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06-04-2012	1.0	Turan Turan	
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Cold Smoked Salmon

Description

Cold smoked salmon is a salt cured, cold smoked product which is prepared and smoked at temperatures which are insufficient to alter the protein structure of the product.

Production Method

Sourcing product

Purchasing Salmon only from the fridge and not from the open fish counter as this can lead to parts of the fish exceeding temperature limits (1C to 6C).

If temperature exceeds upper limit. Reject the purchase

Check temperature and record.

Transport in temperature controlled environment (detailed below).

Preparation

Clean fish filet under cold running water and trim skin, remove scales.

Pat dry with kitchen roll.

Visual and physical check to ensure fully thawed.

Check with thermometer and record. If temp below 0C. place product in fridge for 30 mins and re take temperature until a minimum of 1C in thickest part of fish

Weight the filet and then place in curing dish.

Curing

Add a thin layer of salt to the base of the dish (use food grade salt NaCl only) to ensure the salmon skin receives a cure.

Weight the fish to be cured and calculate 5% weight in Kosher salt crystals. If using fine salt (ie. table salt) calculate for 3% as fine salt will break down into brine far quicker than a coarser grade of salt.

Cover the whole filet in a thin layer of your chosen salt paying attention to the difference in thickness of the fish. Apply a thicker layer of salt to the thicker parts of the filet and a thin layer to the thinner parts. Cover and refrigerate immediately.

Pre-check refrigerator is at 1C to 5C. If temperature exceeds min temp, adjust thermostat, leave for 30 mins and re-check temperature. If temp still above minimum then find alternative storage or reject batch.

Cure for between 12 to 18 hours. 12 hours for the fine salt and 18 hours for the coarser cosher salt crystals.

Visual check for brine runoff at the end of the curing period

Remove filet from the cure and rinse under cold water. Pat dry with kitchen roll.

Weigh the filet and check for 7% to 13% weight loss. If insufficient weight loss is measured, re-salt the fish as described above and refrigerate for a further 1 hour after which, re-rinse and dry the filet then re-weigh. Continue this for a further 4 hours until weight loss falls within parameters.

Drying

Note the weight of the fish.

Pre-check refrigerator is a dry environment (Monthly check with RH Meter) Typical 30% to 40% RH. If the fridge fails to meet the RH readings. To assist drying place a bowl of dry salt in the bottom of the fridge or to assist in hydrating place a bowl of clean cold water in the bottom of the fridge.

Re-measure the RH in one hour. Failure to meet the RH parameters is not necessarily critical and will require an adjustment to the drying time. RH too high – extend drying time. RH too low – shorten the drying time.

Place filet on an open wire rack and allow it to dry in the refrigerator for between 18 to 24 hours.

Check for 1% to 3% further weight loss and record. Failure to meet the minimum parameters will require a further drying period. Re-check every hour until the minimum weight loss is recorded.

Transportation (Where required)

Load cool box with ice blocks (plastic)

Allow for temperature within box to stabilise (30 mins)

Check temperature. Failure to meet the min temp (6C) close the container and wait 30 mins and re-check. Failure to meet the max temp requirements will require the use of another container.

Load box with refrigerated food and salmon (in cling filmed glass dish or other protective cover) on top.

Place insulating fleece over contents and place lid on the box

Transported to venue in cool box.

Check venue fridge temperature and unload ASAP into venue fridge. Failure to meet the max permissible temp (6C) Adjust thermostat and re-check in 30 mins. Failure to meet this requirement will require food to remain in box with regular (hourly) checks.

Cold Smoking

Pre-check environmental ambient temperature is below 25C and record. If the temperature is too high, check sun protection, leave for 30 mins and re-check temperature. Failure to meet the minimum temperature. Use plastic ice blocks inside the cold smoker to provide a level of cooling. Re-check the temperature after 30 mins. Failure to meet the 25C initial limit will require a delay in smoking until the ambient temperature is reduced to a safe level. *

*The smoke generator adds 2C to 3C to the ambient temperature which will make the temperature 28C leaving a small margin for temperature fluctuations throughout the smoking. If using a smoking cabinet larger than 8 cubic feet the effect the smoke generator will have in adding heat will be diminished. And the smaller the smoking cabinet the reverse will be true.

Ensure smoker is protected from direct sunlight.

Ensure wood dust is food grade

Load and light smoke generator and place inside the smoker.

Post-lighting temperature check is below 25C and record.

Note the weight of the fish.

Place on food rack in the smoker and cold smoke for between 4 and 12 hours depending on your taste.

Hourly temperature check to ensure smoking environment remains below 25C and record.

Should temperature exceed max (30C) carry out steps for pre use and consider using ice cooling.

Remove fish from smoker and place in fridge while corrective action is taken. Return fish to smoker and continue smoking when temperature is under control.

Check for further weight loss and record.

Storage

Slice and place on food grade gold boards – Vacuum pack. Label with use by date

Cover and refrigerate at 1C to 4C for up to 7 days.

Freeze to below -19C for up to six months.

General Notes –

Salmon is a high risk product requiring responsible handling to ensure a safe product. By following these steps you will be maximising the opportunities for this product to remain safe for human consumption. Although the salmon is smoked at ambient temperatures for extended periods of time this can only be achieved by effective curing methods and temperature control. The weight loss in the salmon through curing is a key step as this restricts the level of available water to support bacterial growth. Cold smoking alone is insufficient to protect against bacterial growth, only curing with salt can achieve this.