

# PREMIUM SALMON FILLETS

TRIM D  
FRESH OR FROZEN



|                      |                                     | FRESH              | FROZEN |
|----------------------|-------------------------------------|--------------------|--------|
| <b>Bones</b>         | PBI (pinbones in)                   | X                  | X      |
|                      | PBO (pinbones out)                  | X                  | X      |
| <b>Scales</b>        | Scale on                            | X                  | X      |
|                      | Scale off                           | X                  | X      |
| <b>Packing</b>       | INTL (Interleave)                   |                    | X      |
|                      | IVP (Vacuum packed)                 | X<br>(not for USA) | X      |
|                      | Fresh                               | X                  |        |
| <b>Box</b>           | EPS 10/20kg                         | X                  |        |
|                      | AirCargo box 5/15/20 kg             | X                  |        |
|                      | Cartons 10-17 kg                    |                    | X      |
| <b>Sealing</b>       | Lidded and sealed 2-3 straps        | X                  | X      |
|                      | Seaborn printing on boxes           | X                  | X      |
| <b>Cooling media</b> | Ice (not for USA)                   | X                  |        |
|                      | Gel packs (3-4 depending on season) | X                  |        |

**Fillet trim** : Backbone off, bellybone off, backfin off, collarbone off, belly fat off, belly fins off, , pinbones out (unintended remains may occur), belly membrane off, tail piece off, back trimmed

**Packing/Boxes** : Atlantic salmon Trim D can be delivered in various types of packing and boxes depending what the customer requires. The table shows the different qualities:

**Fillet sizes:**

| USA                   | Europe/Israel |
|-----------------------|---------------|
| 0,45 – 0,90 (1/2 lbs) | 0,5 – 1,0 kg  |
| 0,90 – 1,35 (2/3 lbs) | 1,0 - 1,4 kg  |
| 1,35 – 1,80 (3/4 lbs) | 1,4 – 1,8 kg  |
| 1,80 – 2,25 (4/5 lbs) | 1,8 – 2,2 kg  |
| 2,25 – 2,60 (5/6 lbs) | 2,2 – 2,6 kg  |
| 2,6+ (6+lbs)          | 2,6+ kg       |

**Quality:**

|                    |  | <b>Picture p.<br/>8- 9</b> |
|--------------------|--|----------------------------|
| <b>Colour</b>      | Salmofan scale $\geq$ 24   | A                          |
| <b>Skin</b>        | Silver and bright  |                            |
| <b>Bones</b>       | Unintended remains of bone may occur at PBO fillets  |                            |
| <b>Texture</b>     | Firm, fresh  |                            |
| <b>Blood spots</b> | Max 10% of the fillets (1 of 10) may have some small bloodspots.   | B                          |
| <b>Melanosis</b>   | Max 10 % of the fillets (1 of 10) may have small melanosis.  | C                          |
| <b>Holes</b>       | Max 10% of the fillets (1 of 10) may have minor holes caused by melanosis and blood spots trimming. No holes can be more than 1,5cm deep, 3.0cm length and 3,0cm wide. | D                          |
| <b>Gapping</b>     | Max 10% of the fillets (1 of 10) may have minor gapping.<br>Gapping over 1,0 cm deep, 10,0cm length and 2,0cm wide is not ok (se pictures)                             | E                          |

**Packaging:**

|                      |   |
|----------------------|---|
| IVP (Vacuum packing) | 10-150 $\mu$ PE film INTL, or 200 $\mu$ PE vacuum film. |
| INTL (Interleave)    | Polyethylene thickness 10-200 $\mu$ m plastic food film |
| Fresh                | PE 10-150 $\mu$ m transparent plastic bag               |
| Gel packs            | 15*15 cm PELD/PELLD film + polyacrylate gel             |

### Pallet configuration:

|                 |  |
|-----------------|--|
| Fresh EPS       | 10kg boxes: 4 boxes pr layer * 11 layers = 40 boxes<br>20kg boxes: 3 boxes pr layer * 9 layers = 27 boxes  |
| Fresh Air Cargo | 5kg boxes: 8 boxes pr layer * 11 layers = 88 boxes<br>15kg boxes: 4 boxes pr layer * 9 layers = 36 boxes<br>20kg boxes: 3 boxes pr layer * 9 layers = 27 boxes |
| Frozen          | 10 kg boxes: 4 boxes pr layer *10 layers = 40 boxes  |

### Box sizes:

|                | Height | Width  | Length |
|----------------|--------|--------|--------|
| EPS 10kg       | 14,5cm | 40,0cm | 60,0cm |
| EPS 20 kg      | 22,2cm | 40,0cm | 80,0cm |
| Air Cargo 5kg  | 18,0cm | 19,8cm | 59,5cm |
| Air Cargo 15kg | 22,0cm | 39,0cm | 59,0cm |
| Air Cargo 20kg | 22,5cm | 39,0cm | 78,5cm |
| Cartons        | 22,1cm | 36,3cm | 77,8cm |

### Pallet configuration

|                 |   |
|-----------------|---|
| Fresh EPS       | 5kg boxes :8 boxes pr layer * 11 layers = 88 boxes<br>10kg boxes: 4 boxes pr layer * 11 layers = 40 boxes<br>20kg boxes: 3 boxes pr layer * 9 layers = 27 boxes |
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### Storage and transport temperature:

|        |  |
|--------|--|
| Fresh  | 0-4 °C / < 39 °F. Max 38 °F for USA customers.<br><br>Temperature recorders can be used to check the temperature during transport. |
| Frozen | < -18 °C / -0,4 °F   |

### Shelf life:

|        |       |                                 |
|--------|-------|---------------------------------|
| Fresh  | Fresh | 13 days from production date    |
|        | IVP   | 13 days from production date    |
| Frozen | INTL  | 18 months from production date. |
|        | IVP   | 24 months from production date  |

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

**Intended purpose:** Processing, or heat treatment before consumption.

**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 µg/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.

### 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 EU legislation and specific hygiene requirements in regulations EC No 852/2004 and EC No 853/2004. HACCP plans are audited and approved by the Norwegian Food Safety Authority. Analyzes are conducted by accredited laboratories.

