



BREAD IMPROVERS

The Taste, The Difference...



RINA
BRC Global Standard - Food
Certified Food Product





Your Reliable Partner For Flour Improvement

The Polen Group has reached its target of creating a diverse and qualified product range that meets all requirements of the bakery and pastry sector with the production of flour and bread improvers, pastry mixtures, industrial sauces and chocolate products for more than 20 years. Approaching its customers as a solution partner and going beyond only merely being a supplier, Polen continues to grow by gaining the trust of the market and increasing its brand visibility. Always reaping the benefits of efforts to combine the dynamism of their expert, qualified and young team with technical know-how and a quality-focused approach, the Polen Group performs all its R&D activities at its state-of-the-art R&D Center approved by the Turkish Ministry of Science, Industry and Technology.

In 2016, it joined forces with the Martin Braun Group, a subsidiary of the Oetker Group which incorporates many leading companies in the sector.

Today, the Polen Group, empowered by almost 300 employees, performs manufacturing activities for a product range of more than 800 products in a closed area of 30,000 m² at its Istanbul-Es-enyurt, Çorlu-ASB and Çorlu-Türkgücü facilities, which boast a production capacity of more than 90,000 metric tons and stand out with their BRC certificates in line with the HACCP principles and the highest quality standards.

With its innovative products and efficient marketing strategies at home, it has taken place among the leading market companies. Exporting its products and services to more than 60 countries, the Polen Group continues its fast and steady growth in global markets.

Understanding the needs of the market, producers and consumers, and being a business partner who speaks the same language with them that produces solutions in every field has been one of the most important values upheld by Polen since day one. With the cutting-edge solutions of a dynamic young engineer team at its R&D Center, a strong and global network of collaborations and a wide range of products, Polen can provide you with “Flavors that Make a Difference.”



Not Only Products, “Solutions”

As far as we do not produce only products but solutions, we invest every year our turnover mostly in R&D. Like few companies in the world, the 30% of Polen Food's employees are food scientists/engineers, not only in the R&D but in the production, sales and management departments too. We are passionate for the sector we are working in and wheat, flour, bread and ingredients are our daily words for a job that we are enthusiastic for.

Polen Food is aware that the wheat quality changes every year so, we collect, analyze and list samples of wheat from each region and for every single harvest; therefore we are able to support our millers in wheat purchasing strategy and in milling technology adjustment. By this we are also capable of predicting the future flour quality and of formulating the best flour improvement solutions accordingly.

Every day we analyze 30 samples of flour and wheat from domestic and overseas market. Every month we conduct more than 500 bread trials in our application laboratory. Thanks to this innovation mind-set and to our daily efforts for the full satisfaction of our worldwide customers we developed a database with more than 1.000 improver formulations.



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Our Laboratories

With the aim of developing the best improvers and supporting our customers, we constantly make investments in the most modern and precise flour analysis instruments for our laboratories

Flour testing methods in our analysis laboratory:

- Moisture
- Falling number
- Fungal Falling Number
- Wet gluten
- Gluten index
- Zeleny Sedimentation
- Farinograph
- Extensograph
- Alveo-Consistograph
- Reo-Fermentometer
- Mixolab
- Starch damage
- Bug damage determination





Application Laboratories

We believe that improvers are not just a matter of flour rheological parameters correction. For this reason we confirm each obtained result in the analysis laboratory through our application trials.

After several years of studies, experience and after plenty of technical visits around our international customers we have developed product processes for each type of baking goods.

When making application trials we do consider different variables. Technical ones such as product recipe, level of process automation and sort of oven, as well as geographical ones like temperature and humidity conditions of the country. Thanks to our wide range of equipment we are able to realize application tests for different kind of products and processes such as frozen dough, par-baked breads, controlled fermentation dough, laminated products, flat bread, loafs and buns.

Moreover, in the facilities of our industrial customers we have the possibility of making on-line and start up industrial trials for improvers that will be used in fully automated lines.





