

LESAFFRE

T-CONTROL™ 10.25

A new solution for controlling dough fermentation without cold storage phase.

The demand for the availability of freshly-baked bread all day long is ever increasing. In order to satisfy that demand, two solutions are currently in use: freezing and refrigeration. However, both processes entail constraints and investments. Lesaffre has developed a unique response with **T-Control 10.25 yeast** coupled with **T-Control 10.25 improver**. At ambient temperature, fermentation is controlled for several hours, without sacrificing dough quality or structure. For bakers, the benefits are many and varied: time reduction, flexibility, production safety and major savings, while consumers have the guarantee of the taste, preserved freshness and quality of freshly-baked bread all day long.

CONTROLLED FERMENTATION

T-CONTROL 10.25, THE NEW SOLUTION FOR CONTROLLED BREAD MAKING AT AMBIENT TEMPERATURE (10° TO 25°C) (50° TO 77°F)



→ Yesterday's recipes and processes integrating today's technical and financial constraints

Consumer needs are changing...

From fermentation times and temperatures through to ingredient doses, etc... bread making is indeed an art. Nowadays, as consumers are looking more to traditional, speciality breads, freshly-baked at all times of the day, the bread making process grows ever more complex.

In order to cater to these consumer demands, craft bakers frequently rely on freezing and refrigeration solutions, especially in Western countries. Others provide a huge variety of products throughout the day.

Whatever the option chosen, the impact on their business is considerable, resulting in considerable investments for some, and loss of time, lack of flexibility giving rise to unsold goods for others. Being able to control the bread making process has become an important requirement.

"Craft bakery goods, the guarantee of taste and quality, production on the premises at any time, respect for the environment, etc... consumer demands are many and varied and ever evolving. The situation is changing. In order to cater to these high expectations, new bread making processes are required that are more flexible and more economical."

Alexandre DEPOID,

Marketing director, Lesaffre International yeast division

...Bread making processes are adapting

New solutions have been developed to increase tolerance, work organisation and production flexibility, while minimising the losses arising from an ever-expanding range of breads.

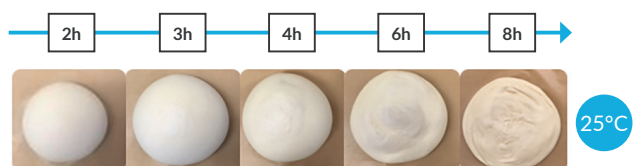
Widespread use is made of pre-baked bread or refrigerated, or even frozen, dough methods to block the fermentation process. However, these solutions bring constraints.

Pre-baking entails complex logistics in terms of transport and storage with the risk of product deterioration if the cold chain is disrupted.

Freezing or refrigeration, however, entail high energy and logistical costs. They also require considerable investments to provide for the storage and maintenance of goods in negative cold temperatures, not to mention a finished product that may suffer loss of quality on bake-off.

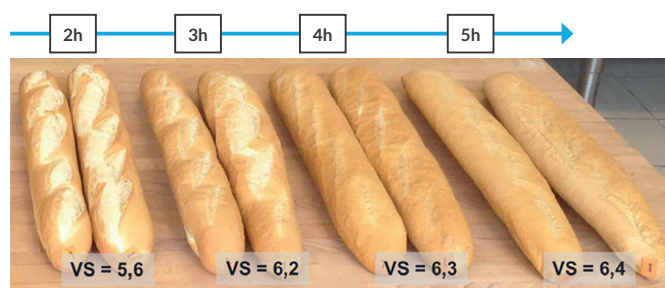
T-Control yeasts

Baker's yeast is a living product that is sensitive to its environment. Several factors impact upon its fermentative activity, including temperature, nature and concentration of sugar, dough acidity and hydration.



→ Fig.1: Fermentation of pizza dough with yeast and classic improver at ambient temperature

Dough slackening after an overly long period of fermentation will have an impact upon the quality of the loaf, thereby rendering it unsaleable.



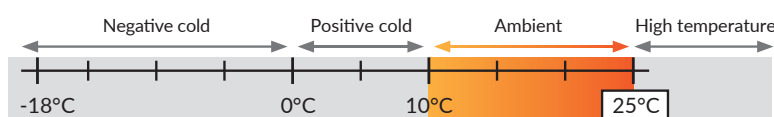
→ Fig.2: Impact of fermentation time at ambient temperature with classic yeast and improver on the finished loaf.

