



Summary & PowerPoint

The Truth Behind Phosphate Chemical Leavening

Phosphates have been an integral part of chemical leavening systems since their discovery. The acid-base reaction with sodium bicarbonate to deliver carbon dioxide gas has supposedly been well known chemistry. But has it? Do we really understand the mechanisms behind the phosphate/bicarbonate reaction? An in-depth investigation has shown that phosphates cause bakeries significant technological challenges.

Bakeries often compensate for these difficulties by adding ingredients such as organic acids, starches, gums and emulsifiers.

So could there be new technology out there? This presentation looks at a new and novel means to deliver carbon dioxide with none of the drawbacks of phosphates, yet the same high quality results. This new technology produces nutritionally balanced baked goods that are low in sodium and phosphate free. Added salt can be removed, products become clean label and shelf life is controlled without affecting color, taste or texture; and we get the perfect rise!

Learning Objectives

- Understand the effect and limitations of phosphate leavening systems
- Understand the ingredients that are used to counteract the effects of phosphate addition
- Gain insight into a new and novel technology that rises baked goods without the use of phosphates

Presenter

Dinnie Jordan, Kudos Blends

Presentation Time

Tuesday, February 26, 2019
1:25 pm - 2:00 pm

Session

Breakout 5



THE TRUTH BEHIND PHOSPHATE CHEMICAL LEAVENING

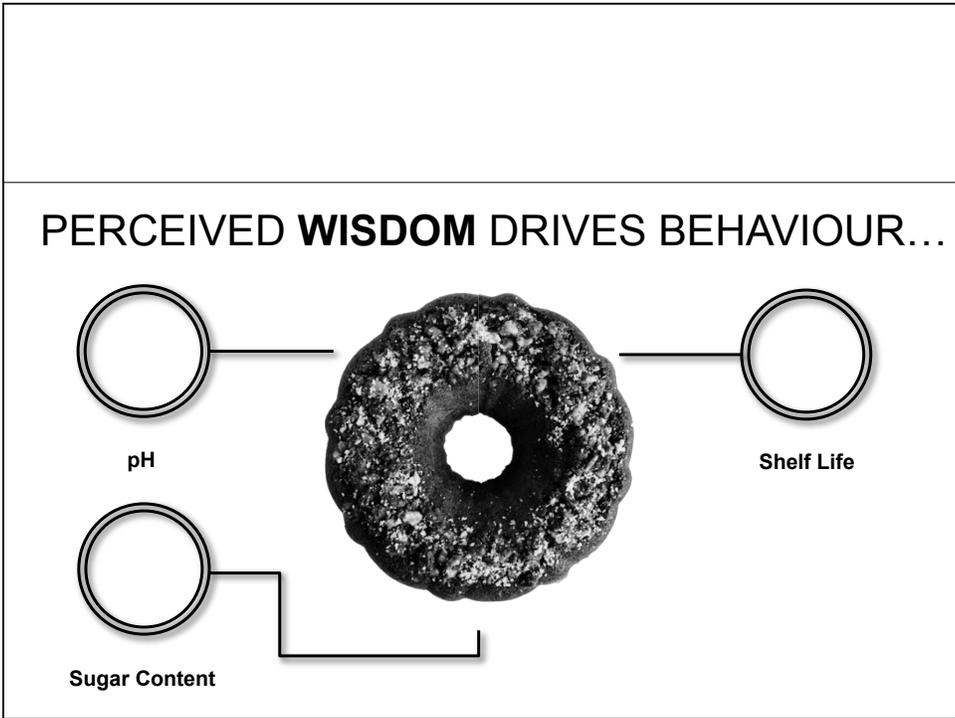
Dinnie Jordan – MD, Kudos Blends

26th February 2019



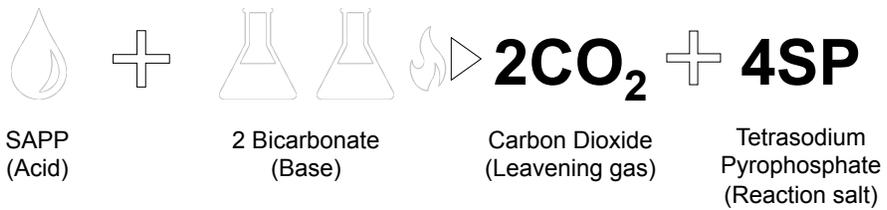
**DEVELOPMENT AND PROGRESS
COME FROM A HUNGER FOR CHANGE**





TRADITIONAL CHEMISTRY

Industry assumed...



