



Breaking News on Industrial Baking & Snacks

Bakers slash salt with 'micro' salt particles

By Elaine Watson, 26-Mar-2010

Related topics: Ingredients and additives

Loaves with "astonishingly low levels of salt" could hit supermarket shelves early next year as the UK's leading plant bakers launch the first products containing microscopic salt crystals from Nottingham-based firm Eminate, reports our sister title *Food Manufacture*.

The bakers have all completed technical trials in which they were able to slash salt by more than half (from 1.8 per cent to 0.7 per cent), with the potential to go down as low as 0.5 per cent without impacting volume, texture or weight, claimed Eminate technical director Dr Stephen Minter.

It is well-known that the smaller the crystals, the higher the salt perception, said Minter, who was speaking at the Food and Drink Federation's Biscuit, Cake, Chocolate and Confectionery conference on Friday.

However, simply grinding salt to make the particles smaller did not work as the smaller the particles, the more hygroscopic they became, he said. *"They lose their free-flowing properties and stick together."*

By contrast, Eminate's 'SodaLo' salt had been engineered using patent-pending technology that changes the structure of salt crystals to create free-flowing, microscopic hollow balls, with the consistency of talc and a shelf-life of 18 months, he said.

At 5-10 microns, they were a fraction of the size of standard salt (c.200-500 microns), and delivered an intense, salty hit on the taste buds. While particles this size were moving into the realms of nanotechnology, they dissolved on the tongue so did not present any risk, he explained.

Trials have been conducted by manufacturers in sausages, crisps, sauces and bread, with soups and bakery premixes to follow, said Minter. *"We have a water-soluble and an oil-soluble version and we have also been experimenting with encapsulating flavours, colours and bioactives such as pharmaceuticals within the balls."*

Results in plant bread were particularly exciting as bakers had also achieved significant increases in shelf-life as the tiny salt crystals cross-linked gluten in dough more effectively, helping to retain moisture, he said. *"If you look at the structure using a scanning electron micrograph, you can see that SodaLo is very evenly distributed throughout the loaf."*

The bakers' biggest concern was that yeast would not be controlled and the dough would expand too quickly or it would become too sticky and clog up their machinery. But it didn't. The end product also has the same structure, texture, weight and volume as the original."

Eminate had also conducted trials with bakers to reduce sodium in cakes by 50 per cent, he said. *"We did the same to sodium bicarbonate as we did with sodium chloride, and achieved very similar results."*

While SodaLo was more expensive than salt, it was competitively priced compared with other salt replacers, claimed Minter. Its clean-label status (it can be listed as 'salt' on labels) also appealed to customers, he said. *"People don't want to use potassium chloride, flavour enhancers, nucleic acid, yeast extracts and peptides. This is just salt, only smaller."*

Copyright - Unless otherwise stated all contents of this web site are © 2000/2010 - Decision News Media SAS - All Rights Reserved - For permission to reproduce any contents of this web site, please email our Syndication department: Administration & Finance - Full details for the use of materials on this site can be found in the Terms & Conditions

© 2000/2010 - Decision News Media SAS - All right reserved. **Decisionnewsmedia**