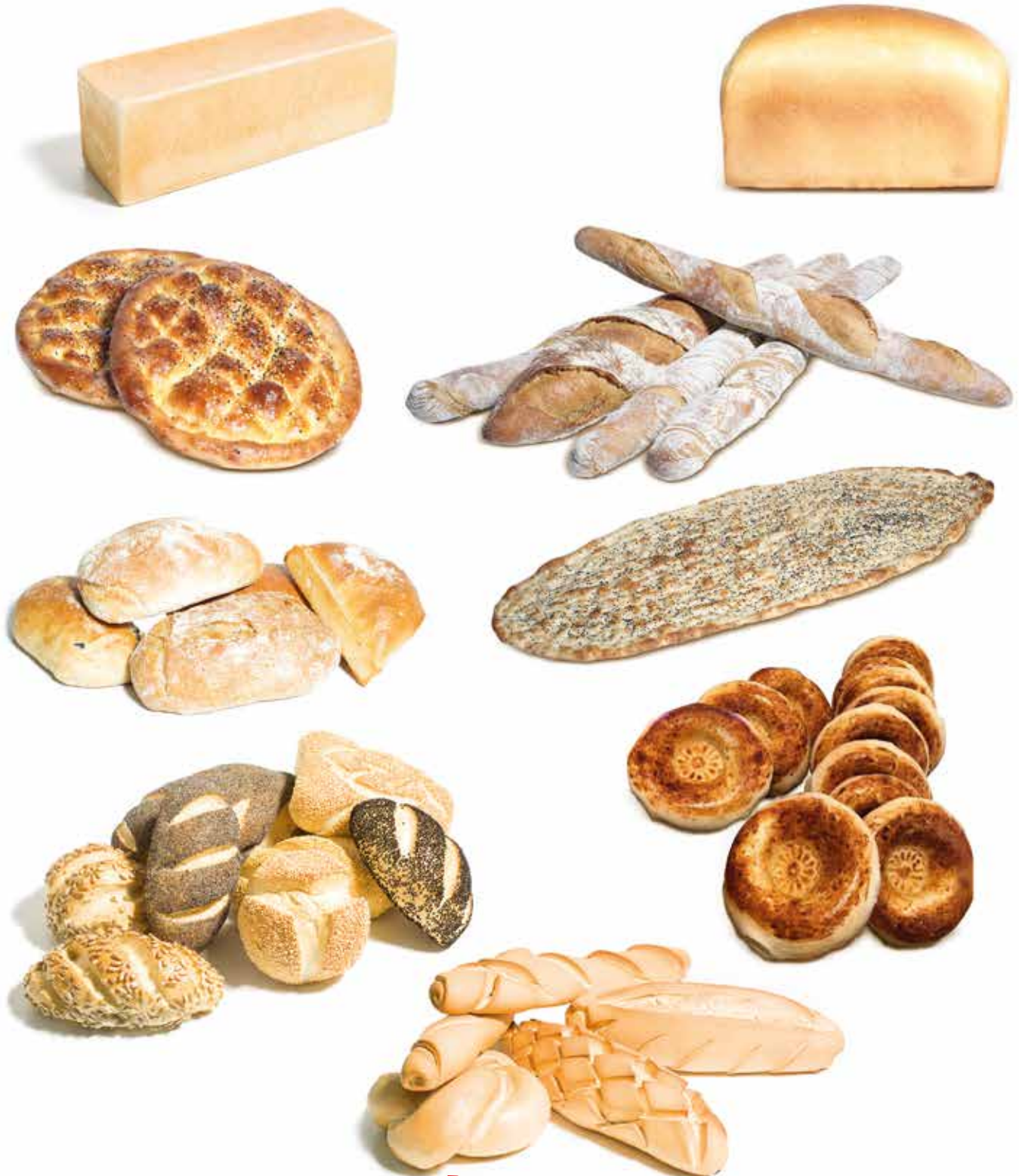
World Bread

“**A world of improvers**” is what we say to our customers. Polen Food develops different enzymes combinations to obtain proper quality flours for all kind of breads and supports its customers in over 60 countries.





World Bread





Croissant

Croissants are difficult to produce due to their high fat content and the processing conditions. Quality fluctuations in flour and the key raw materials used in the production process, can make producing croissants even more difficult.

Croissants are produced in two different ways, either an industrial or artisan . Special preservatives and shelf-life enhancers are used to extend the shelf life of products that are sold in package.

A croissant must have;

- high volume
- a crispy texture
- distinct layers
- non-homogeneous spider web-like pores in the artisan products.

Mass-produced croissants are expected to be smaller in volume and have more dense pores than artisan products.

With its package solutions, Polen Food guarantees you best croissant for your special requirements.

