



Clean Label

Declaration friendly Baking Solutions

Clean label, lean label, organic products,
Bakery premixes, ingredients and enzyme systems



Consumers know what they want: fewer additives

The trend towards a healthy, natural diet and unadulterated food has been increasing for years. This is reflected not only in steadily rising sales of "organic" products from certified organic farming but also in demands by consumers and consumer organizations for a reduction of additives in packaged foods. The label declaration "free of" or "no added ..." is associated by consumers with superior quality and healthier foods.

But this "clean label" trend is not governed by legal regulations; it simply follows the motto that a product should only contain ingredients that are used in one's kitchen at home or are of natural origin.

The fact that bread, cake, biscuits or other foods produced by consumers themselves do not need long shelf-lives or have to travel long distances presents the food industry with new challenges.

Not all additives can simply be left out or replaced with "grandma's ingredients". For industrially produced foods have to meet certain requirements in order to ensure the necessary processing characteristics and the accustomed nutritional and enjoyment value, sensory properties or minimum shelf-life.

Our approach: natural or tried-and-tested alternatives

The search for alternatives started some time ago in Europe, notably in the UK, and the trend is now spreading to other regions of the world. DeutscheBack has taken up this subject in cooperation with its customers and developed "clean label" or "lean label" products for a number of different fields. DeutscheBack supplies raw materials for baking and ingredients to help our customers develop recipes free of E numbers and organic products.

Bakery premixes

Bakery premixes for the taste of pure bread

The bakery premixes are products for direct processing in various applications in which emulsifiers are undesirable. These products contain ascorbic acid because its functionality is difficult to replace and

consumers have accepted it in the past. Moreover, since ascorbic acid is used as an auxiliary substance in flour standardization it is not necessary to declare it on consumer packs. No further additives are used.

Product	Effect/purpose	Usage level
TopBake Rolls Pure	Concentrate for the production of bread rolls	1–3 %
TopBake Wheat Pure	Concentrate for the production of wheat and mixed wheat bread	1–4 %
TopBake Rye Pure	Concentrate for the production of rye and mixed rye bread with a natural source of acidity	3–5 %
TopBake Wheat and Rye Pure	Concentrate for the production of mixed wheat and rye bread	1–4 %
TopBake Brioche Pure	Concentrate for the production of recipes rich in fat and sugar	2 %
TopBake Special Pure	Concentrate for the production of wholemeal and bran bread	2 %

Bakery premixes for freezing

A further trend DeutscheBack is observing internationally is the industrial production of dough portions which are transported in a frozen condition and baked freshly on the spot. This method is being used more and more by supermarkets, filling stations and restaurants.

Both the freezing process and retarded fermentation make specific demands on the structure of the dough.

The TopBake Frozen product series was created specially for longer-term freezing and stabilizing of dough portions.

Product	Effect/purpose	Usage level
TopBake Frozen Roll	Concentrate for the production of bread-roll dough portions for freezing	1 %
TopBake Frozen Baguette	Concentrate for the production of baguette dough portions for freezing	1 %
TopSweet Frozen Croissant	Concentrate for the production of croissants and Danish pastries for freezing	1–1,5 %



Enzyme systems

Fresh crumb

The products from the Mulgazym SFX series make the crumb of sandwich loaves and hamburger buns especially tender, ensure a soft, elastic crust and keep the bread fresh longer.

Better stability, volume and texture

The Mulgazym DFX- and Sternzym EFX series was developed to enhance stability, volume and crumb texture. So it is especially suitable for products intended to have a crisp crust.

Fine texture, optimum volume

Sternzym EFX Swift is the ideal product for producing bread and rolls with a finer texture and good volume. It is used "on top", in addition to the usual treatment.

Larger volume with strong flours

Sternzym BE 22000 is a system for increasing volume when strong flours of different qualities are used in a diversity of bakery products. Sternzym BE 22000 makes it possible to produce good quality loaves even from flours with falling numbers over 500 seconds.

