CURING & SMOKING

2024

Since 1921

Dunninghams

Curing & Smoking

A GUIDE TO CURING & SMOKING

Curing is one of the oldest and most effective ways of preserving meat. It imparts an unmistakable flavour to meat and is also a prelude to smoking meat.

Meat handling before and during the curing process must be carried out hygienically - the better the quality of the meat, the better the end product. At Dunninghams, we specialise in providing the finest quality curing and smoking ingredients and equipment, to assist you in producing the best products for your customers. Following is a quick guide to the techniques behind successful curing and smoking. To find out more, or to select which Dunninghams products best suit your individual needs, please call our customer service team on 0800 363 1921 or speak to your rep.

Typical Batch Pack contents could include...

Colours
Protein
Starch
Anticaking Agents
Antioxidants
Flavours
Buffers
Preservatives
Stabilisers
Free flowing agents
Herbs & spices

BATCH PACK ADVANTAGES

Convenient Time Saving

The need for weighing separate ingredient quantities is avoided.

Consistency of Flavour

Each batch of product you prepare will contain the same, accurately weighed ingredients, giving you better quality control. Preservatives and cures, where applicable, are packed separately within the batch pack.

Reduced Stock Holding

A variety of ingredients need not be held in stock. All the ingredients you require are blended in their correct proportions in each batch pack.

Eliminated Wastage

No spillage or spoilage of separate ingredients, as batch pack contents are pre-weighed and the total contents of each pack is used.

Freshness

Batch packs are only opened prior to use. Non batch pack ingredients, once opened, can lose their freshness if only partly used.

Quality Control

The quality of raw materials used in each blend is carefully monitored and controlled by Dunninghams through its microsafe® process.

Batch Control

Each batch pack contains a production batch number which allows Dunninghams to track the raw materials used, in the unlikely event of a quality issue.

APPLICATIONS

Meat Products

Fresh sausages such as boerewors, beef, pork, mutton, and chicken sausage. Cured and dried sausage such as pepperoni, salami and cabanossi. Cured meat cuts such as ham, biltong and bacon. Smoked and cooked sausage such as Russians, Viennas and Frankfurters.

Poultry Products

Injection brine for pumping of whole birds and portions.

Sauces and Condiments

Dry and wet cook-in sauces, marinades, sauces and bastings.

Baked Goods

Pizza dough, breads, cakes and buns.
...And any other applications where combinations of functional ingredients are used in a batch system.

Curing Agents

Today there are numerous curing agents available from synthetic pyrophosphate's to seaweed derived carrageenan. In addition, with advances in refrigerated transport logistics and modern packaging methods, food-preservation is no longer the sole expectation of a cure. Yield for instance, can be increased by up to 50% by needle injecting cure deep into larger meat-cuts. Colour can be strongly enhanced or altered completely and with the addition of maple crystals, technical gums and brine additives, you can create an almost limitless array of flavours.

So, what is your average cure-base likely to contain?

- **Salt:** Is a natural shelf life extender in meat products, it's also used as a conduit for the other additives.
- **Mineral Salts 450, 451 & 452:** This is a blend of phosphates used to retain moisture in the pumped product. The better the grade of mineral salt, the better the moisture retention.
- **Antioxidant 316:** Is produced from natural food sugars and essentially acts as an oxygen barrier, stabilising both the colour and flavour of the meat.
- **Preservative 250:** Is sodium nitrite (a synthesized form of naturally occurring Chilean saltpeter), a food preservative and colour fixative.

The techniques of curing meat have also improved significantly since Roman times, although for boutique butchers or the hobbyist, rubbing a dry cure onto meat and leaving it to mature still gets excellent results. But most commercial operations use brine pumps, brine tubs, needle injectors and pumping compounds, to speed up the process and maximise yield.

Below are some of the basic tips to ensure you get the best results:

Making a Brine

- Use food grade tubs and equipment and ensure they're cleaned thoroughly.
- The water you use needs to be ice cold (<2°C) and ideally filtered.
- Mark appropriate water level on the tub for future brine consistency.

When mixing a brine always put the water in first. Then add the cure and dissolve completely, after which time you can add the desired amount of salt, sugar, dextrose, maple crystals etc. It's important to follow this sequence, because if the salt is added to the water first, or the water is too warm, the cure won't dissolve properly.

It's also worth employing a set of scales throughout the process, so you can gauge the increase from a meat's pre-cure weight, to its post-cure and final sale weight. This will give you a reasonable idea of how much extra value can be added by using the right curing regime.