Product Name	Improvement	Dosage
Vizyon Croissant Improver (Artisan) Vizyon Croissant Improver (Industrial)	<ul style="list-style-type: none"> • Volume • Distinct layers • A crispy texture • A spider web-like interior texture 	2%





Flat Bread

The bakery experts say that despite what it would look like, the hardest breads to improve are not the toast, baguette or buns but flat ones. Improving the flour for the right extensibility, keeping a good final color of the bread without renouncing to its softness or sometimes crunchiness (according to the bread), avoiding the chewiness and guarantying its freshness during 2-3 days after baking is something that few companies are able to do.

The successful story, in different countries, of our improvers for flat breads such as Lavash, Pita, Sangak, Berberi, Chapatti, Parotta and Tortillas makes us say that Polen Food is for sure one of those few companies.

Product Name	Improvement	Dosage
Vizyon Anatolia 100	<ul style="list-style-type: none"> • Optimized enzymatic activity • Optimum dough stability • Crumble-proof 	100-200 g / 100 kg
Vizyon P50	<ul style="list-style-type: none"> • Softness that lasts until the next day • Increased bread volume • Perfect crust color 	50-100 g / 100 kg





Pizza

Concerning the pizza dough, various factors affect the consistency, how well it cooks and even the taste of the pizza such as:

- the type of flour used and the gluten amount
- the fermentation method and time
- how the dough is spread.

When assessing the quality of a pizza, the final factor is the dough. The dough used must be smooth and spreadable. The crust must be done to perfection to be crispy and brown while the materials on it must be well-cooked, soft and easily chewable and the pizza must be sturdy enough to house the ingredients.

Both the top and bottom of the pizza must be homogeneously well-cooked. Pizzas are made using both thin and thick dough depending on the production process and the recipe. Besides, artisan-produced and mass-produced pizzas also show variations.

You can make the perfect pizza dough with package solutions tailored to your line.

Product Name	Improvement	Dosage
Vizyon Pizza SD (Artisan) Vizyon Pizza SD (Industrial)	<ul style="list-style-type: none"> • It makes the dough more easy to spread • It improves dough stability • It helps the pizza to cook thoroughly • It improves the eating experience it helps • The pizza host its ingredients. 	1%





Tortilla

It is a popular fast-food product ever consumed with more fervor. It is also rising in popularity in luxurious restaurants that offer meat dishes, and not just fast-food outlets.

What to look for in a tortilla:

- no bubbles on the product
- no signs of drying and crumbles when it is wrapped up with ingredients
- no sticking between layers in packaging
- short texture that allows easy eating

It is now easier than ever to make the perfect tortilla.

Product Name	Improvement	Dosage
Vizyon 6000 T Vizyon 6000 U	<ul style="list-style-type: none"> • Prevents the formation of spots on the end product. • Increases processing tolerance. • Makes the end product crumble-free and dry-proof in frozen processes. • Eliminates the drying of the crust and delays the staling process. • Improves the crust color. • Prevents sticking between the layers. • Improves food quality by ensuring a short texture. 	1%

Used in combination with the Vizyon Emulsifier Mixture in the recipe.





Frozen Dough

Frozen bakery goods are rising global trend nowadays.

- mass production
- quality standardization and customer expectations (ready-made, fast and fresh product...).

The production of frozen dough differs from normal bakery products, especially due to the significant differences in the process. So, enhancers used in frozen dough should also be able to meet these different requirements in the process.

