Production cost for Skaginn 3X pelagic system

- Working hours per 1,000 kg of fully frozen product*: 0.94 hours
- Electrical usage for freezers per 1,000 kg of finished product: 60 kWh
- Electrical usage for total factory without product freezing per 1,000 kg**: 66 kWh
- Packing cost per 1,000 kg of finished product***: 36 Euro

* Working hour based on all factory employees, including also cleaning time and technical service. This is based on 300 MT/300 dairies production with 15-20 hours of the blast freezing method.
** Electrical usage is the total usage for the whole plant and includes all processing equipment (without product freezing), cold storage and normal heating and electric cost of the plant.
*** Packing material for the total product and includes plastic bag, carton box, strapping, pallets and pallets wrapping material.

Dr. Björn Margeirsson
Matís – Research Group leader

- Experiments with the Automatic Box Freezer (ABF) show a significant effect on the mackerel’s muscle gaping. This indicates that quality concerns regarding the pressure from the plates are irrelevant.
- The freezing time for the ABF method significantly affects the mackerel’s membrane (peritoneum) lesser than the blast freezing method. High temperature causes increased enzyme activity in the mackerel gut which is observed in the mackerel’s condition.
- A severely reduced freezing time (the time for the product to reach a target temperature) with the ABF method, i.e. with the target temperature -25 °C, the ABF method has the mean freezing time of 5-7 hours compared to 15-20 hours of the blast freezing method.
- Mackerel frozen using the ABF method has less drip (2.6%) than ones using the blast freezing method (4.9%).
- Experiments show that the ABF method is 1.4-2.0 times more energy efficient than the blast freezing method.

Matching your demand in a market with technical innovation is a key factor in the food industry. Matís provides consultancy and services in companies in fisheries and agriculture as well as governmental agencies.

Unique product quality

- Product is cooled down between all processing steps with fluid ice before packing
- Automatic product handling during processing
- Product emerges in fully sealed, non-transparent polybag
- Product is transported in special plastic tray into the freezer
- Product is -1°C before freezing process
- Fully frozen in 3-4 hours
- Pallet goes in carton box after freezing process
- No forklifts in processing area

Skaginn 3X automatic pelagic processing starts at the ship ...

- Fish weighed in → Cooling tank → Grading → Cooling tank → Filtration
- Packed -> Batch weighing -> Cooling tank
- Frozen -> Metal detector -> Color grading
- Metal detector -> Carton box

... and finishes in cold stores

- Fully automatic
- Unique design
- All pelagic fish
- Minimal pressure during freezing

Varðin Pelagic invested in a 600 MT/24H factory from Skaginn 3X in March 2012.
Our one-time investment in such equipment has paid off and the equipment has increased our production capacity up to 750 MT/24H. We are producing high-quality products and our customers are happy with the products. We have never had a production day because of technical problems after startup.

- Bogi Jacobsen, Managing Director Varðin Pelagic

SVN have about 550 MT/24H pelagic system from Skaginn 3X. In SVN we have 9 freezers for product in trays and 3 carton box freezers. We produce mackerel, herring, capelin and capelin roe. We have a long relationship with Skaginn 3X and it is easy to work with them. They provide unique solutions and high-quality equipment.

- Jón Már Jónsson, Manager for land based operations SVN

Matís ltd. is an independent research institute which strives toward innovation in the food industry, biotechnology, and food security. Matís provides consultancy and services to companies in fisheries and agriculture as well as governmental agencies.

No forklifts in processing area

Automatic Pelagic Processing Solutions

- Fully automatic
- Unique design
- All pelagic fish
- Minimal pressure during freezing