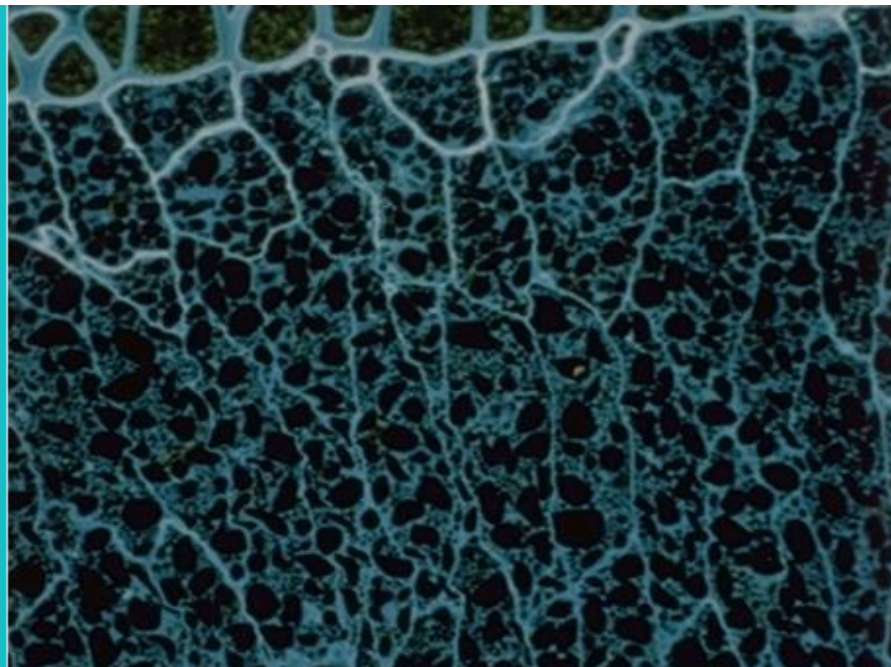
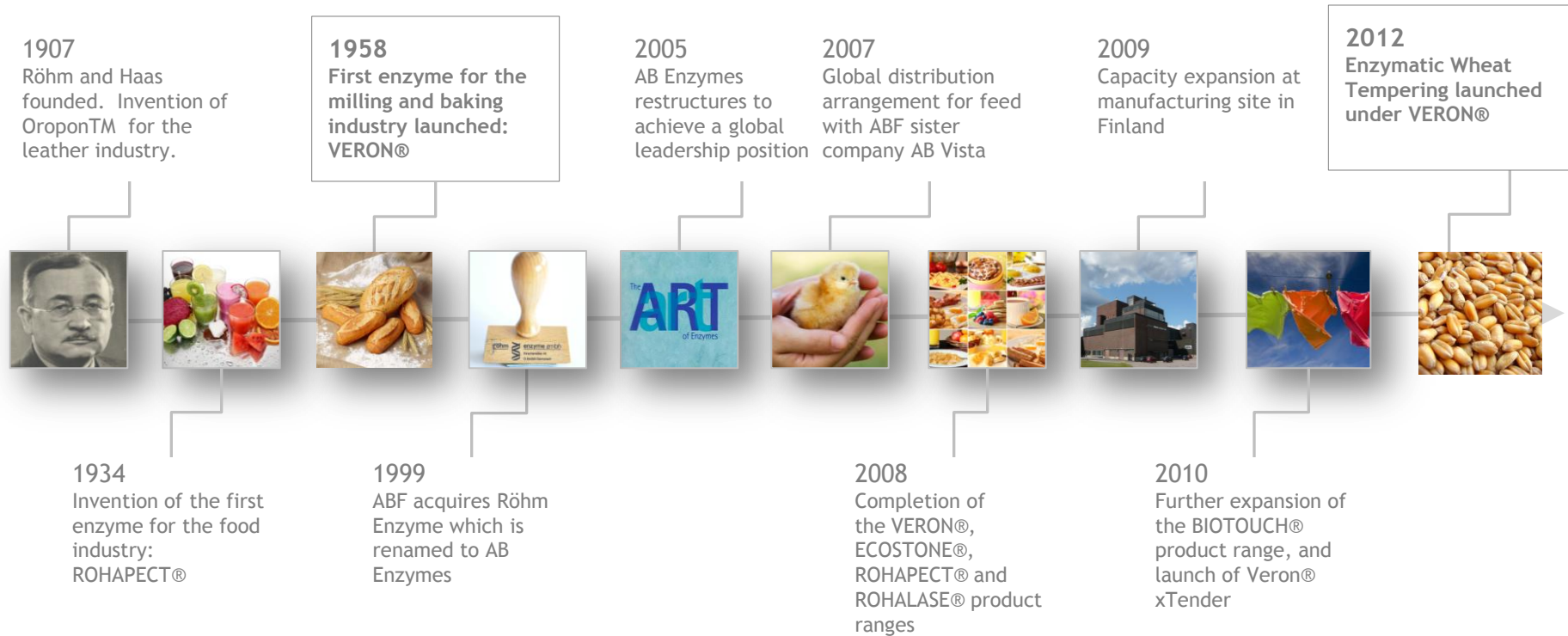