Types of frozen dough production

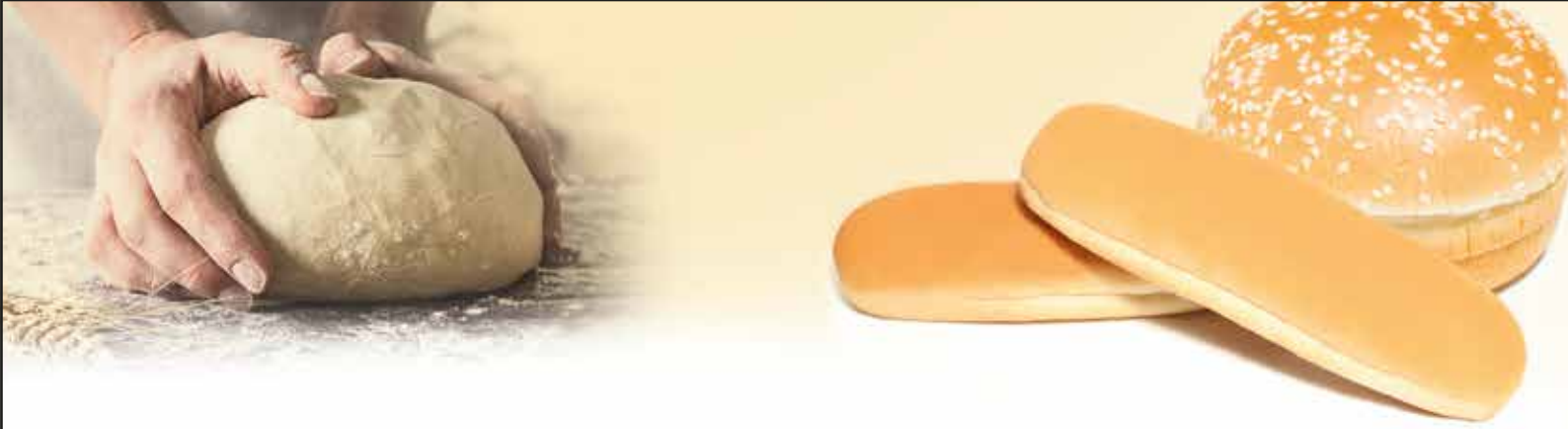
- Frozen Dough
- Partially Baked Frozen Dough
- 100% Baked Frozen Dough

The encountered issues are limp or flabby crusts, a plastic-like texture that has lost its crispiness, crumbliness, excessive loss of taste, spots due to freezer burn.

Polen Gıda offers you tailored solutions with its special products.

Product Name	Improvement	Dosage
Vizyon 4000 D (Frozen Dough)	• The crust maintains its crispiness	1 - 1.5%
Vizyon 4000 D – YP (Half-Baked Frozen Dough)	• It makes the crust more firm	
Vizyon 5000 (Half-Baked Frozen Dough/Flat Breads)	• It prevents the bread from crumbling inside	
	• It prevents white spots inside the bread	
	• It provides the optimum protection for fresh bread's taste and aromatic component	0.5%





Soft Breads

Soft breads such as burger buns and sandwiches are generally produced in industrial lines. Besides the dough and bread structure quality, a long lasting freshness and shelf-life is what producers more expect for. Because of its process and its desired qualities, burger buns and other soft breads require the utilization of strong flours and they are one of the hardest breads to produce without any enzymatic improvement.

Product Name	Feature	Improvement	Dosage
Vizyon Soft	(3-5 days shelf life)	<ul style="list-style-type: none"> • Extended shelf life • High oven spring 	1%
Vizyon Soft 4000	(10-12 days shelf life)	<ul style="list-style-type: none"> • Improved loaf volume and softness • Crumbling Prevention 	





French Baguette

For this very famous bread type as well, we are aware of how great is the variability of the ways it is produced around different countries in the world. Long and short baguette, crunchy and thick crusty as well as light colored and soft in crumb ones.

So, what Polen food is doing is firstly analyzing the wheat and flour characteristics of its customers, then studying what are the expectations of bakers and final consumers in the country. That means how should the baguette be in order to be accepted and appreciated by those who daily buy it. According to this first analysis the R&D team develops, an improver that will provide the main desired effects such as improved extensibility, proofing stability, clear slit cuts and oven spring.



With Improver



Without Improver



With Improver



Without Improver



French Baguette

Product Name	Improvement	Dosage
Polenzyme Plus BGT (concentrated)	<ul style="list-style-type: none"> • High ovenspring 	20-25 g / 100 kg
Rio Exper P100	<ul style="list-style-type: none"> • High loaf volume 	200-300 g / 50 kg
Vizyon P100	<ul style="list-style-type: none"> • Optimized Crumb structure 	200-300 g / 100 kg
Vizyon P300	<ul style="list-style-type: none"> • Extended crumb softness and structure 	200-300 g / 100 kg





Toast Bread

Toast is maybe the most consumed bread around the world and even if plenty of types can be found in different countries. The common desired characteristics are a good volume, a homogeneous crumb, a soft and thin golden crust as well as the avoidance of crumbling in the product, whilst a good dough structure and development, a fermentation stability and a great oven spring are expected on the process side.

