

FRESH NORWEGIAN SALMON



Description of product: Fresh Norwegian Salmon, gutted, head-on or head-off

Designation & Species: Atlantic salmon, *Salmo salar*

Preservation: Fresh

Quality: Superior or Ordinary

Quality parameters: Colour: ≥ 3 kg size: Average ≥ 27 and not less than 24 on Salmofan™ colour scale
 ≤ 3 kg size: Average ≥ 24 and not less than 22 on Salmofan™ colour scale

Fat percentage: depending on size, season and geographic origin

Condition Factor: range 1.0 – 1.6, normally 1.2 - 1.4

Sizes: 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9+. Additional grading of sizes may be provided on request.

Food Safety and Good Manufacturing Practice:

All production complies with Codex Alimentarius recommendations for Good Manufacturing Practice, and General Principles of Food Hygiene. Manufacturing is in accordance with specific hygiene requirements in EU regulations EC No 852/2004 and EC No 853/2004. HACCP plans are audited and approved by the Norwegian Food Safety Authority.

Shelf-life: 16 + days

Ingredient: 100 % salmon; **Allergen:** Fish

Intended use: Heat treatment before consumption, or processing

Chemical elements: According to EU legislation.

Cadmium: < 0.050 mg/kg w.w.

Lead: < 0.30 mg/kg w.w.

Mercury: < 0.50 mg/kg w.w.

Indicator PCB6: < 75 μ g/kg w.w.

Dioxins; Sum PCDD/F2005 : < 3.5 ng TEQ/kg w.w.

Sum PCDD/F2005 + dl PCB: < 6.5 ng TEQ/kg w.w.

Fish feeds: Fish feeds are produced by registered and certified manufacturers. Production is in accordance with Norwegian and EU legislation. Pigment source is astaxanthin. Canthaxanthin is not used. No hormones or antibiotics are used as growth promoters in Norwegian fish farming.

GMO: Not used in neither fish roe nor fish feeds above the permissible EU limit of 0.9%.

PAP: Processed Animal Protein of avian or mammalian origin are currently not in use. Any changes in production will not take place without prior approval from customers.

Packing:

Packed in disposable EPS boxes with 4-6 kg ice in standard boxes and 2-3 kg in air cargo boxes. Lidded and sealed with 2 or 3 straps. Absorbing pads used in air cargo boxes.

Packaging:

Standard EPS boxes, expanded polystyrene, 20-25 kg, or
Air cargo EPS boxes, expanded polystyrene, 22 kg, or
EPS boxes, expanded polystyrene, 10 kg

All packaging materials in direct contact with products are food grade quality. Production comply with requirements in EU legislation, the German BfR, the Dutch Warenwet and American FDA. All materials have been declared by the Norwegian Packaging Convention. Wooden pallets are produced according to standard ISPM 15.

Labelling and information in documents:

- Commercial designation
- Scientific name
- Country of origin
- Identification stamp EFTA
- Packing station name and authorization number
- Production method
- Fish farmer name, organization number, licence number*
- Locality*
- Exporter*
- Order number*
- Customer name or number*
- Treatment
- Preservation
- Quality
- Size
- Net weight
- Gross weight*
- Number of fish in box*
- Lot/batch number
- Box number
- Pallet number
- Unit per pallet*
- Harvest date/Production date**
- Use-by date
- Storage temperature: Keep cool 0-2 °C
- Color added (USA)**
- Contains: Fish (salmon) (USA)**
- GTIN 14*
- Bar code format GS1 128*
- Name and address of exporter**

*Labelling may vary according to packing station and customer's requests.

** Information may be given in documents, in accordance with legal requirements.

Production method: Farmed in clean waters of western and northern coastal areas of Norway. Broodstock originates from Norwegian rivers, and has been farmed through generations by family owned companies. Roe production is subject to breeding programmes to enhance quality, growth and disease resistance.

Roe develop and hatch in fresh water, in on-shore facilities. During the fresh water phase of 8-16 months, fry will be sorted and vaccinated, and it undergoes a smoltification process. This is a physiological change which prepares salmon from a life in fresh water - to a life in saline water.

Smolts are transported by wellboats to the on-growing site, where they are farmed in sea cages for a period of 10-14 months, until harvest. During this phase production is monitored, and registrations are updated throughout the production cycle. Feeding is computer controlled, and submerged cameras will reveal excessive feeding.

