

Information for the Press

Alphamalt Fresh keeps bread fresh longer

Mühlchemie offers a new enzyme preparation that keeps the crumb soft and elastic – Quality demands of the trade and consumers are increasing – Fewer returns of stale products make industrial bakeries more profitable.

Ahrensburg, 2nd April 12. The flour treatment specialist Mühlchemie has developed a new enzyme preparation capable of prolonging the shelf-life of industrially produced bread by up to 15 days. Alphamalt Fresh prevents recrystallization of the starch which has gelatinized during baking and thus keeps the crumb soft for a longer period. This reduces the amount of bread that becomes stale.

Consumers want food to be fresh, and the trade endeavours to meet this demand by ensuring a long shelf-life at consistent quality. In the case of bakery products the decisive attributes are appearance, taste, smell and crispness of the crust, but a further important aspect of quality is the elasticity and softness of the crumb. Since the structure of baked goods changes over time, it becomes harder during transportation and storage. The main reason for this is recrystallization of the amylopectin content of the starch that has gelatinized in the baking process.

Whereas the smaller amylose molecules migrate out of the starch grain into its surroundings and re-crystallize soon after baking, the larger amylopectin molecules initially remain in their non-crystalline form. At low temperatures, especially, the amylopectin crystallizes;

Editor:
Mühlchemie GmbH & Co. KG
Nicole Schulze (Marketing)
Kurt-Fischer-Straße 55
D-22926 Ahrensburg
E-Mail:
nschulze@muehlenchemie.de

Press Office:
Public Relations v. Hoyningen-
Huene
Heimhuder Straße 79
D-20148 Hamburg
Marc v. Bandemer
Tel: ++49 40 41 62 08-17
E-Mail: mvb@prvvh.de

above all, the coiled parts of the molecule “tighten up” again. The subsequent hardening of the crumb is ascribed to the firm binding of water by the crystallized amylopectin.

Alphamalt Fresh breaks down the parts of the amylopectin that can crystallize. Moreover the resulting short-chain dextrans are able to interact with the remaining coiled structures of the starch and thus inhibit its crystallization. If Alphamalt Fresh is combined with emulsifiers or enzymes that optimize the volume of the bread and the bread structure as it appears immediately after baking, an even longer shelf-life of up to three weeks can be achieved.

Prolonging the shelf-life of baked goods can increase the profitability of an industrial bakery, since it meets the demands of the trade for high-quality but durable bread and reduces the return of products that have gone stale.

About Mühlenchemie

Mühlenchemie GmbH & Co. KG is one of the world’s most prominent companies in the flour treatment industry. Its core competence lies in solutions for flour standardization, flour improvement and flour fortification – from classic flour treatment to concentrates for ready-mixed flours. Mühlenchemie exports its products to over 120 countries and maintains close partnerships with more than 1,000 mills around the globe. Through the foreign affiliates in Mexico, Singapore, India, China, Russia and Brazil a team of experts supports mills on the spot and offers individual solutions to ensure optimum flour quality. For this, Mühlenchemie has developed enzyme systems, flour maturing and oxidizing agents, bromate replacers, emulsifiers, vitamin and mineral premixes and functional systems for ready-mixed and composite flours. Mühlenchemie improves and fortifies over 70 million tons of wheat a year. At the Technology Centre in Ahrensburg, near Hamburg, a team of research scientists and applications technologists works on innovations for the future. It is here that pioneering solutions in the field of enzyme technology are devised for bread and other baked goods. They include the well-known enzyme preparations Alphamalt, Powerzym, Sternzym, Pastazym and Tigerzym. The company was established in 1923 and has been a member of the Stern-Wywiol Gruppe since 1990. Volkmar Wywiol, Mühlenchemie’s managing director and the founder of the Stern-Wywiol Gruppe, achieved the award of “Entrepreneur of the Year – Finalist” in 2009, 2010 and 2011. The prize is awarded in 50 countries each year by the auditors and business consultants Ernst & Young.

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Public Relations v. Hoyningen-Huene
Heimhuder Straße 79
20148 Hamburg
Editor in charge: Marc von Bandemer, tel. +49 40 41 62 08-17, mvb@prvhh.de

For further information please contact:

Mühlenchemie GmbH & Co. KG
Nicole Schulze (Marketing)
Kurt-Fischer-Straße 55
22926 Ahrensburg/Germany
E-mail: nschulze@muehlenchemie.de

Published by:

Mühlenchemie GmbH & Co. KG
Nicole Schulze (Marketing)
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D-22926 Ahrensburg
E-mail:
nschulze@muehlenchemie.de

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