T-CONTROL 10.25: a proof-tolerant yeast

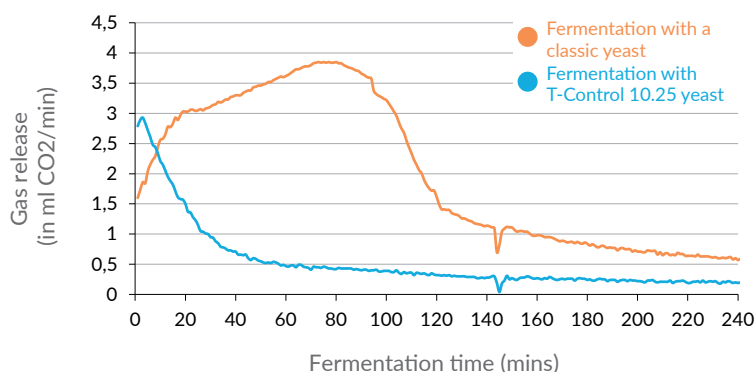
In order to keep pace with changes in manufacturing methods, Lesaffre has developed an innovative range of T-Control solutions enabling bakers to control dough fermentation depending on the recipe and process.

The latest addition to the T-Control range is T-Control 10.25, coupled with an improver of the same name, and offers a unique solution to controlling dough fermentation for speciality breads (max. 5% sugar) at ambient temperature and up to 25°C and above.

The T-Control 10.25 solution developed by Lesaffre combines a yeast and improver to obtain a fermentation-tolerant dough. The yeast is active in controlling fermentation, while the improver, once incorporated into the dough, strengthens the network.



→ Proof tolerance temperature



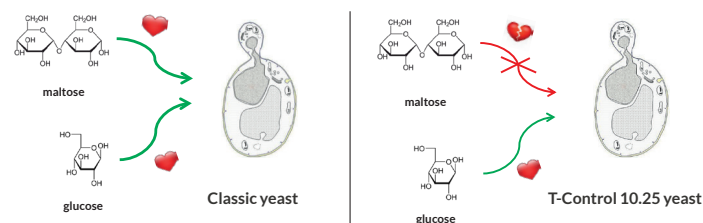
→ Instant gas release - Unsweetened dough and stored in the ambient temperature

The principle

A dough is deemed to be tolerant to fermentation when, after having risen and having achieved the desired volume, its shape and volume are preserved for several hours, without any recourse to cold-blocking techniques. This result is made possible by the use of a negative maltose yeast, which solely consumes simple fermentable sugars.

It therefore differs from a conventional dough, which, at ambient temperature, continues to develop until it collapses.

In addition to the yeast of the same name, the T-Control 10.25 improver breaks down the substrate so that the yeast continues to release CO₂ and strengthens the gluten network. The result is that, once all the simple sugars are consumed, fermentation stops. The merit of this solution lies in the fact that there is sufficient gas production to attain optimum volume and maintain that dough volume for several hours at ambient temperature.

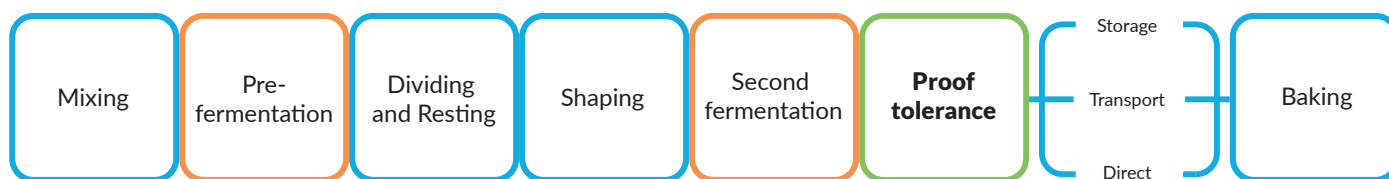
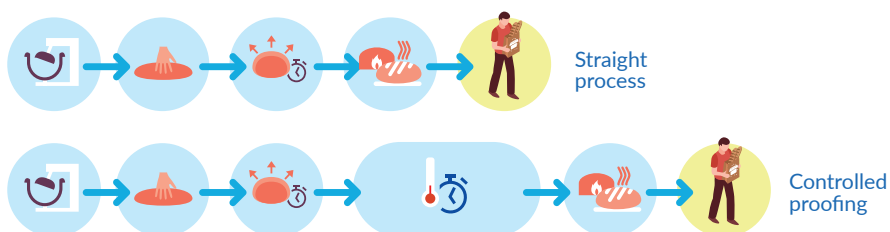