Harvest: When a weight of 3-6 kilos has been reached, the fish will be starved for a period to empty the gut. Following transport by wellboat to the packing station, it will in most cases, be pumped into waiting cages. After a rest period, the fish is pumped into the stunning machine in the packing station. Anesthesia is done either by stunning or electricity, before the major artery or gills are cut. Bleeding is done in cold water. Cleaning removes viscera, kidney and blood residues. Automatic graders are used for sorting by weight before gutting and cleaning, which is done automatically or manually, depending on size. The fish is cooled again in a RWS water tank before packing.

Weight grading: Grading is done by automatic grader before packing, which is done either automatically or manually. The tare weight for packaging is subtracted.

Quality grading: Salmon is graded into 3 different qualities: Superior – Ordinary – Production, and the first two can be exported to the international market. Quality grading is done manually by trained staff, and it is based on Norwegian Industry Standard for Fish; Quality grading of farmed salmon (NBS 10-01).

Ice: Amount of ice is registered in a separate bar code, which secures the correct amount of ice.

Transport and storage conditions: -1 - +4°C.

Traceability: Full traceability on all products. Recall procedure is tested annually.

Fish health: Every farm is obliged to have a contracted authorized Veterinarian or a Fish Health Biologist, to monitor fish health and welfare. A veterinary health plan must be in place to prevent transmission of fish diseases between localities. Use of antibiotics is minimal, since vaccines have replaced the need for medication.

Control of sea lice can be done by cleaner fish, by bath treatment, or by medication through the fish feed. All substances are prescribed and supervised by veterinarians, and monitored by the authorities.

Environment: Management of the environment must be documented for every locality, to monitor local impact. A risk analysis and a contingency plan is mandatory, to prevent escape and to secure working conditions for the staff.

Nutrient content per 100 gram edible food:

Nutrient	Unit	Salmon, farmed, raw/ sashimi	Salmon, farmed, chops, boiled	Salmon, farmed, chops, fried in fat	Salmon, smoked
Edible part	%				90
Water	g	61	54	46	63
Energy 1, kilojoules	kJ	932	1108	1304	938
Energy 2, kilocalories	kcal	224	266	314	225
Protein	g	20	23,6	23,6	23,2
Fat	g	16	19	22,7	15
Saturated fatty acids	g	3	3,6	4,8	2,5
Trans unsaturated fatty acids	g	0	0	0	0
Cis-mono unsaturated fatty acids	g	5,9	7	8,4	6,1
Cis-poly unsaturated fatty acids	g	5	6	6,8	4,5
Omega-3	g	1,5			3,2
Omega-6	g	0,5			1,4
Cholesterol	mg	80	95	95	63
Carbohydrate	g	0	0	3,6	0
Starch	g	0	0	3,5	0
Mono + Disaccharides	g	0	0	0,1	0
Dietary fibre	g	0	0	0,2	0
Retinol	µg	26	31	60	9
Beta-carotene	µg	0	0	13	0
Vitamin A	RAE	26	31	61	7
Vitamin D	µg	10	11,9	11,8	7,5
Vitamin E	alfa-TE	1,4	1,7	2,4	3
Thiamin	mg	0,12	0,14	0,15	0,3
Riboflavin	mg	0,11	0,13	0,13	0,12
Niacin	mg	7,3	8,7	8,5	8,3
Vitamin B6	mg	0,51	0,61	0,59	0,5
Folate	µg	7	8	9	10
Vitamin B12	µg	3,5	4,2	4	4,6
Vitamin C	mg	0	0	0	0
Calcium	mg	7	8	9	16
Iron	mg	0,3	0,4	0,4	0,4
Sodium	mg	46	55	74	1221
Potassium	mg	451	537	527	425
Magnesium	mg	26	31	32	31
Zink	mg	0,5	0,6	0,6	0,4
Selenium	µg	30	36	35	30
Copper	mg	0,04	0,05	0,05	0,05
Phosphorus	mg	227	270	268	254
Salt	g	0,1	0,1	0,2	3
Iodine	µg	12			9

Source: The Norwegian Food Composition Table 2015;
The Norwegian Food Safety Authority, The Norwegian Directorate of Health, University of Oslo.