**Soda & SAPP
Reaction**



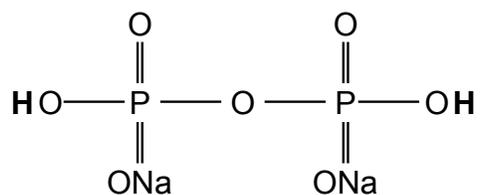
**Neutralising
Value**



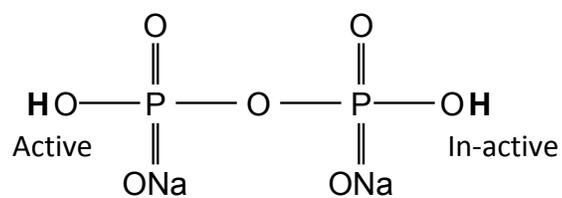
**Rate of
Reaction**



SAPP CHEMISTRY DOESN'T MAKE SENSE



SAPP CHEMISTRY DOESN'T MAKE SENSE



WE HAVE DISCOVERED THE **ACTUAL**
MECHANISM IS



SAPP



Bicarbonate



Carbon Dioxide



3SP (Buffer)



Bicarbonate



Carbon Dioxide

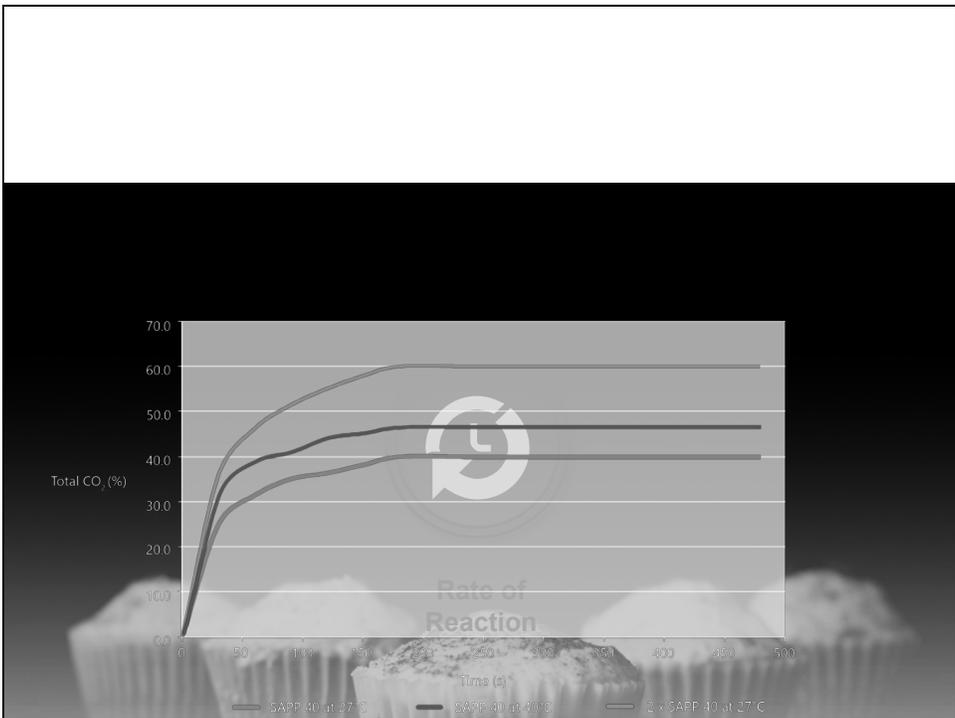


Carbonate (Base)