Fresh and succulent

Sternzym Fresh is available specially for packaged bread. It delays staling and keeps the crumb succulent and fresh much longer. This reduces the return of stale products from supermarkets because consumers still buy the goods days after the production date. Consumers will also find the bread remains pleasant to eat much longer at home. In this series we offer an additional variant that can be used in organic foods under the organic products regulations (Sternzym Fresh 15 Organic).

Product	Effect/purpose	Usage level / 100 kg flour
Mulgazym SFX 15 Mulgazym SFX 21	Increases the succulence and shelf-life of sandwich loaves and hamburger buns	20 – 70 g 2 – 10 g
Mulgazym DFX	Emulsifying properties with regards to stability and volume of wheat bread and rolls	5 – 20 g
Sternzym EFX Mega 0,5 % Sternzym EFX Mega	Improves the stability and volume of wheat bread and rolls, even with retarded fermentation	100 – 500 g 1 – 5 g
Sternzym EFX Swift	As "on top" treatment for a finer texture and larger volume of bread and rolls	0,5 – 5 g
Sternzym BE 22000	Increases volume with normal and strong flours with falling numbers of up to 500 seconds	10 – 30 g
Sternzym Fresh 15 Sternzym Fresh 65 Sternzym Fresh 95	Enhances the succulence of the crumb, helps to prevent recrystallization/staling	20 – 70 g 2 – 7 g 2 – 7 g



Raw materials

Label-friendly raw materials and ingredients for baking

Besides enzyme systems, DeutscheBack supplies a number of raw materials that can be used in the development of label-friendly recipes.

Better water binding

TopBake WA Pure ensures excellent water absorption of the dough and thus increases water binding in the end product. In this way the crumb becomes succulent and dries out less rapidly. 5–10% more water can be added to bread and rolls; this offers ecological advantages as well as enhancing the sensory properties. TopBake WA Pure can be used as a 1:1 substitute for guar gum powder.

Greater dough stability

TopBake C is a vital wheat gluten that strengthens the protein structure and thus improves the stability of the dough. It optimizes both fermentation tolerance and the volume yield.

Natural vitamin C

An acerola fruit powder with a high natural ascorbic acid content can be used in applications where pure ascorbic acid is undesirable. Our ELCO AF Natural 19 has an ascorbic acid content of 17–19%.

Attractive colour for crust and crumb

The barley malt products EMCEmalt and EMCEmalt Dark can be used to optimize the colour of crust and crumb. Enzyme-active EMCEmalt improves volume and crust colour with low-enzyme flours. Roasted EMCEmalt Dark intensifies the colour of the crumb and the flavour.

Optimum dough extensibility

With excessively strong flours, the inactivated yeast EMCERelax 400 with its high level of natural L-cysteine (present in glutathione) can increase the extensibility of the dough.

Bright crumb

The enzyme-active SOYnovo soy flours help to brighten and enhance the texture of the crumb. They also stabilize the dough.

Product	Effect/purpose	Usage level
TopBake WA Pure	Increases water addition and thus the freshness and elasticity of the crumb; can be used as a substitute for guar gum powder	0,2 – 1 %
TopBake C	Vital wheat gluten increases dough stability, fermentation tolerance and volume yield	1 – 3 %
ELCO AF Natural 19	Acerola fruit powder as natural ascorbic acid	0,02 – 0,04 %
EMCEmalt	Enzyme-active barley malt enhances volume, crust colour and flavour with low-enzyme flours	0,1 – 2 %
EMCEmalt Dark	Roasted barley malt, enhances crumb and crust colour and the flavour	0,1 – 2 %
EMCERelax 400	Inactivated yeast softens the gluten and promotes dough extensibility	0,1 – 0,2 %
SOYnovo VES/EAS	Enzyme-active soy flour for brightening the crumb, stabilizing the dough and enhancing the texture	0,1 – 0,5 %

Enzyme systems for organic products

Declaration friendly baking raw materials and ingredients

According to the organic products regulations, organic foods may only contain enzymes derived from organisms which are not genetically modified. Many of our enzyme systems meet this requirement. This series comprises both products for basic treatment and such that optimize flour or adjust products or processes in the organic food sector.



