity	18～22 kg/h

Model name	S-220WL
Freezing Capacity	18～22 kg/h

Model name	TL－1
Freezing Capacity	120～140 kg/h

Model name	TL－2
Freezing Capacity	280～320kg/h

Model name	TLB－1
Freezing Capacity	300～330kg/h

Model name	TLB－2
Freezing Capacity	600～680 kg/h

LM-45

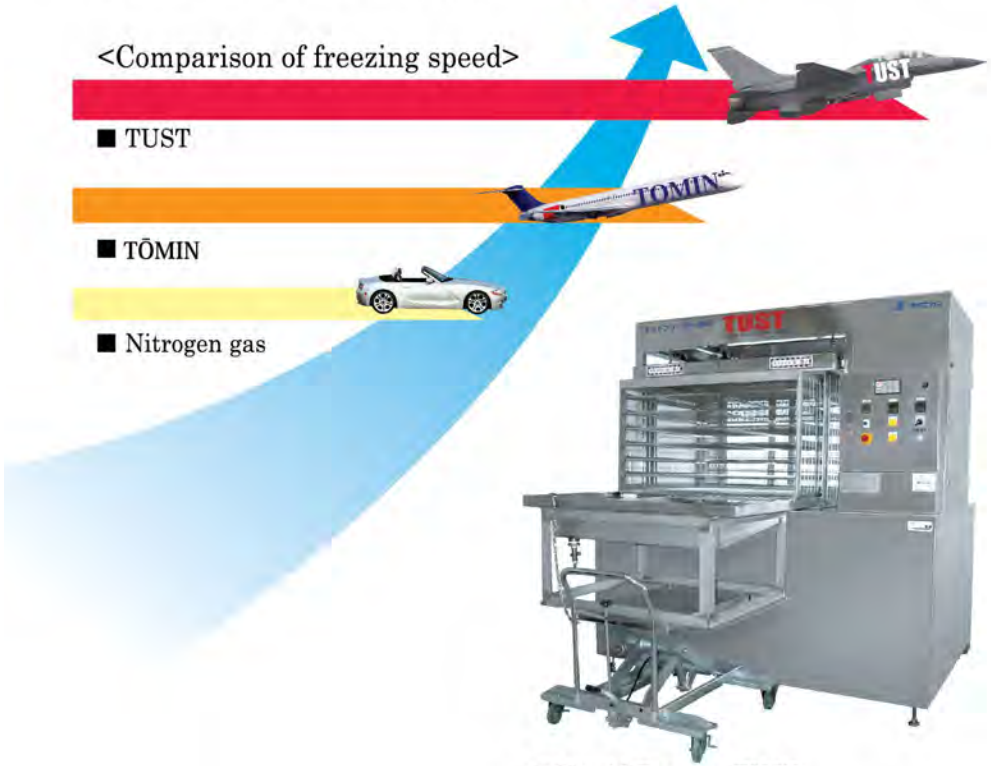
Model name	LM-45
Freezing Capacity	45～55 kg/h

Model name	LM-75
Freezing Capacity	75～85 kg/h

TUST & Conveyor System

TUST's Speed and Precision has no rivals at all.

TUST is the advanced TŌMIN equipment in the aspect of freezing precision.
TUST can freeze product much more nearly to "raw (original) status".
TUST can freeze iron portion inside the blood of fishes and others without any destruction, as it result TUST can delay color alteration. Fish color alteration is the relationship between oxygen and iron.



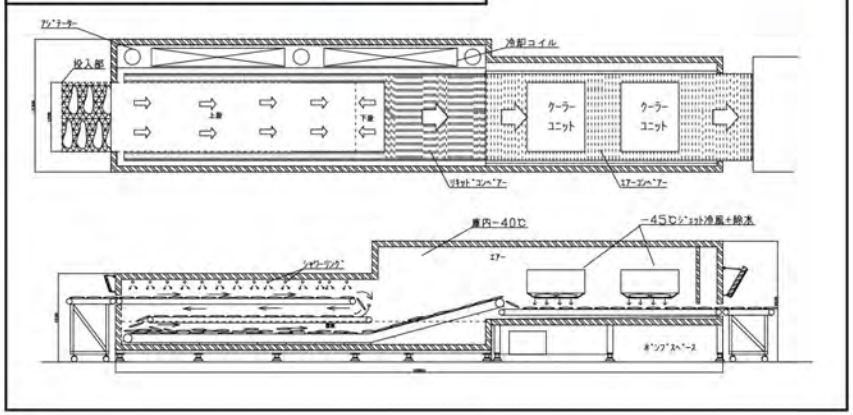
● Liquid Freezer TUST

Next generation ultimate liquid freezer

Three (3) steps liquid conveyor

The continuous conveyor type with maximizing liquid freezing merits.
The quality of liquid freezing is continuously maintained furthermore we can realize less space than tunnel freezer.

Three (3) ways liquid conveyor + air blow



Technican Co., Ltd.

Technican Co., Ltd. Main products: [TŌMIN] [TUST] [TŌMIN Conveyor] [Food Press Machine]

TEL: 81-45-948-4855

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Yokohama, JAPAN 224-0037

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