

BAKING POWDERS

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Baking Powders by Charles A. Catlin

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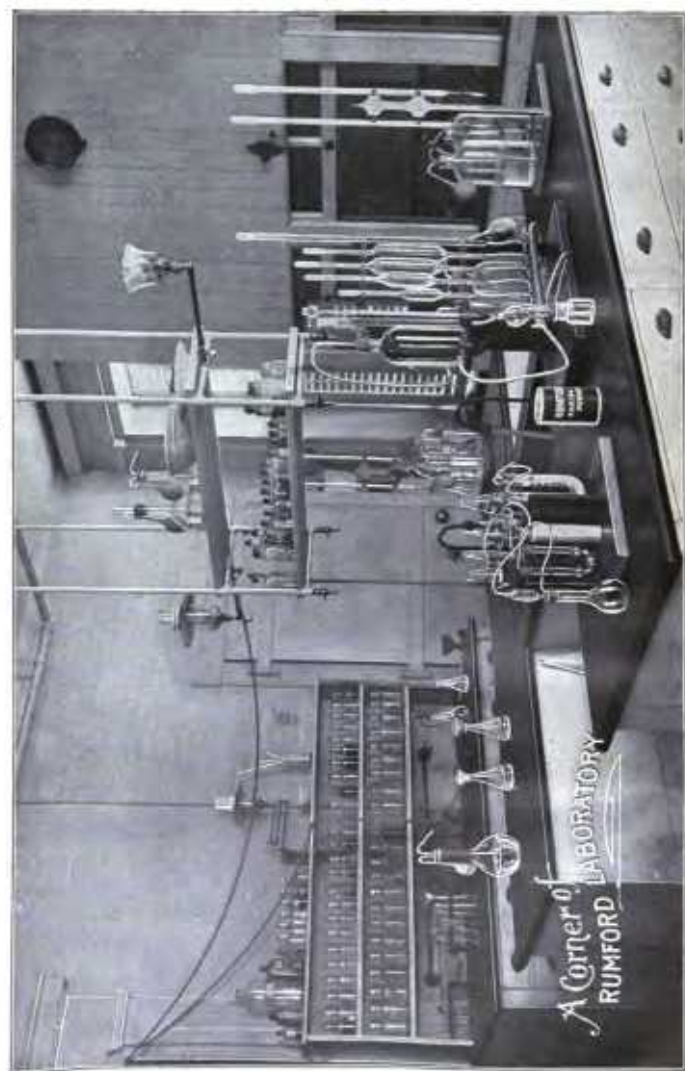
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CHARLES A. CATLIN

**BAKING
POWDERS**



BAKING POWDERS.

A TREATISE ON THEIR CHARACTER, METHODS FOR
THE DETERMINATION OF THEIR VALUES, ETC.
WITH SPECIAL REFERENCE TO
RECENT IMPROVEMENTS IN PHOSPHATE POWDERS.

BY

CHARLES A. CATLIN, B. S., Ph. B., F. A. A. A. S.



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CONTENTS.

Baking Powders.	7
Hygienic quality.	
Leavening quality.	
Recent improvements in phosphate powders.	
Valuation of Baking Powders.	20
Total available carbon dioxide.	
Conditions under which carbon dioxide is evolved.	
Keeping quality.	
Carbon Dioxide Absorption Apparatus. Description.	29
Improved Apparatus for the volumetric determination of Carbon Dioxide, etc., Description.	35
Rumford Chemical Works.	43

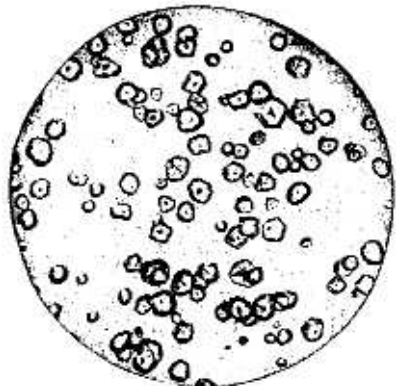
ILLUSTRATIONS.

A Corner of Rumford Laboratory	Frontispiece.
Photo-Micrographs of the constituents of Rumford Baking Powder.	6
Absorption Apparatus.	28
Volumetric Gas Apparatus.	34
Photo-Micrographic Camera.	42

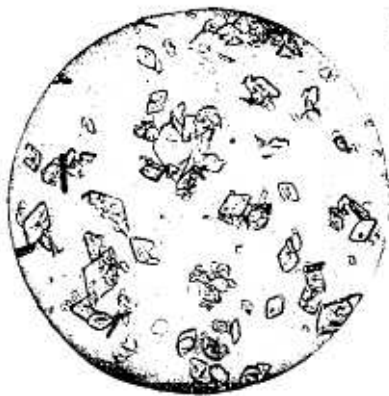
PHOTO-MICROGRAPHS OF THE CONSTITUENTS OF RUMFORD BAKING POWDER.



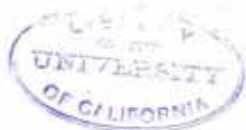
Crystals of Bicarbonate of Sodium, the source of the leavening carbon dioxide gas in Rumford Baking Powder.



Pure Corn Starch.



Crystals of Monocalcium Phosphate, which, in admixture with starch, forms the active acid agent in Rumford Baking Powder.



Baking Powders.

Hygienic Quality.

Baking Powders have for their essential constituents, sodium bicarbonate and some form of acid or acid salt. During the bread making process in which they are employed, under the influence of the water or other liquid used in mixing the dough, chemical reaction more or less complete ensues between these constituents, resulting in the evolution of the leavening carbon dioxide gas, which is eventually dissipated, and a fixed residue, saline for the most part, which remains. It is, therefore, the character of this residue which determines the hygienic quality of any baking powder.

Based upon these residues, Baking Powders may be conveniently divided into three well defined groups:

1st. Baking Powders conveying to the food in which they are used, a saline addition of phosphates, for the most part of calcium and sodium.

2nd. Baking Powders conveying to the food in which they are used, a saline addition of tartrates, for the most part potassium-sodium tartrate, more commonly known as the medicine Rochelle salt.

3rd. Baking Powders conveying to the food in which they are used, a saline addition of sodium sulphate,

more commonly known as the medicine Glauber's salt, and an aluminum salt, or aluminum hydrate, or both, as the case may be.

Considering the hygienic quality of powders of the various classes, we find in the first, the residue left in the food is wholly composed of phosphates, of calcium and sodium for the greater part; and that these phosphates are normal constituents of both animal and vegetable food. Furthermore, we find careful research has demonstrated animal life cannot exist without a supply of these phosphates; since they not only go to make up an important element of bodily structure, but play an essential part as well in the process of bodily nutrition.

It has been proved by research, in all the higher forms of animal life, if not in every form of animal life without exception, there is a demand for a constant supply of these phosphates and a corresponding constant waste through their utilization in the life process; and that the organs of the animal body are specially constructed for the continued elimination of these phosphate wastes without injury, or even the slightest disturbance of any of their functions.

These phosphate baking powders are in fact the sole exemplification of leavening agents which do not introduce, as a residuum of their action, material abnormal to food; and are further unique, in that their residues, in and of themselves, contribute essential salts in form available to the animal economy.

Considering the hygienic quality of powders of the second class, wherein potassium-sodium tartrate is the saline residue, we find this salt, while possessing