Throughout several technical visits in different countries Polen Food developed a wide varieties of bread improvers that according to the flour quality, and the user production process to obtain a perfect loaf. Process allow its customer around the world to standardize the flour quality for baking goods production, thus guarantying the bakers to obtain a perfect loaf.



With Improver



Without Improver



With Improver



Without Improver



With Improver



Without Improver



Toast Bread

Product Name	Feature	Improvement	Dosage
Vizyon Soft 5000	12-15 days shelf life)		1%
Vizyon Soft Toast Bread Improver	(10-12days shelf life)	● Extended shelf life	1%
Vizyon Soft 4000	(10-12 days shelf life)	● High overspring	1%
Vizyon Soft	(3-5 days shelf life)	● Improved loaf volume and softness	1%
Vizyon P 10 Anatolia 500	For artisanal usage	● Crumbling prevention	10-20 g / 100 kg 300-500 g / 150 kg



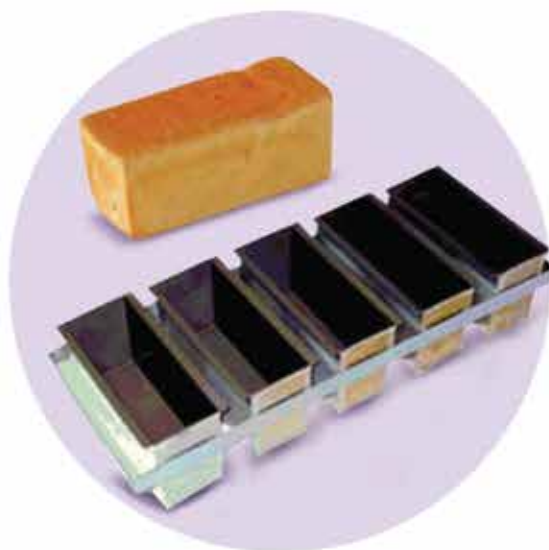


Special Solution

NO OIL FOR TOAST LOAF PANS

Exper Gold KNG toast bread improver is a practical solution to prevent stickiness and to reduce production cost. There is no need to use oil on toast loaf pans. Exper Gold KNG toast bread improver is a solution to reduce production cost.

Product Name	Improvement	Dosage
Exper Gold KNG	<ul style="list-style-type: none"> • Prevents stickiness on English toast loaves. • Provides gas retention capacity to toast loaves. • Improves pore structure of the bread. • Helps relaxation in dough structure. • Improves processability of dough. • Provides high loaf volume. • Improves extensibility and elasticity. • Optimizes amylase activity for longer proof processes. • Improves dough tolerance and proofing stability. 	20-30 g / 100 kg





Vizyon Turkish Bagel And Pastry Improver

Vizyon Turkish Bagel Coating Sauce

The most valuable asset in this age is time, and people prefer to consume quick snacks especially for breakfast. The weakening of the dough due to the inclusion in the process of different types of cereal flours-grains, oils and sugar depending on the product type can be compensated for through appropriate bread enhancers. Turkish bagels are an important group of snacks thanks to

- the sesames on top,
- their bright and brown color and
- crispy crust.

Product Name	Improvement	Dosage
Vizyon Turkish Bagel And Pastry Improver	Supports dough stability Increases oven performance Improves the eating experience by 1%	1%
Vizyon Turkish Bagel Coating Sauce	Makes more sesames stay on top Provides a bright and caramelized color Helps make the crust more crispy	Used by diluting between 1-2 / 1-5 according to the color choice





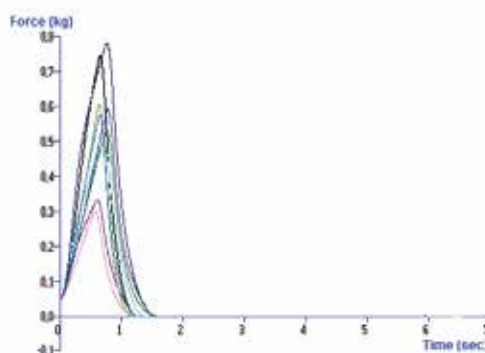
Shelf Life Improvers

The bread production industrialization process started on the second half of the 19th century and since that time till our days the bread quality issue has greatly changed. Fresh bread nowadays does not simply mean “daily made”. For the producers it means late staling, no crumbling, no drying and absent mold growth. On the other side, it is a synonymous of softness and long shelf life for the consumers. Polen Food developed a specific line of products that improve the shelf life of baked goods both microbologically, by inhibiting mold activity and texturally, by delaying staling and firmness.



