

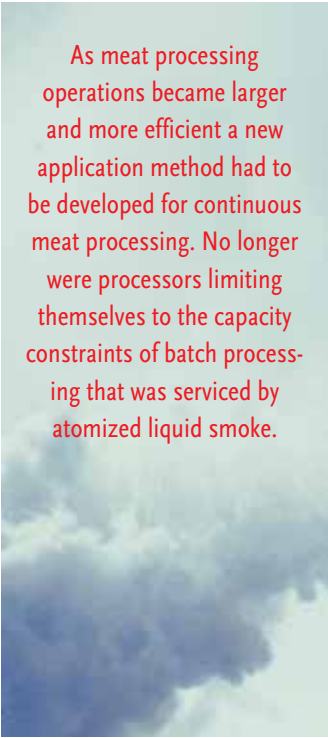
The Big Smoke

Smoke flavourings, as a more controllable, consistent process alternative to burning hardwood sawdust, has matured into a standard industry practice since its inception in the late '50s. As soon as the U.S. Food and Drug Administration (FDA) accepted aqueous smoke flavourings in 1960 and the Canadian Department of National Health and Welfare accepted them in 1966, a variety of industrial applications started to take shape. Governmental regulators recognized there were potential health risks associated with the tar and polycyclic aromatic hydrocarbons associated with direct smoking by wood burning. Liquid smoke flavourings were eventually written into federal regulations.

Initially, smoke flavourings were used internally to deliver flavour. But once topical applications could replace the smoking process industrial applications began to flourish. The process of high-pressure air atomization of smoke flavourings to regenerate a smoke cloud was the first wave of application technology to move through the meat industry. From the early '70s and through the '80s atomization was the method of choice for obtaining golden brown, smoke flavoured processed meat and poultry products.

From a regulatory perspective the U.S. FDA recognized the proliferation of smoke flavourings in general and their widespread usage and asked the Federation of the American Societies for Experimental Biology to review smoke flavourings. From its report, the U.S. FDA concluded that smoke flavourings that do not contain the tarry, resinous fraction wherein polycyclic aromatic hydrocarbons are found would be considered GRAS level 3. This meant no change in the use of smoke flavourings was required.

By this time smoke flavourings had expanded to include a wide range of carrier based products from maltodextrins, yeasts, oils and polysorbate 80. The U.S. Department of Agriculture/Food Safety and Inspection Service had begun to regulate smoke flavouring use via a positive list whereby



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product names and samples were submitted for approval. Before this practice was discontinued in 1991 the list contained over 500 discrete smoke flavourings or product names from three manufacturers.

As meat processing operations became larger and more efficient a new application method had to be developed for continuous meat processing. No longer were processors limiting themselves to the capacity constraints of batch processing that was serviced by atomized liquid smoke. Showering or drenching processes evolved with continuous ovens and by the late '80s many processors were large enough to receive liquid smoke in bulk tankers.

While North American meat processors were early adopters of smoke flavourings the international acceptance of smoke flavourings did not go unnoticed. The use of smoke flavourings by Japanese meat processors was initiated as early as 1975. In Europe individual countries began to accept smoke flavourings in the mid-80s. In the EU, a

codified regulation in the European Parliament and Council 2065/2003 sets a formal process of approval for smoke flavourings in member countries.

This process requires a complete dossier to be submitted on each primary condensate that will be allowed as a base material for smoke flavourings in the future. Issues that must be addressed are toxicology, chemistry, usage levels, composition, batch variability and manufacturing methods. While the process is burdensome for manufacturers, these final dossiers should validate definitively what manufacturers have been advocating for years about the safety and efficacy of use of smoke flavourings both as a replacement for the smoking process and one of the most widely used flavourings in the world.

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