A cover brine can be prepared using a mix of salt (2%) and water, but many curers (especially those using multi needle injectors) no longer use cover brines, instead opting for submersion in brine tubs, or curing in vacuum sealed bags.

Pumping Ham

- New hoses should be thoroughly flushed before using to fill any brine.
- Brine should be stored in the cold room for a maximum of 6 days - fresh brines work better.
- Brine containers should be covered.
- Agitate the brine regularly, to dislodge any sediment buildup on the bottom of the tub.

Pumping the ham can be done with a hand-held needle or with an injection machine. Pump to at least 25% to achieve the best result during the cook.

Pumping Bacon

Bacon should only be pumped to 15% - 20% of its weight. Once pumped, place the middles in a cover brine for approximately 2-3 days in your cold room.

Cooking

Before you cook the cured product, it's extremely important that it's given adequate time to reach room temperature before entering the smoke oven. This will prevent the chilled meat from going into thermal shock, which will diminish the meat's texture and yield. It's also important to ensure the cuts are cleansed of any excess salt and are completely dry.

Before smoke is introduced to the oven, bacon should be dried for over an hour on a lower temperature – hams will require a second hour of drying. Smoke does not coalesce with the meat fibres when excess moisture is present.

After several hours of drying (dependent on the average weight of the product) increase the oven to the desired temperature, introduce the smoke and cook for the prescribed length of time.

Once the product is cooked it needs to be showered or dunked in cold water to prevent the product cooking further in its own heat, then transfer product to the cool room.

INGREDIENTS USED IN OUR CURING AGENTS

Dunninghams curing agents are carefully formulated to ensure the best possible quality characteristics of taste, colour, succulence and shelf life, are achieved without compromising on yield.

With over 80 years' experience and a world wide network of suppliers, Dunninghams has developed a range of products specially formulated for the New Zealand Meat Industry.

Dunninghams formulations are continually being reviewed to ensure they encompass the most advanced food science, comply with New Zealand's food laws and optimise our customers' profitability.

The ingredients used, and their functions in meat products, are reviewed in the sections that follow.

Salt

Sodium chloride - or common salt - has been used for the preservation of food from times of antiquity. In the modern Food Industry salt is not often used as a food preservative. In the production of manufactured and cured meats, it is added to enhance the functional properties of the product. Salt is also used as a flavour enhancer.

The most important function of salt is to combine with phosphates to hydrate and solubilise meat proteins. These functions are essential in the production of high quality meat products, where it is necessary to use active ingredients to optimise the natural properties of the muscle tissue.

Salt, in the presence of phosphates, begins to have an effect on muscle proteins at a level of 1.2%, or approximately 12g per kg. This effect is enhanced as the salt concentration is raised, and at 2% salt, the meat proteins begin to be fully hydrated or activated.

Although salt is used at lower levels in the modern Food Industry, salt can still contribute to the shelf life of meat products, particularly in products where salt is used in conjunction with other properties such as reduced pH, modified atmosphere packaging and low storage temperatures.

A final and important use of salt is as a carrier of components which could be dangerous

Phosphates

Phosphates are salts and could have been included in the preceding section. However, phosphates play such an important role in the Meat Industry, that they are often regarded as a specialised ingredient, and treated separately.

After slaughter, meat undergoes irreversible changes like rigor-related stiffness and subsequent muscle relaxation during aging. These changes limit meat's binding properties and cause shrinkage while cooking, due to post-slaughter biochemical alterations.

A critical change is the loss of adenosine triphosphate (ATP), causing muscle fibres to remain contracted after rigor mortis. Even with aging, the original muscle flexibility isn't fully restored.

Phosphates play a key role by disrupting the bonds formed in muscle fibres, enhancing solubility, especially when paired with salt. This universal use in the Meat Industry addresses these concerns. Another post-slaughter change is a pH drop due to glycogen converting to lactic acid, potentially resulting in a low pH of 5.5, which reduces water retention.

As phosphates are generally alkaline, adding them raises pH levels, helping meat hold more water. Specific phosphates can also split chemical bonds in muscle fibres, crucial for stable gels and emulsions in processed products like sausages.

Choosing phosphates for varied applications is specialised, involving controlled conditions or blending different types to meet specific needs effectively.

