

New solution for pathogen control increases shelf-life of RTE meats

by **Unitherm Food Systems Ltd, Unit 7, Connect 10, Foster Road, Ashford Business Park, Ashford, Kent, TN24 0SH, UK.**

To achieve the needed food safety and cooking efficiencies, many meat and poultry items such as hams, turkeys and chickens are today cooked in a pouch or bag, using water or steam, and then chilled.

However, when processors need to add colour, texture or flavourful seasonings to these items, in order to satisfy consumers' taste preferences, additional post processing is required. The question is, what is the best way to attain those desired effects and also maintain extended shelf life?

The answer for many processors today is a breakthrough technology that can roast, flavour, sear and colour meat and poultry, while also providing the needed surface pasteurisation to significantly extend shelf life – the 'tunnel of fire' pasteurising and flash roasting system.

Using the flame tunnel processors simply take the cooked and chilled whole poultry or meat products from the chiller and place them on a belt that moves the products through an enclosed flame that will colour, sear and surface-pasteurise the products so that they are ready for immediate packaging. Because of the speed of the process – normally 30-60 seconds – complete surface pasteurising and searing is achieved, yield loss is minimal and a long shelf life is ensured.

Flame tunnels such as Unitherm Food Systems' Tunnel of Fire also include a dispensing unit that sprays

browning and flavouring agents such as liquid smoke or other seasonings onto products as they enter the tunnel.

This allows the colour, texture and flavour of delectable products such as barbecue rotisserie-style chickens and honey-roast hams to be easily and consistently controlled.

Using this flash roasting and pasteurising process, finished products maintain their cool core temperatures, and can be immediately packaged for distribution. This eliminates food safety problems that can occur when products are cooled in the open air prior to packaging, which exposes them to cross contamination that can limit shelf life to a few days rather than weeks.

Shelf life of 40+ days

Roasted chicken, a perennial favourite all over the world, provides a good example of how the right flame roasting and pasteurising process and equipment can meet customers' taste preferences while also extending shelf life.

Comercializadora Andina SA (Comansa) of Santiago, Chile produces a line of foods sold to supermarkets, including chicken, beef and other meats, plus a ready meal line that is mainly provided for the Chilean School Feeding Program.

One of the company's primary products is roasted chicken, which is sold to supermarkets throughout the country at the rate of about 80,000 units per month.

Eduardo Carvajal, Comansa Operations Manager, says that providing these chickens in a rotisserie



Using the flame tunnel processors. Simply take the cooked and chilled whole poultry or meat products from the chiller and place them on a belt that moves the products through an enclosed flame that will colour, sear and surface-pasteurise the products so that they are ready for immediate packaging.

style and an assortment of seasonings has enhanced sales and also offers other benefits.

"We cook the chicken in bags in a steam tank for about three hours, then chill it in the same unit," he explains. "Afterwards we put the chicken through the Unitherm Tunnel of Fire to keep surface pasteurising, and get the colour and develop the seasonings. This is all done in just 30-35 seconds.

Using the flame tunnel provides important benefits besides the assurance that each chicken is exposed to the air for only seconds before it is surface pasteurised and put in retain bags immediately afterwards, ensuring that it will remain safe.

"The colouring process of the flame tunnel is very important because our customers prefer that finish rather than a plain white colour," he explains. "Also, the same equipment enables us to provide a variety of seasonings, including spicy, barbecue, butter and sweet flavours."

One of the most important benefits of the flame pasteurising process is the extended product shelf life. While many roasted chickens have a typical shelf life of about three days, Comansa's is considerably longer.

"After we ship the chicken, we are certain of a shelf life of 42 days, and that is an important reflection of our high standards" Eduardo added.

Speeding throughput

Luka Meats (Luka Vleeswarenfabriek NV), Vilvoorde, Belgium, has offered an elegant variety of cooked hams, including smoked, roasted, and extra lean hams as well as Strasbourg meat loaves since 1970.

Until recently, the hams and Strasbourg loaves were pasteurised, browned and seared by hand, using a hand-held torch, but handling 1,200 hams and 300-400 loaves per week was just too time consuming.

"We used to spend an average of two hours a day finishing these products by hand," says Thomas Leemans, Luka Meats founder and owner.

Recently, Luka Meats automated its pasteurising process with a Unitherm Tunnel of Fire flash roasting system. "This new equipment makes quite a difference in productivity," Thomas explains. "We now save approximately 60% of the time it used to require to brand our products by hand, as well as considerable labour." ■

