بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائق الأصلية تالفه

بالرسالة صفحات
لم ترد بالاصل

STUDIES ON WHEAT FROZEN DOUGHS

BY

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B.Sc. Food Science and Technology, Zagazig University, 1981
M.Sc. Food Technology, Suez Canal University, 1987

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INTRODUCTION

INTRODUCTION

In the late 1950 an entrepreneur from outside the baking industry had the idea of producing frozen dough to be marketed at the retail level to the housewife. The idea was to offer a completely mixed, yeast-leavened dough in frozen form letting the homemaker bake "homemade" bread in her own kitchen without the mess and fuss of ingredient preparation and mixing (Spooner, 1990).

The economic factors that make frozen dough bread to be cheaper can be summarized in the following: (a) the complete bakery requires a greater number of skilled personnel than bake - off bakery, (b) the installation of a bake - off operation costs only one fifth that of a complete bakery, (c) the bake-off bakery requires much less space than the complete bakery., (d) the product is not delivered daily but goes out through normal frozen food distribution channels and can be stored until needed, (e) bake - off offers a flexibility to bake as much or as little as needed, and (f) there is no spoilage or "stales" in frozen dough. (Lorenz, 1974; Watson, 1974; and Vetter, 1979).

Frozen dough is now a very important item in baking technology. For the first time the classical system of bread and roll baking (mixing, fermentation,. baking) can be interrupted at different stages, e.g., after mixing, after 3/4 proof time.

Freezing of prebaked and baked products, e.g., bread in Norway or rolls in Germany, have been already practi ed since many years.

Especially with wheat bread and rolls, the problem of staling still exists, because the time difference between the production and consumption is too long. White bread stales after 2 days and with hard wheat rolls the crust softens after 4-6 hours, depending on the relative humidity of the air. Another advantage of dough freezing is that skilled bakers are no more needed for the baking process. Depending on the type of frozen dough, the thawing, fermentation (if necessary) and baking can be practi ed in every hotel kitchen. With wheat rolls (dough pieces up to 75g and prefermented 3/4 of fermentation time) it is now possible to put the frozen dough pieces directly in the oven, thaw them by several steam injections in the oven and bake them in the same baking oven. The total time for thawing and baking is about 25 minutes. Till now, there is practically no frozen dough in African and East European countries. In Western Europe, there is an increasing market for frozen dough, especially with small dough pieces (<100g). In Germany and France, several factories are producing only frozen dough in large varieties, which are sold to the bakeries, hotels or hospitals. The frozen dough pieces are used for the bake-off system. In doing so, there are always fresh baked products, the basis for increasing the bread and roll consumption. Also in Great Britain, the market for frozen dough is increasing (Seibel, 1993).

Frozen dough business started, however, in the United States of America (Van der Plaat, 1988 and Seibel, 1993). There exists the greatest experience in preparing and also marketing of frozen dough, including dough piéces greater than 100 g.

The importance of frozen dough undoubtedly will further increase. Frozen doughs will come to countries, where they are unknown today. Frozen dough systems should not be copied from one country to another like recipies. Every country has to develop its own system, based on the local circumstances, the different bread and roll varieties and the marketing systems (Seibel, 1993).

Thus, the present work aimed at studying the following points:

1. Effect of freezing conditions on the freezing time, viability of yeast, yeast activity, extensograph properties and white pan bread quality.
2. Effect of thawing conditions on the quality of white pan bread.
3. Changes occurring to the dough during freezing time.
4. Effect of frozen storage time and freeze-thaw cycles on frozen bread doughs stability.
5. Optimization of the frozen bread doughs ingredients.
6. The ultrastructure of frozen bread doughs.

REVIEW OF LITERATURE