

Salt reduction with sodium chloride

VARIOUS EUROPEAN COUNTRIES ARE MORE OR LESS STRONGLY ENFORCING A REDUCTION IN DAILY SALT INTAKE, SOME THROUGH REDUCTION IN QUANTITY, SOME THROUGH SUBSTITUTES. TATE&LYLE IS BRINGING THE POSSIBILITY OF SODIUM CHLORIDE POWDER INTO PLAY



+ The discussion around salt in bread is coming to the fore again. The topic is currently at a turning point. Consumer protectionists above all now reject a calculation based on dry matter or quantity of flour. They demand a measurement of the final product's actual salt content. What makes the reduction in salt content so problematical is the fact that as a rule all the substitutes offered up to now introduce an aftertaste or foreign taste into the bread.

So it was appropriate that Tate & Lyle PLC, London, UK, presented at the Health Ingredients Europe trade fair in Frankfurt, Germany, in November 2012 a product that helps reduce the amount of salt in the recipe but at the same time tastes exactly like sodium chloride because that's exactly what it is: sodium chloride. The interesting aspect is that the crystalline powder produced by Tate&Lyle, formerly an English sugar group whose founder Henry Tate brought cube sugar into the United Kingdom and which is today an internationally active raw materials manufacturer, involves tiny hollow shapes made of sodium chloride. In a special process, now patented, a sodium chloride solution mixed with a small amount of gum Arabic is spray-dried. This gives the free-flowing crystals a larger surface area, thus creating a stronger perception of salt on the tongue. According to Tate & Lyle the product, which is called "Soda-Lo", is very suitable for use in products in which the water is bound by starch or hydrocolloids, e.g. in doughs. Because the crystals are so small, they also distribute themselves very well in the dough. "We have been able to reduce salt levels by 25–50% in baked foods and salty snacks," Dr. Andrew Hoffman, Director of Health and Wellness Innovation at Tate & Lyle, said in a press release.

Reducing the daily salt intake of Europeans is no longer at topic of debate, and has been a well-defined political aim

for a long time. Several EU countries have already implemented the stepwise reduction in salt in processed foods such as bread in the context of the "WHO European Action Plan for Food and Nutrition Policy 2007–2012". Portugal was the first EU country to fix a statutory limit for the salt content of bread on 12th August 2010: if bread that contains more than 1.4 g of common salt per 100 g of finished product is sold, a fine of up to EUR 5,000 can be imposed. Portugal is the front runner in salt consumption in the EU. Average daily intake in the country is 11.9 g of salt. There is also a limit value for the amount of salt in bread in the Netherlands: on a voluntary basis from 1st January 2013 onwards it is 1.8 g (at first it was 2.1 g) relative to dry matter; and the plan is to reduce the limit value further. Fines will also be payable in the Netherlands if the limit value is exceeded. In their "less salt is healthier" campaign with the Ministry of Health, Austrian bakers are voluntarily implementing a stepwise reduction in salt in bread and baked goods by 2015. The intention in Austria is to reduce the salt content within five years from the 2% mostly used nowadays to 1.7% (relative to 1 kg of flour). A salt reduction program was already introduced in Great Britain in 2003. In Finland, according to a regulation of December 2007, the salt content in bread and certain other foods must even be indicated on the package if it exceeds the recommended value. Germany is the only country in which there is so far no action plan to reduce the population's salt intake. At the same time, scientists proved long ago that it is possible to manufacture bread with an excellent flavour even with a reduced salt content of 1–1.2% calculated on the amount of flour, the only proviso being that one must understand one's profession. +++

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