Volume and crumb

The amylases of the Sternzym A series increase baked volume and ensure a soft crumb. They are available in different concentrations. Sternzym Fresh 15 Organic contains amylases intended specially for packaged bread, since they prolong the softness of the crumb.

Stability, volume, bright crumb

The use of hemicellulases such as Sternzym H 8043 in bread and rolls is recognizable by the very fine texture they create. The use of esterases like Sternzym EFX 22050 ensures stable doughs, excellent baked volume, a fine texture and a brighter crumb.

Less cracking and breakage

Proteases relax the dough and can increase its extensibility in biscuits and crackers. With Sternzym BK 5020 there is less cracking and breakage of the end products; this enhances the appearance of the goods and reduces the proportion of rejects.

Greater efficiency

Sternzym LQ 4020 is optimally adjusted to the production of wafers. The rapid reduction of batter viscosity, which may mean that less additional water is needed, helps to cut production costs. Further advantages are homogeneous wafers, optimum spreading of the batter on the irons, fewer broken wafers and a higher yield of flat wafers.

More oven rise after freezing

The glucoamylase Sternzym GA 5071 forms glucose out of starch, thus providing nutrition for the yeast. This increases oven rise when low-enzyme flours are used. Browning is intensified and the flavour of the end product enhanced. In some cases it is possible to reduce the amount of sugar added without affecting the activity of the yeast.

Stronger gluten protein

Use of the glucose oxidase Sternzym Gloxy 21087 strengthens the protein of the gluten, which helps to optimize weak flours. This is especially useful with freezing or retarded fermentation. The dough surfaces are also drier, which improves machinability.

Better browning

A further product capable of optimizing flours for organic products is Betamalt 25 FBD. Obtained from barley, this enzyme product rich in β -amylase lowers the falling number and intensifies browning and flavour in bread and rolls.





Product	Effect/purpose	Usage level /100 kg flour
Sternzym Fresh 15 Organic	Amylases to prolong the shelf-life of the crumb; helps to prevent recrystallization/staling	30 – 100 g
Sternzym A 4050	Amylase for increased volume yield, enhanced browning and a softer crumb with a longer shelf-life in bread and rolls	1 – 5 g
Sternzym A 5070	Amylase for increased volume yield, enhanced browning and a softer crumb with a longer shelf-life in bread and rolls	0,2 – 2 g
Sternzym A 7010	Amylase for increased volume yield, enhanced browning and a softer crumb with a longer shelf-life in bread and rolls	0,1 – 1 g
Sternzym EFX 22050	Esterase creates a finer crumb structure and brightens the crumb of bread and rolls	2 – 7 g
Sternzym H 8043	Hemicellulase to enhance the texture of the crumb and optimize the baked volume of bread and rolls	5 – 17 g
Sternzym BK 5020	Protease for dough softening; increases extensibility and prevents cracking of biscuits and crackers	50 – 70 g
Sternzym LQ 4020	Protease for rapid viscosity reduction in wafer batters; improves the homogeneity of the wafers and reduces breakage	20 – 50 g
Sternzym GA 5071	Glucoamylase provides nourishment for the yeast, increases oven rise after freezing, enhances browning and flavour and reduces the addition of sugar	0,2 – 5 g
Sternzym Gloxy 21087	Glucose oxidase strengthens the gluten protein, dries the surfaces of the dough and strengthens doughs in the over-fermentation process	5 – 20 g
Betamalt 25 FBD	Vegetable amylase preparation with a large proportion of β -amylase; lowers the falling number of strong flours, enhances browning and flavour	10 – 50 g



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