

NEW BREAD'S RECIPES WITH SOLUBLE FIBERS

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Abstract

In spite of the increased demand for fresh foods, dried and dehydrated products retain a high level of popularity. Consumers choose to buy bakery mixes because they are convenient (easy to store and quick to prepare), convivial (they give the sensation of home-made product) and they are treat products. But even with these attractions, proper formulation for optimum nutritional benefits is now required, with high eating quality. This technical study describes how it is possible to develop a fat reduced chocolate cake mix with inulin or oligofructose in order to meet quality expectations.

Keywords : bread, soluble fibers, recipes, fibruline

Introduction

In spite of the increased demand for fresh foods, dried and dehydrated products retain a high level of popularity. Consumers choose to buy bakery mixes because they are convenient (easy to store and quick to prepare), convivial (they give the sensation of home-made product), and they are treat products. Is very important to say that for an healthy and vigorous organism is essential a well-balanced alimentation. When we say that, we must mention the most usual food : bread. We have made this paper because we want to speak about soluble fibers in bread and to present new bread's recipes with one of it: fibruline. This bread's assortment join with success the nutritional character of bread with functional and prebiotic character of soluble fibers.

Experimental

Inuline, an soluble fiber, is hydrolised only in large bower and thanks to bacterium, it is transform in hydrogen, methane, carbon dioxid and fat acids: acetic, propionic, butyric. This is one of the benefic effect of inuline: it isn't hydrolised in stomach and small bower, it stimulate the bifidobaterium's development in large bower. We have made determinations with fibruline addition delivered by SC Enzymes & Derivates SA and we

made Parisian wand, white bread and whole bread. We have made this bread's assortments using different amounts of soluble fibers: inuline. Technological process is analogous with classic process without technological changes. Flour and inuline are mixed and water amount is adapted in accordance with inuline amount. Because inuline is an soluble fiber, it's binding water properties are smaller than insoluble fibers and that's why the water amount will be reduced with only 1-2% for each percent of inuline. During the fermentation process, yeast' enzymes are able to hydrolise a part of inuline, leads to fructose formation and gains the Maillard reaction. Pharinograph determinations, after inuline addition, confirm an constant dough's development in time, an increase of stability and an decrease of dough's damping.

Results and Discussions

Technological process is analogous with classic, and the bread recipes are given in table 1

Table 1: Bread's recipes with Fibruline (inuline)

Ingredients (g)	Parisian wand with fibers	Parisian wand with big fiber's content	White bread with big fiber's content	Whole bread with big fiber's content
Flour 650	59.02	57.75	100.0	-
Flour 1350	-	-	-	100.00
Water	36.43	34.85	57.0	63.00
Vegetable fat	1.21	1.24	2.0	2.00
Fibruline	1.70	4.48	9.0	5.00
Salt	1.03	1.06	1.7	1.7
Ameliorative	-	-	-	3.00
Yeast	0.61	0.62	1.0	1.0
Sum	100.00	100.00	170.7	175.7

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Conclusions

- ❖ Bread obtained with fibruline addition are an agreeable flavour and an sweetish taste;
- ❖ It's core is uniform and soft;
- ❖ The volume is increases till an optimum level when we added 2-5% inuline.
- ❖ Crust is shining, rosy and uniform;

The nutritional characteristics are presented in following table:

Table 2: Nutritional characteristics of bread with inuline

Nutritional informations/100 g bread	Parisian wand with fibers	Parisian wand with big fiber's content	White bread with big fiber's content	Whole bread with big fiber's content
Energetic values kcal/kJ	244	254	246	242
Carbohydrates (g)	48.0	50.5	48.3	37.8
Proteins (g)	7.5	8.0	7.6	9.0
Fat (g)	2.0	2.2	2.1	2.2
Fibers content (g)	6.3	3.1	5.7	7.9
Inuline (g)	4.7	1.7	4.3	2.7

In conclusion, inuline is an functional ingredient because it have benefits for health:

- ❖ Increase fibers contribution;
- ❖ Bifidogenic effect;
- ❖ Improves calcium assimilation;
- ❖ Reduces risk of cardiovascular deseases and of large bower cancer.

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