Enzymes for Wheat Conditioning

What's New Session - 7th November 2013
IAOM Mideast & Africa
Sousse Tunisia
Ralf Neumann



HISTORY



VERON®

PROCEEDINGS

Conducted global trials on five continents



AB Enzymes is partnering with various milling institutes in Germany / France and technology providers



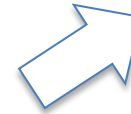
ENZYMATIC WHEAT TEMPERING

Would it be interesting to achieve....?

Tempering Time



First break flour



First break ash

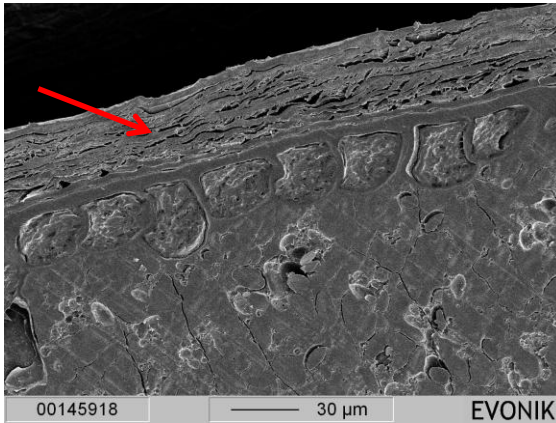


That is what we have observed on hard wheat around the world!

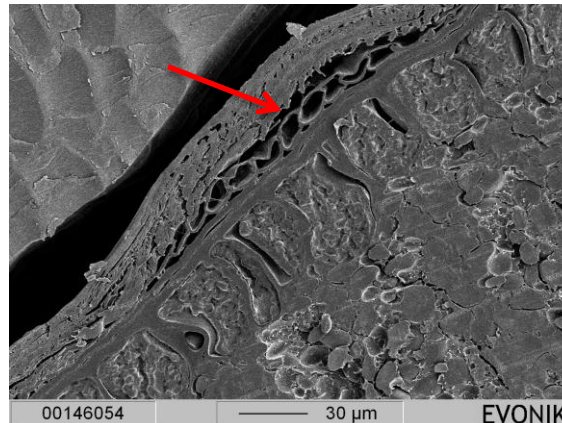
TEMPERING TIME

The physical change of the wheat will influence the milling property.

