

Novozymes Fungamyl[®]

– The industry standard
for reliable flour correction

A constant challenge for the baking industry is to ensure consistent bread quality through the use of standardized flour. Flour correction enzymes such as fungal alpha-amylases help correct a common deficiency of flour by standardizing alpha-amylase activity. This ensures desired end product characteristics such as volume, crust color, and crumb structure.



The main benefits of Fungamyl are:

Better control over alpha-amylase activity

Fungamyl can consistently standardize flour when the flour itself has low cereal alpha-amylase activity.

Larger bread volume

Fungamyl provides increased loaf volume.

Improved crust color

The brown crust color of baked goods is improved.

Fine crumb structure

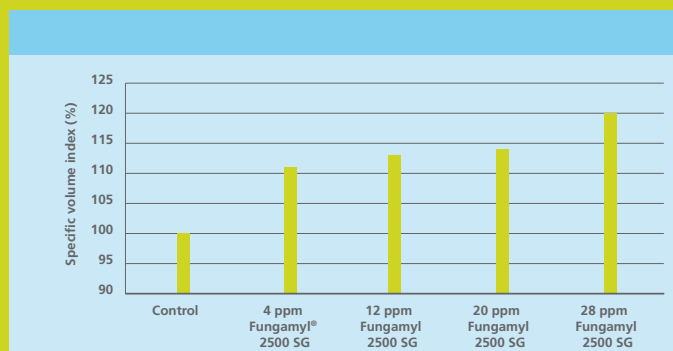
Flour standardized with Fungamyl ensures a fine and uniform crumb structure.

In the milling and baking industries, a common standard procedure for characterizing the baking quality of wheat flour is the falling number (FN) test. Flour with a high falling number requires the addition of fungal alpha-amylase or supplementation with malt flour. The addition of fungal alpha-amylase has advantages over malt amylase in terms of having temperature optima in baking applications and consistency in enzyme activity. However, in tests the FN value of flour remains unchanged when fungal alpha-amylase is added in amounts recommended for the baking industry. This is due to the window of activity of fungal alpha-amylase, which is incompatible with the heating profile of the FN test.

The optimal dosage of Fungamyl varies depending on the flour quality, the formulation, and the process, and should therefore be determined through baking trials.

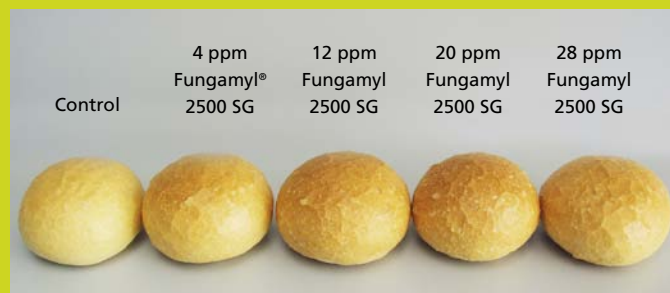
Novozymes is the world leader in bioinnovation. Together with customers across a broad array of industries we create tomorrow's industrial biosolutions, improving our customers' business and the use of our planet's resources.

Larger loaves



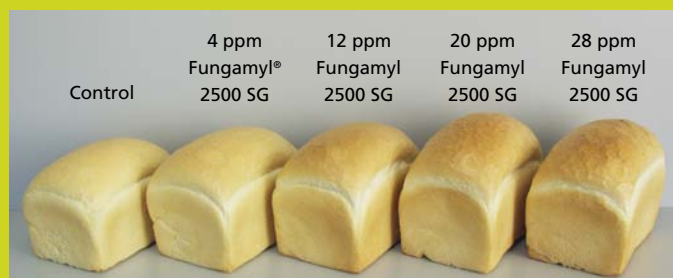
In straight dough pan bread, the addition of fungal alpha-amylase (Novozymes Fungamyl® 2500 SG) results in increased loaf volume (French flour, 60 ppm ascorbic acid in all doughs).

Improved volume and crust color in rolls



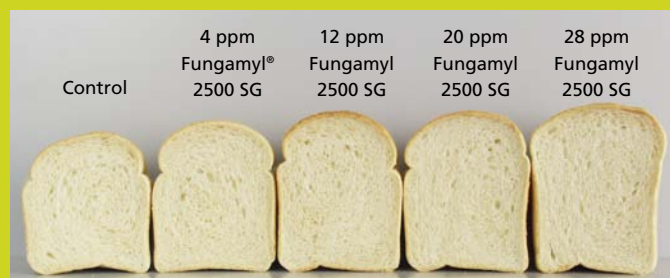
In straight dough rolls, the addition of fungal alpha-amylase (Novozymes Fungamyl® 2500 SG) improves volume and crust color (French flour, 60 ppm ascorbic acid in all doughs).

Improved crust color



In straight dough pan bread, the addition of fungal alpha-amylase (Novozymes Fungamyl® 2500 SG) improves the crust color (French flour, 60 ppm ascorbic acid in all doughs).

Fine crumb structure



In straight dough pan bread, the addition of fungal alpha-amylase (Novozymes Fungamyl® 2500 SG) results in a fine and uniform crumb structure (French flour, 60 ppm ascorbic acid in all doughs).

Fungamyl demonstrates synergistic effects with other enzymes used in the baking process such as xylanases, lipases, glucose oxidases, and maltogenic alpha-amylases.

Reference dosages of fungal alpha-amylase for flour with varying FN values are available on request to your local Novozymes representative.

The recommended dosages are:

Fungamyl 2500 SG:	2–10 ppm (5–25 FAU/kg flour)
Fungamyl 4000 BG:	1–6 ppm (5–25 FAU/kg flour)
Fungamyl 800 L:	6–31 ppm (5–25 FAU/kg flour)
Fungamyl Ultra BG:	Variable (5–25 FAU/kg flour)
Fungamyl Ultra SG:	Variable (5–25 FAU/kg flour)

For more information, or for more office addresses, visit www.novozymes.com

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