

TopBake Fresh

Optimizes the shelf-life and profitability of bakery products

What counts is the shelf-life

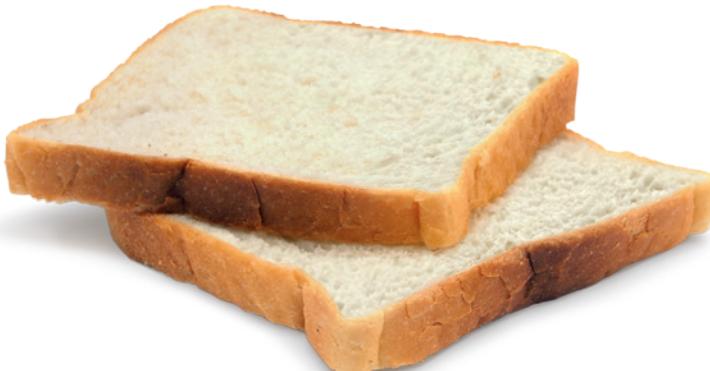
The shelf-life of wrapped bread plays an extremely important role in industrial baking.

Consumers have a simple way of judging the texture of bread – they feel and press it. In other words: the freshness and elasticity of the crumb are decisive purchase criteria. Good quality bread that is pleasantly fresh will be chosen even days after production.

That means the “best before” date and the service intervals for the shelves can be extended, and there is less return of bread that has gone stale.

At our trial bakery we test the shelf-life of bread sensorily and by means of an instrument. In the tasting process the decisive quality attributes are mouth feel and bite. The instrument used is the Texture Analyser, with which we rate the softness, elasticity and resilience of the crumb as a function of the length of storage (see Fig. 1).

By using TopBake Fresh it is possible to achieve a significant improvement in the elasticity of the crumb after 7 days; this even exceeds the effect of emulsifiers (glycerol monostearate, GMS).



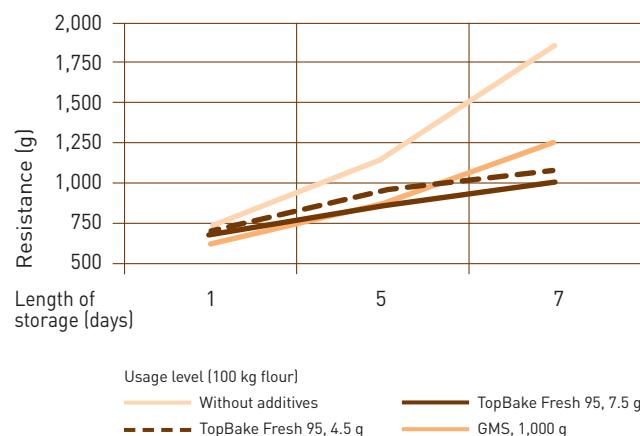
TopBake Fresh

- ... can be used for numerous baking applications
- ... is available in different concentrations
- ... is also part of our range for certified organic products

Economic aspects of TopBake Fresh

- Prolongs the shelf-life, especially of packed bakery products
- Reduces the return of goods that have gone stale
- Lengthens the service intervals for the shelves
- Quality attribute to promote your brand
- Fewer end products thrown away by consumers
- Reduces the carbon footprint

Fig. 1: Reduction of bread staling (prolongation of crumb softness) with TopBake Fresh 95 and monoglycerides (GMS)



Functional properties of TopBake Fresh

- Prolongs the shelf-life
- Keeps the crumb soft and elastic during storage
- Has no negative effect on dough properties
- High dosage tolerance
- Can be combined with other enzyme preparations without the risk of over-treatment

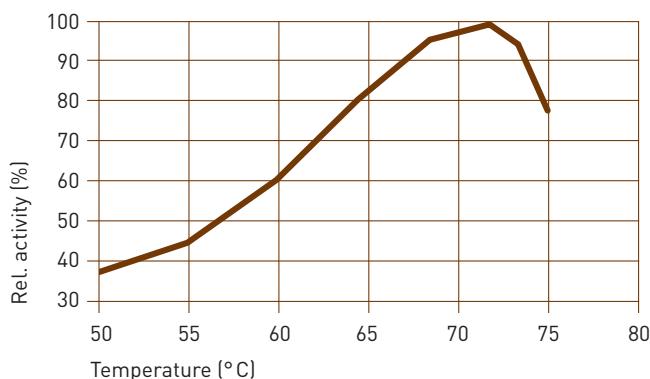


How TopBake Fresh works

Staling of bread is caused by solidification of the starch previously gelatinized by heat in the baking process. During baking the starch initially creates the structure necessary for crumb formation and gas retention, but during storage it re-crystallizes and binds water very firmly. Because of this the products lose their succulence and elasticity.

TopBake Fresh prevents these processes through specific enzymatic breakdown of the starch, in particular its amylopectin content. This is achieved by selecting bacterial amylases with moderate heat stability that reach their optimum activity after gelatinization of the starch (Fig. 2). The dextrins formed also interact with the starch and thus prevent re-crystallization.

Fig. 2: Temperature-activity curve



Optimum bread quality can be achieved by combining TopBake Fresh with other DeutscheBack products. In our TopBake Fresh Organic range we also offer enzymes for use in certified organic products.

Examples of usage levels

• TopBake Fresh 15	40–70 g to 100 kg flour
• TopBake Fresh 15 Organic	550–100 g to 100 kg flour
• TopBake Fresh 23	20–50 g to 100 kg flour
• TopBake Fresh 95	4–12 g to 100 kg flour
• TopBake Fresh 110	2–8 g to 100 kg flour

Composition

- Enzymes
- Carrier: thermally treated wheat flour

Processing

TopBake Fresh has no effect on processing methods.