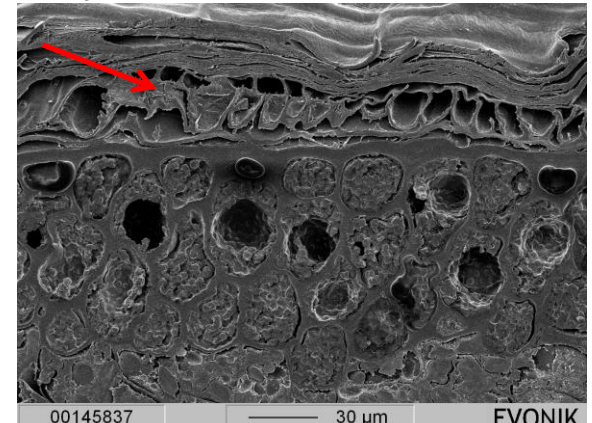
No treatment



Water treatment 24h



Enzyme treatment 12h

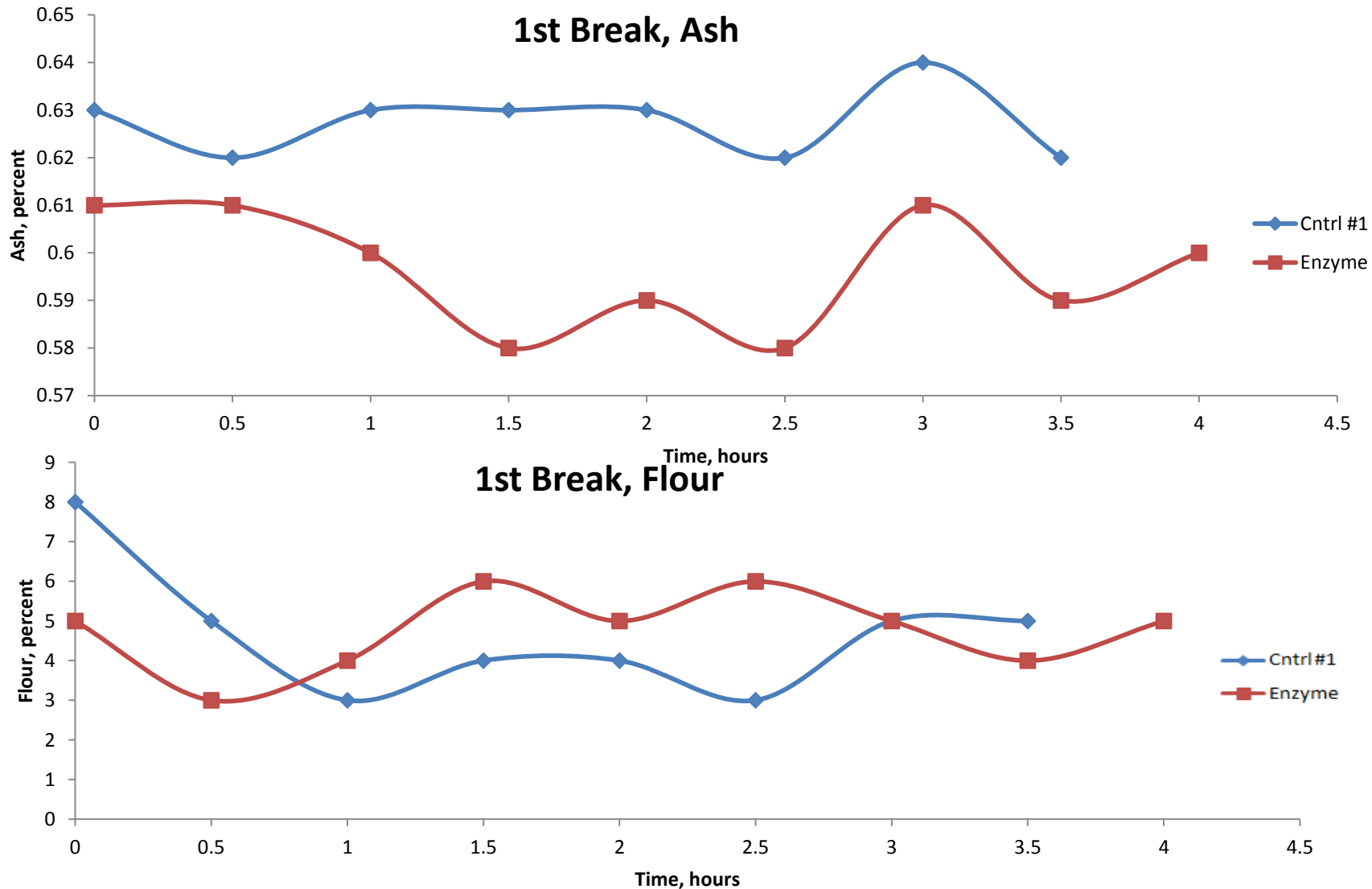


Non Starch Polysaccharides will be transferred from non water soluble into water soluble, degraded into lower sugars and by this changing the physical structure.

The enzyme acts mostly upon the cellulosic structural components of the bran down towards the aleurone layer.

Tempering Time can be reduced !

STREAMS, 1ST BREAK



ENZYMATIC WHEAT TEMPERING SET UP

Different tempering systems at mills



WHEAT TEMPERING

Application guidance

The roller gap settings are still the main factor for increasing the extraction grade (with and without enzyme)



The enzyme tempering is just responsible for an easier separation of endosperm and bran despite the shortened time.

The easier separation allows to increase the amount of mechanical extraction (which normally increases ash content) without the increase in ash.

Without adjusting the mill setting it is unlikely to get the full potential effect by only applying the enzyme to the grain.

TAKE AWAYS

Enzymatic Wheat Tempering - A tool to increase your milling value

- ✓ Combines millers craftsmanship and biotechnology
- ✓ Tempering time down
- ✓ Increase first break flour at reduced ash
- ✓ Low hardware investment cost



THE ART OF ENZYMES

The combination of science and craftsmanship
is powerful - we call this 'The Art of Enzymes'



Ralf Neumann

Customer Solutions Director Baking Enzymes

Email:

Ralf.Neumann@abenzymes.com

www.abenzymes.com

THANK YOU VERY MUCH FOR YOUR ATTENTION!