**Migration and phytosanitary measures :** All packaging materials in contact with products are food grade quality. Production comply with requirements in EU legislation, the German BfR, the Dutch Warenvet. A migration certificate have been issued on all EPS boxes and fish pads, by the Norwegian Packaging Convention. Wooden pallets are produced according to standard ISPM 15.

**Traceability:** Products are traceable from broodstock to customer, and recall procedure is tested annually.

**Labelling (D-pak):** EFTA ID/authorization No/country of origin, exporter name and address, manufacturer name and address, production method, commercial designation, scientific name, size, treatment, quality, preservation, production/freezing date, use-by date, net weight (kg and lb), batch No, Box No, pallet No, storage temperature, box/pallet, FDA registration No, Bar code symbol GS1 128, GTIN 14.

**Fish feeds:** Fish feeds are produced by registered and certified manufacturers. Production is in accordance with Norwegian and EU legislation. Pigment source is astaxanthin, and levels are according to EU regulations. Canthaxanthin is not used.

**No GMO in use:** Genetically modified organisms are not used, above permissible EU limit of 0.9%.

**No PAP of Avian or mammalian origin in use:** 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

**No endoparasites:** Salmon supplied by Seaborn is farmed in sea cages, and solely fed heat treated pellets. Based on EFSA's Biological Hazards Panel assessment on these farming conditions, salmon is not associated with endoparasites which may represent a hazard to human health.

**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.

Fry will spend 8-16 months in a fresh water phase. During this time they are sorted and vaccinated, and they undergo a smoltification process. This is a physiological change which prepares salmon from a life in fresh water - to a life in saline water. No growth hormones are used in Norwegian fish farming.

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 method:** Prior to harvest, fish will be starved in order to increase its tolerance for being handled. Transport is by wellboat to the packing station, where the fish usually is transferred to waiting cages. After a rest period of 24 hours, it is anesthetized either by percussive or electric stunning, 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. Gutting and cleaning is done automatically or manually, depending on size. Products are cooled in cold water before packing.

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

**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.

**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/<br>sashimi | Salmon, farmed,<br>chops, boiled | Salmon, farmed,<br>chops, fried in fat | Salmon,<br>smoked |
|----------------------------------|------|---------------------------------|----------------------------------|--|-------------------|
| Edible part                      | %    |                                 |                                  |  | 90                |
| Water                            | g    | 61                              | 55                               | 46                                     | 63                |
| Energy 1, kilojoules             | kJ   | 932                             | 1100                             | 1304                                   | 938               |
| Energy 2, kilocalories           | kcal | 224                             | 264                              | 314                                    | 225               |
| Protein                          | g    | 20                              | 23,6                             | 23,6                                   | 23,2              |
| Fat                              | g    | 16                              | 18,9                             | 22,7                                   | 14,7              |
| Saturated fatty acids            | g    | 3                               | 3,5                              | 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                               | 5,9                              | 6,8                                    | 4,5               |
| Cholesterol                      | mg   | 80                              | 94                               | 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                              | 28                               | 61                                     | 9                 |
| Beta-carotene                    | µg   | 0                               | 0                                | 13                                     | 0                 |
| Vitamin A                        | RAE  | 26                              | 28                               | 62                                     | 7                 |

|             |         |      |      |      |      |
|-------------|---------|------|------|------|------|
| Vitamin D   | µg      | 10   | 11,8 | 11,8 | 7,5  |
| Vitamin E   | alfa-TE | 1,4  | 1,6  | 2,4  | 3    |
| Thiamin     | mg      | 0,12 | 0,11 | 0,12 | 0,3  |
| Riboflavin  | mg      | 0,11 | 0,1  | 0,13 | 0,12 |
| Niacin      | mg      | 7,3  | 6,9  | 8,5  | 8,3  |
| Vitamin B6  | mg      | 0,51 | 0,54 | 0,44 | 0,5  |
| Folate      | µg      | 7    | 4    | 7    | 10   |
| Vitamin B12 | µg      | 3,5  | 4,1  | 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   | 500  | 500  | 1221 |
| Potassium   | mg      | 451  | 532  | 527  | 425  |
| Magnesium   | mg      | 26   | 31   | 32   | 31   |
| Zink        | mg      | 0,5  | 0,6  | 0,6  | 0,4  |
| Selenium    | µg      | 30   | 35   | 35   | 30   |
| Copper      | mg      | 0,04 | 0,05 | 0,05 | 0,05 |
| Phosphorus  | mg      | 227  | 268  | 268  | 254  |
| Salt        | g       | 0,1  | 1,2  | 1,2  | 3    |
| Iodine      | µg      | 12   |      |      | 9    |

Source: The Norwegian Food Composition Table 2014;

The Norwegian Food Safety Authority, The Norwegian Directorate of Health, University of Oslo.

## QUALITY PICTURES

### A. Perfect fillet. Good color, free of bruises, melanosis, holes



### B. Blood spots may occur



Max 10% of the fillets (1 of 10) may have some small bloodspots.

### C. Small melanosis may occur.



Max 10% of fillets (1 of 10) may have small melanosis.

### D. Holes because of removed melanosis spots may occur



Max 10% of the fillets (1 of 10) may have holes caused by melanosis and blood spots trimming. No holes can be more than 1,5cm deep, 3,0cm length, 3,0cm wide.