INGREDIENTS USED IN OUR CURING AGENTS

Sodium Nitrate

Sodium nitrite is added to cured meat products to provide a stable pink colour, and also to enhance the flavour traditionally associated with cured meat. In addition nitrite is added as a food safety measure, as nitrite has some bacteriostatic effects, and acts as a preservative against certain bacteria. Sodium nitrite is itself colourless. Colour is added to salt that has had nitrite mixed in. This is a safety attribute used to ensure that salt containing sodium nitrite is not used incorrectly.

When added to meat, sodium nitrite turns into nitric oxide (NO), which triggers a series of reactions resulting in a pink colour. This pink hue is achieved by the transformation of nitrite by-products, ultimately forming stable pink compounds in cured meat.

The reaction sequence depends on specific conditions. Initially, a mildly acidic environment with a pH between 5.2 and 6.4 is required. Lower pH levels enhance the reaction's speed. Normally, meat's pH drops to 5.5 post-rigor and rises due to enzymatic activity during aging. Fresh meat has a pH of 5.6 to 5.8, ideal for colour development.

Key factors for colour development are sufficient myoglobin in meat and ample nitrite in curing. Myoglobin can be low in chicken or extended products like sandwich hams, making stable colour harder to achieve.

To improve colour, additives like ascorbic acid and its salts are used. These act as reducing agents, counteracting oxidising agents that hinder colour stability. However, excess oxygen can hinder their efficacy, particularly if other negative factors are present.

Temperature influences colour development rate, with lower Meat Industry temperatures leading to slower reactions. Most curing requires overnight holding, suiting processes like tumbling.

Nitrite's reaction with meat constituents can form carcinogenic substances, so their levels are regulated. In New Zealand, nitrite content is capped at 125 parts per million for cured and dried meats.

Nitrite complexes, including nitrosomyochromogen, are sensitive to light, causing colour fading. This is more pronounced in products with marginal colour development.

Carrageenan

Carrageenan is derived from seaweed. The type of carrageenan used in the meat industry is termed K-Carrageenan.

The reagent needs to be heated to 700°C before it begins to form a gel. As a gel, carrageenan has the capacity to bind large quantities of water, with stable gels being produced with 1 part carrageenan and 100 parts water. Carrageenan gels are heat-reversible. That is, they will set at lower temperatures, but melt in heated products. For this reason they are more suited to products that are consumed cold.

Added Proteins

A number of different proteins are used in the meat industry to enhance the water-holding capacity, and to assist in the formation of gels.

The most widely used has been soy protein, or soy isolates. Dairy proteins such as whey powder and casein have also been used, as has egg albumin.

All of these substances are allergens. Where possible, Dunninghams has replaced allergenic substances with non-allergenic alternatives such as other vegetable proteins or pork rind powder.

Proteins are added to meat products to improve the gelling and emulsifying characteristics. This in turn leads to improvements in the mouth feel of the product, whilst reducing purge in sliced and pre-packed products.

1: Spoilage problems

Gas-producing bacteria can also cause the pin hole effect, although this is unusual in products with reasonable levels of curing salts. Nevertheless, it is important to maintain certain hygiene standards, with the following being important:

- Use only fresh meat. Tainted or old meat cannot be 'refreshed' by curing.
- Brines which are re-used, kept too long or used for a variety of products, may become contaminated. It is recommended that brines (especially injection brines) are made fresh for a particular operation and are not stored for prolonged periods of time.
- Plant and equipment should be cleaned and sanitised daily. Proper cleaning may involve stripping some pieces of equipment. Refer to user manuals and follow the recommended procedures.

(b.) Bone Taint

Bone taint can be a problem specific to Cooked on the Bone Hams (COBs). Products such as ham that are cured 'bone-in' may suffer bone taint if the meat around the bone is not properly cured. This can be resolved by using a hand injector to inject curing brine up along the hock. It is also necessary to ensure the meat is not tainted before curing.

(c) Poor Shelf Life

Although the shelf life of ham and bacon products is a broad subject, many problems can be overcome by adhering to four basic principles:

- Use the correct cures and marinades. The combination of curing salts, cooking, correct packaging and cold-holding temperatures are the basis of a product's shelf life. Salt levels in the finished product should be about 2%. This is necessary to inhibit some of the spoilage organisms that can grow at low temperatures.
- Cook ham products correctly. A core temperature of 68°C is recommended for large products such as leg hams, which may take a number of hours to reach core temperature. Smaller products such as chubs, cook more quickly, and should be cooked to a core temperature of 72°C.
- Products to be sliced or stripped of cooking bags or netting, must be handled through equipment and on benches that have been thoroughly cleaned and sanitised.
- Storage temperatures are inversely related to shelf life. A reduction in holding temperatures from 4°C to 1°C will result in a significant increase in shelf life. Operators able to reduce temperatures to -1°C will see additional improvements.