→ Fig.3: Activity of conventional yeast vs T-Control 10.25



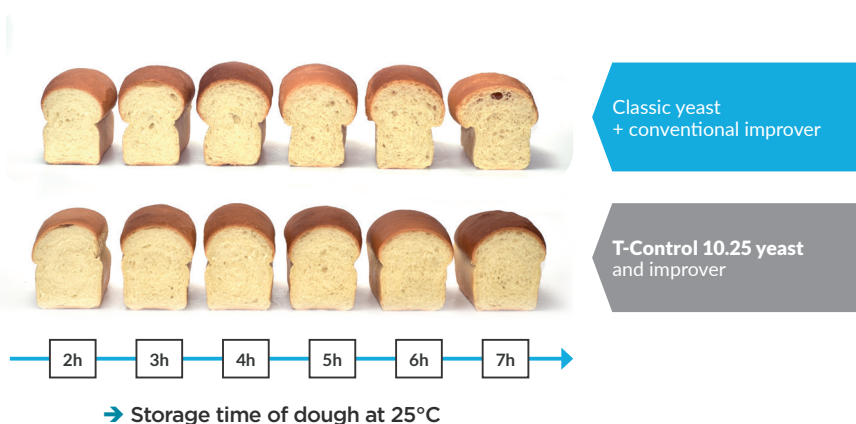
→ Dough after 6 hours' fermentation at 25°C

The bread making process



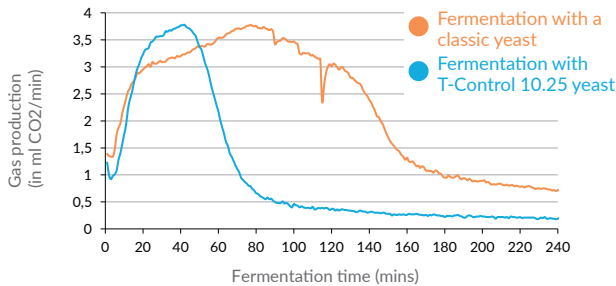
Pre-fermentation must be controlled in order to preserve the necessary sugars after gas is released has taken place in the dough during shaping.

With the T-Control 10.25 solution, the dough remains stable throughout its storage at ambient temperature, and to protect against unwanted crusting over (preservation with plastic film, use of controlled-humidity proofing chamber, etc.). This stability is preserved in the end product, even after 7 hours' fermentation. The baker thus controls his output in order to be able to offer consumers freshly-baked bread, consistent in volume, all day long.



Influence of the sugar quantity

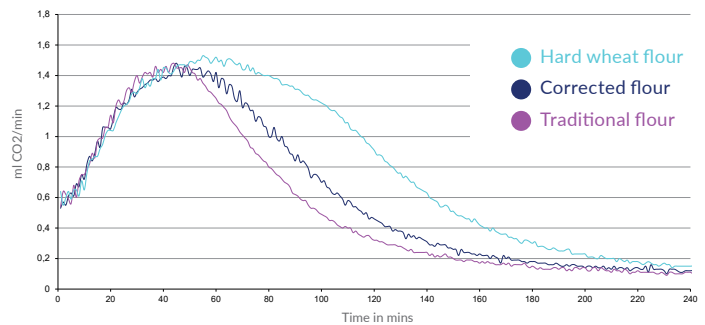
In an unsweetened dough, the fermentative activity of T-Control 10.25 lasts longer with a peak in gas release equally as high as that attained with a classic yeast. It is therefore not recommended to use this yeast in a sweetened dough (max 5% sugar).



→ Instant gas release - 2% DEXTROSE

Influence of the flour type

Fermentation varies according to the type of flour and the amount of simple directly fermentable sugars contained therein. This rate varies between 1 and 3%. **The doses of yeast and improver can therefore be adjusted according to the flour and process used.**



→ Instant gas release depending on different types of flour

A cost-saving solution to help produce an extended range of top-quality, fresh products.

Devised specifically to help control fermentation with a tolerant dough at ambient temperature, the T-Control 10.25 concept offers users the possibility of saving time and money. It also provides an adapted solution to all players in the chain:

- Craft bakers or manufacturing workshops

selling on the premises, who do not always have the equipment to preserve the cold chain.

- Chains supplying their own retail outlets, while improving product stability and facilitating logistics.
- Bake-off points that lack the necessary equipment for the purchase of raw unbaked dough (cold chambers, proofing

equipment), while seeking to optimise transport and cold storage costs.

- Production sites not equipped with pre-baking facilities.
- Players wishing to maintain a traditional process and seeking an alternative to pre-baked or cold-block fermentation methods and the equipment that these entail.

A solution to help cut costs and reduce your carbon footprint

By enabling bakers to dispense with cold-block fermentation, the T-Control 10.25 solution helps cut electricity costs and thus significantly reduce the carbon footprint.

LESAFFRE  | EXPERT SOLUTIONS

Take a step ahead

LESAFFRE EXPERT SOLUTIONS™ is an innovative approach to answer the specific needs of professional bakers in the field of fermentation. More than a range of performing yeasts and baking ingredients, LESAFFRE EXPERT SOLUTIONS™ is a way of working with a shared ambition: thinking about tomorrow's bakery and helping you overcome your challenges. Based on creativity and co-development LESAFFRE EXPERT SOLUTIONS™ is relying on market trends knowledge, Lesaffre's R&D expertise and the Baking Center TM network to provide bakers with high value and customized solutions.

For more information, please contact us at: www.lesaffre.solutions