3SP





BECOMING WISE BAKERS

Control

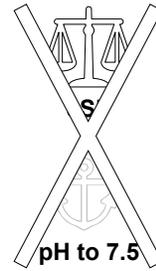
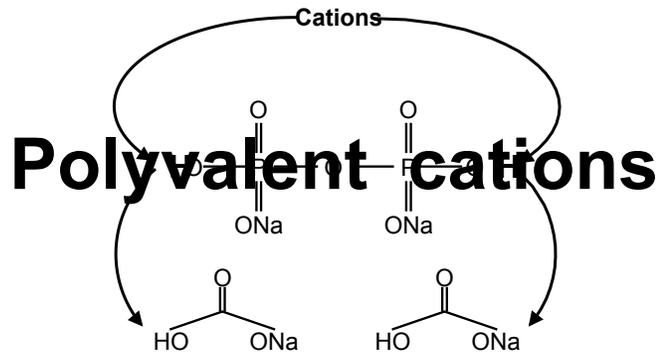
200% SAPP



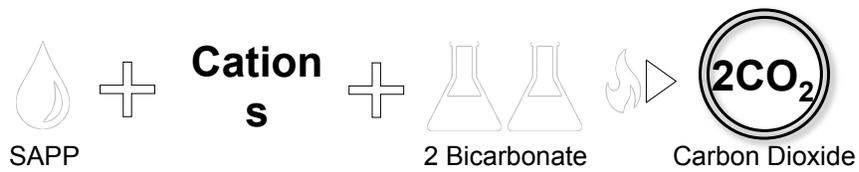
PERCEIVED WISDOM DRIVES BEHAVIOUR...



MAGIC INGREDIENTS



NEW CHEMISTRY



100% gas is released

Any pH with all the functionality of SAPP

FROM THEORY TO ACTION

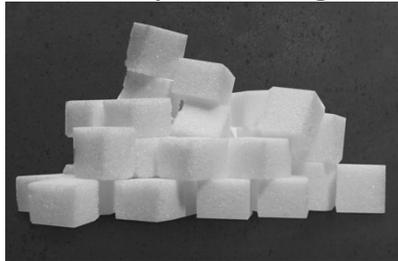


SO WHAT IS
THE IMPACT?

A black and white photograph showing a hand in a plaid shirt sifting flour over a ball of dough on a wooden surface. The flour is captured in mid-air, creating a dynamic, textured effect. The background is blurred, showing what appears to be a kitchen setting.

SUGAR REDUCTION

Today's challenge



Tomorrow's opportunity



-20% by 2020

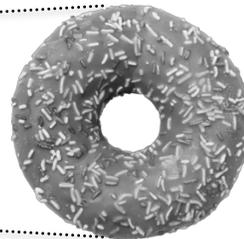
SHELF LIFE

Today's challenge



X DAYS

Tomorrow's opportunity



Y DAYS

REVOLUTIONISE THE BAKING INDUSTRY



Health Benefits

Sugar reduction
Sodium reduction



Quality Improvements

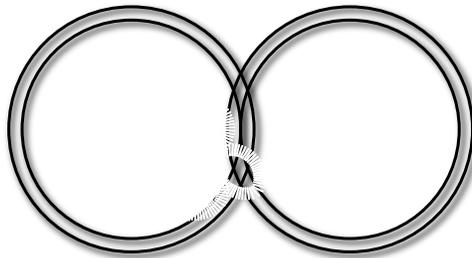
Maintain eating qualities
Shelf life changes



Cost Reduction

Reduce preservatives
Remove extra ingredients

WE'RE ON THE **CUSP**



KUDOS BLENDS' **HUNGER** FOR CHANGE



kudos
blends

THE SMARTER
WAY TO BAKE

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Kudos Blends is seeking patent rights to protect its new and novel leavening system via patent application number WO 2017/221018 A1.