2: Colour Problems

(a) Product fades on outer surface, but remains pink on inside

The cured pigment is affected by strong light and in particular by neon lights. It is possible to improve the retention of colour by the addition of reducing agents. Ask your Dunninghams representative about colour-fast additives.

(b) Product has grey patches, or has poor colour throughout

The product is likely to be insufficiently cured. There are a number of possible reasons for this:

- Insufficient myoglobin (meat pigment) in the meat. This is not normally a problem. The exceptions are products such as sandwich hams that are highly extended. Chicken products can also have minimal levels of myoglobin.
- Insufficient nitrite level in the cure. Pumping brines correctly prepared will have the correct level of nitrite. However, it is important that cover brines are also maintained with the correct nitrite level.

- Insufficient time given for complete curing before the product was cooked. The reaction of curing salts with the meat pigments is quite complex and takes a certain period of time. Holding the product overnight (16 hours) is normally sufficient for good colour development.
- Temperatures are too cold. It is important that temperatures of pumped meats do not exceed 4°C. On the other hand, temperatures must not be too cold, as colder temperatures will reduce the rate of development of curing colours. For this reason it is important to ensure frozen meats are completely thawed, and meat temperatures are between 2 and 4°C before curing is attempted.

(c) Product has green discolouration

Green discolouration can be brought about by the use of incorrect levels of curing agents, or by microbial spoilage:

Excess levels of nitrite (about 5 times the legal limit) can lead to a condition known as nitrite burn. It is recommended to use nitrite in the form of nitrite salt blends, or complete curing blends such as Dunninghams Ultracure or Honey Dew to ensure excessive levels of nitrite are not used inadvertently. Cover brines should also be tested periodically to ensure nitrite levels are controlled. Bacterial spoilage can bring about green discolouration under certain conditions, such as the loss of vacuum in sealed packs. High storage temperatures can also be implicated.

2. Colour Problems

3. Texture & Consistency Problems

(a) Product not retaining water

Different products have an inherent ability to retain a certain level of water, resulting in an industry-accepted yield. It is important to note that different styles of product don't all retain the same level of water. For example, a COB may be acceptable with a yield of 10% of green weight (raw weight), whilst sandwich or pressed might be expected to yield 150 to 200% green weight (raw weight).

Allowing for these differences, there can be reasons for products not retaining the expected level of water:

- Phosphates not used correctly. Phosphate blends are prepared to interact with the meat proteins in the presence of salt to enhance the water-holding capacity of meat products. Phosphate blends are scientifically formulated to achieve the desired result in different products. Ensure you follow the pumping charts for given applications and avoid using phosphates at low or higher levels than is recommended
- Acid conditions can result in poor water uptake. Ensure brines containing acidulates such as GDL are used in the prescribed time. Avoid using PSE meat.
- Excessive pump pressures will cause the flesh to tear and result in lower water uptake. For higher yield and uniform products, it is important to use a multi-needle injector. It is almost impossible to achieve a high yielding product using a hand injector. When using multi-needle injector it may not be possible to achieve the desired uptake of brine in a single pass, which is likely to cause rupture in the flesh. Any brine retained in the torn flesh will be lost readily when the product is cooked. It is preferable to use two passes at a moderate pressure, ensuring a more even distribution of the brine.
- Excessive cooking temperatures will result in additional losses. It is recommended cooking temperatures be monitored using a probe. It is also important to adjust the final temperature to the size or diameter of the product, with larger hams requiring lower core temperatures than small or thin products. For food safety reasons, all ham should be cooked to achieve a minimum of 68°C, with chubs and smaller products taken to 72°C. Oven temperatures and humidity should also be well controlled. Yield can be improved by staging cooking temperatures so they are 25-30°C higher than the core temperature.

3. Texture & Consistency Problems

(b) Reformulated products don't hold together

Sometimes reformulated products break apart, especially on slicing. Reasons for this are varied, as the condition can be brought about by the way the meat is selected and prepared; by using meat that has undergone a degree of spoilage, the use of the incorrect ingredients and by applying severe cooking methods.