T.A SETTINGS & PARAMETERS

Sequence Title: Return to Start (Set Dist)
 Test Mode: Compression
 Pre-Test Speed: 1,0 mm/sec
 Test Speed: 8,0 mm/sec
 Post-Test Speed: 8,0 mm/sec
 T.A. Variable No: 5: 0,0 g
 Target Mode: Strain
 Distance: 5,0 mm
 Strain: 20,0 %
 Trigger Type: Auto (Force)
 Trigger Force: 50,0 g
 Probe: A/BSR ; BREAD SQUEEZE
 RIG
 Batch:
 Points per second: 500



Product Name	Improvement	Dosage
Polenzyme M	freshness during shelf life	0.2%
Polenzyme Pro		0.5-1.5%



Preservatives

The high level of water activities and the pH values of bread and other bakery products create a suitable environment for the development of microorganisms. The most common problems encountered in these products include mold contamination and the reproduction of rope spores.

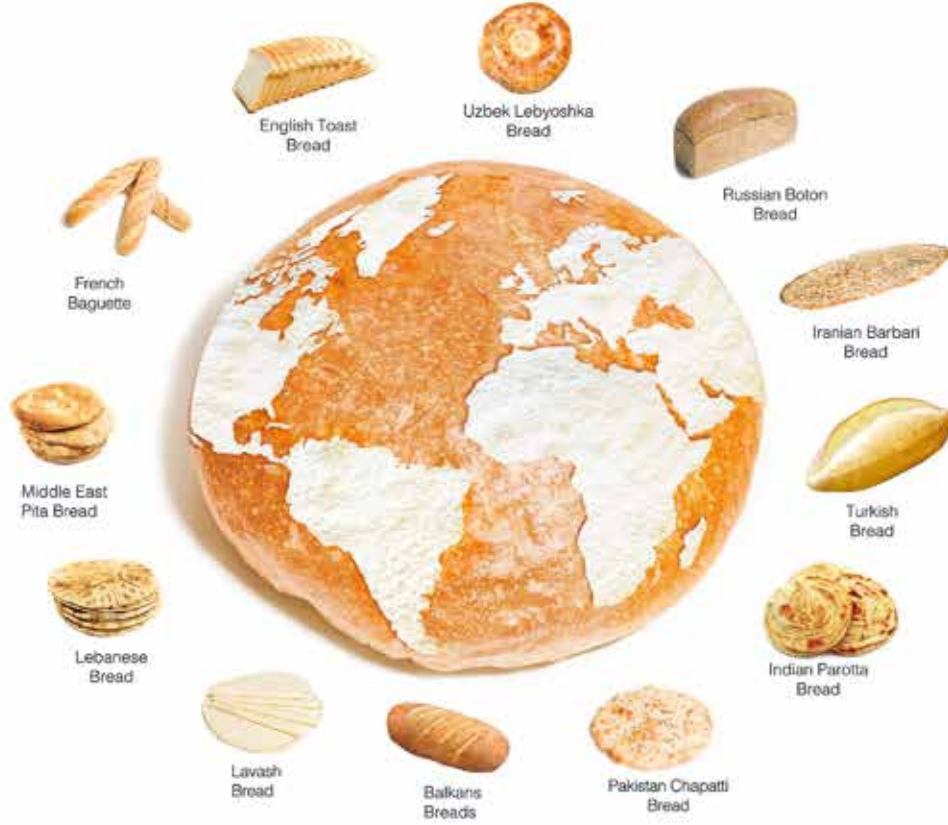
Rope is the most dreaded bread disease. This undesirable situation, which bread producers need to be aware of, rarely occurs but it is always a possibility and a situation that needs to be prepared for.

Product Name	Improvement	Dosage
Exper Gold SDA	Prevents the reproduction of rope spores inside the bread	0.2 %
Exper Gold Calcium Propionat	Prevents mold growth during the shelf life of bread by	Within the limits allowed by the country



POLEN FOOD

World of Improvers



Recommended with Vizyon Instant Dry Yeast

vizyon Instant Dry Yeast



خميرة جافة نشطة • Levadura Seca Instantânea
Levure Sèche • Levedura Seca Instantânea
Быстродействующие сухие дрожжи • خشک خمیر