- Meat with excessive levels of fat will not adhere properly. It is important to trim fat from meat to be injected and tumbled, not only does fat interfere with the binding process, but fat has no capacity to hold water. Thus, fatty meat causes excessive amounts of water to pass into the lean parts of the meat, resulting in these structures becoming weakened.
- When meat is correctly injected and tumbled, it should be sticky to touch. All the water in the tumbler should be taken up and no free liquid should be evident. Signs of free water can be due to excessive amounts of water added to the tumbler. The condition can also be brought about if the time between injecting and tumbling is too long. Another reason for the meat not being sticky at the end of tumbling, is that the wrong curing ingredients have been used. Consult your Dunninghams representative for advice on the use of specialty cures. Yet another reason is the tumbling time is insufficient. A general guide is that reformed meats should be tumbled 2500 revolutions. It may be necessary to use a higher number of revolutions for smaller tumblers.
- Meat that has undergone early stages of spoilage can be slightly acidic. It is difficult to extract meat proteins under these conditions. Products prepared from such meat will be compromised in terms of gel strength and water retention.
- Loose bagging of reformulated meats will result in the meat not binding correctly on cooking. Ensure bags are pulled up tight to provide good contact between the meat pieces in the bag.

4. Problems with Smoking

Smoking is considered an art, and even operators using modern, well-controlled smoke houses can have problems from time to time. Common problems are invariably related to the way the smoke cycle is set up and managed:

- Uneven smoke colour is usually the result of insufficient or uneven drying of the product before smoking. 'Striped' patterns are due to condensate running over the product during smoking. Spotty or uneven patches are a result of moisture interfering with the uptake of smoke and can usually be remedied by increasing the drying time/temperature before smoking. Overloading the oven can also cause problems with airflows and lead to variable smoking and cooking outcomes. In certain instances, faulty equipment has also been found to cause uneven smoking, with airflow patterns, leaks and the like, allowing for cold spots in the oven.
- Products that are wrinkled or tough are invariably the consequence of over-drying before or during the smoking process.

5. Emulsion Products

To discuss problems including spoilage problems, colour problems, problems with texture or consistency, problems during cooking or smoking, contact your Dunninghams sales representative.

Try out these Butcher's Banquet Recipes

Easy Butcher's Banquet Grilled Chicken and Veggie Skewers

INGREDIENTS

- 1 pound boneless, skinless chicken breasts, cut into chunks
- Assorted vegetables, such as bell peppers, onions, and zucchini, cut into chunks
- Butcher's Banquet All Purpose Rub
- Olive oil
- Salt and pepper

INSTRUCTIONS

1. Prep Skewers: Soak wooden skewers in water for about 15-20 minutes to prevent them from burning on the grill.

2. Thread Ingredients: Thread the chicken and assorted vegetables onto the skewers, alternating between them.

3. Season: Brush the skewers with olive oil and sprinkle a generous amount of Butcher's Banquet All Purpose Rub over all sides of the chicken and vegetables. Sprinkle with a pinch of salt and pepper.

4. Preheat Grill: Preheat a grill or grill pan to medium-high heat.

5. Grill: Place the skewers on the preheated grill and cook for about 10-15 minutes, turning occasionally, until the chicken is cooked through and the vegetables are tender and slightly charred.

Serve: Remove the skewers from the grill and let them rest for a minute. Serve the grilled skewers as they are or with a simple side salad.

MIXING CHART
Dunninghams Cures

Cure	Usage
DMD CURE COLOURBRITE 4kg	Pumping pork 60g to 10l water Pumping beef 30g to 10l water Soaking brine 8g to 10l of water Small goods 30g to 50kg meat (finished product) Spray solution 400g to 10l of water
DMD CURE COLOURQUIK 1kg	For pumping 173g to 10l of water and pump to 15% Contains 6.3% Sodium nitrite on salt * Please note there are no permissions in the food standards code to add nitrites to fish products. * Not for use with unprocessed meat
DMD CURE 2580 SPECIAL 25kg	Mix 613g to 10l of water dissolve then add 1kg salt and dissolve or refer to pump chart * Premix contains 1.5% Sodium nitrite * Please note there are no permissions in the food standards code to add nitrite to fish products
DMD CURE COLOURQUIK SALINITE 12.5kg & 25kg	Add 1.2kg per 100l of water, refer to pumping chart. Contains 6.3% Sodium nitrite * Please note there are no permissions in the food standards code to add nitrite to fish products * Not for use with unprocessed meat
DMD CURE CORNED BEEF 5kg & 25kg	For a 20% pump above raw weight dissolve 1.1kg corned beef cure in 20l of water. After dissolving cure add salt 1.5kg (to your preference) sugar can be added if desired. Dissolve before pumping Premix contains sodium nitrite 1.7% * Please note there are no permissions in the food standards code to add nitrites to fish products
DMD DRY CURE 1kg & 5kg	Use 50g per kg of meat. Rub on to meat, place in a bag, vacuum seal or remove air from bag and seal. Leave in chiller for a minimum of 10 days. Once curing is complete remove from bag rinse with chilled water and dry. Product can be smoked if required. Product is now ready to cook and consume. Cure premix contains 0.26 Sodium nitrite. Please note there are no permissions in the food standards code to add nitrite to fish products
DMD HONEYDEW CURE 5kg & 25 kg	Recommendation for a 20% pump above raw weight dissolve 1kg Honeydew cure in 10l of water. After dissolving cure add salt 400g to 700g (to your preference) sugar can be added if desired, dissolve before pumping. Pump meat to 20% above raw weight. * Premix contains sodium nitrite 0.99%
DMD CURE PARRAGON 4X4 HAM 5kg	For a 60% pump above raw weight, dissolve 10.6kg cure in 47.4l of water. After dissolving cure, add salt 2kg (to your preference) sugar can be added if desired, dissolve before pumping. Pump meat to 60% above raw weight. Premix contains sodium nitrite 0.23% * Please note there are no permissions in the food standards code to add nitrite to fish products.
DMD CURE PARRAGON UNIVERSAL 5kg	For suggested usage refer to pump chart Contains 1.72% Sodium nitrite * Please note there are no permissions in the food standards code to add nitrite to fish products.
DMD CURE PASTRAMI 5kg	Dissolve 7kg pastrami cure in 45l of cold water. Pump to approximately 20% above raw weight of meat. Use in combination with pastrami rub Premix contains sodium nitrite 1.1%

Cure	Usage
DMD CURE PINEAPPLE 500g	Mix 500g of cure and 4.5kg salt with 45l of water to make 50kg/litres (optionally add sugar up to 2kg) Pump to 25% over raw weight. Premix contains sodium nitrite 6.4%
DMD CURE PREMIUM BACON AND HAM 20kg	For a 15% pump above raw weight dissolve 550g cure in 10l of water. After dissolving cure add salt 800g (to your Preference) sugar can be added if desired, dissolve before Pumping. * Please note there are no permissions in food standards codes to add nitrites to fish products
DMD CURE PREMIUM BRINE MIX 10kg & 25kg	For a 12% pump above raw weight dissolve 3.9kg cure in 50l of water. After dissolving cure, add salt 4.5kg (to your Preference) sugar can be added if desired, dissolve before Pumping. Pump meat to 12% above raw weight. Premix contains sodium nitrite 2.05% * Please note there are no permissions in food standards codes to add nitrites to fish products
DMD CURE PREMIUM INJECTAMIX 25kg	**% Pump** / **15%** / **25%** / **30%** Water (KG) / 100 / 100 / 100 Injectamix (KG) / 10 / 6 / 5 Sugar-Optional (KG) / 7 / 4.1 / 3.5 Salt (KG) / 13.7 / 8.1 / 7 To use this chart: select the pumping level required for your product. Prepare the brine according to the above chart, ensure the cure is completely dissolved before adding salt and sugar. Continue to mix until the salt and sugar has dissolved. Premix contains sodium nitrite 1.4% * Please note there are no permissions in food standards codes
DMD CURE MASSAGE MIX 20kg	Meat / 100 Massage mix / 20 Salt / 5 Water / 75 1. Using a large mincer plate, mince meat into chunks. 2. Tumble the meat with the salt until the meat becomes tacky (20 mins - 1 hour) while maintaining chill temperatures. 3. Blend massage mix with water to form a smooth slurry. Add This meat to the salt and tumble continuously or rest with Periods for 2 - 6 hours. Keep chilled at all times. 4. Fill into large moisture proof casings and cook to an internal Temperature of 71°C. 5. Cool and chill as quickly as possible.
DMD CURE SOAKING BRINE 12.5kg & 25kg	Mix 310g cure and 1kg salt with 10l of water, mix well and Soak. Premix contains sodium nitrite 3.0% * Please note there are no permissions in food standards codes to add nitrites to fish products
QI DURANT CURE PINEAPPLE 500g	For a 25% pump rate mix 500g pineapple cure with 450g salt and 45l cold water