

NO-OX, THE BEST PROTECTION AGAINST STALING OFF FLAVOURS

Pilsen type base malt made from 2-row spring barley without lipoxygenase activity

Prolonged flavour stability and enhancement of beer shelf life without the need for chemical preservatives or allergenic additives like sulphite



BELGOMALT

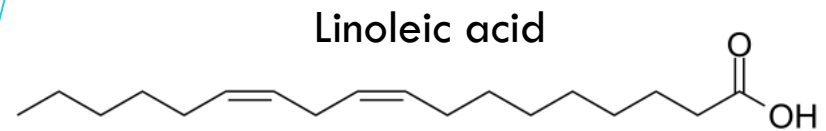


LIPOXYGENASE: FORMATION OF TRANS-2-NONENAL FROM FREE FATTY ACIDS IN MALT DURING MASHING



Malt lipids

lipase
→



LOX-1

O₂

LOX-2

9-LOOH

13-LOOH

Trans-2-nonenal

Carbonyl compounds

Stale cardboard flavour



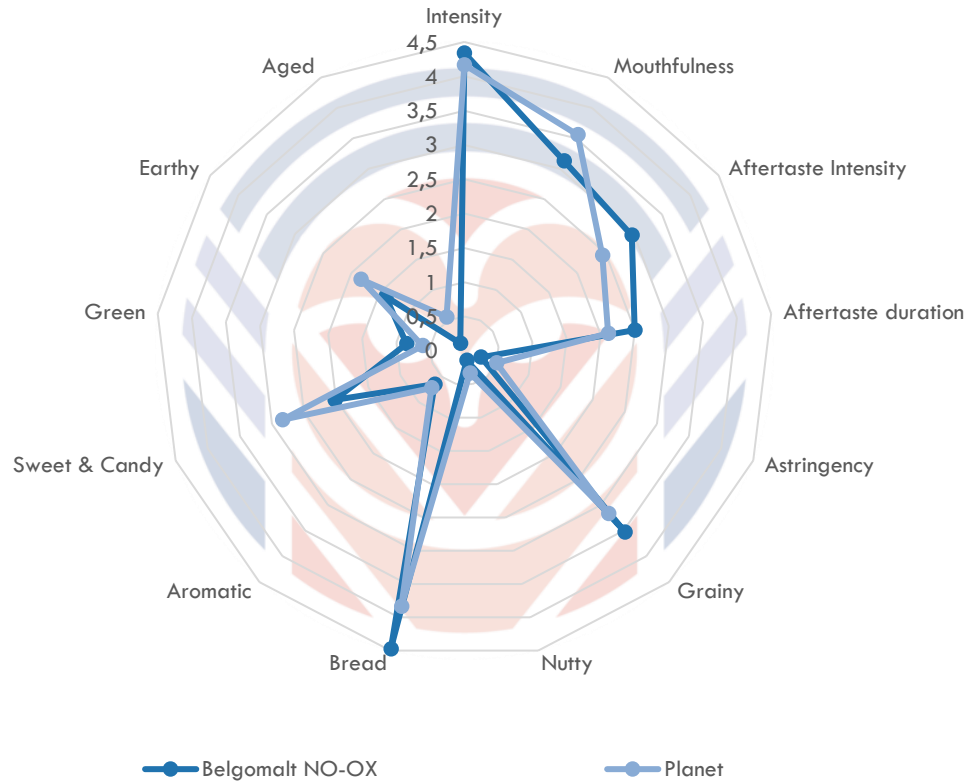
~~LOX-1~~
~~LOX-2~~

MALT SPECIFICATIONS

Malt Analysis	Belgomalt NO-OX	Planet *
EBC Extract 0,2mm dry basis	82,6%	82,4%
EBC colour	3,3 EBC	3,4 EBC
Moisture	4,2%	4,5%
Total protein dry basis	10,8%	11,3%
Soluble protein	4,4%	4,7%
FAN	160 mg/L	172 mg/L
EBC wort pH	5,91	5,93
Diastatic power	304 Wk	319 Wk
EBC β -glucan in wort	139 mg/L	136 mg/L
Friability	85%	85%
Homogeneity	94%	95%
Viscosity	1,56 cP	1,61 cP
<i>LOX-activity</i>	0 U/g	147 U/g

* Average values for production samples from same harvest year as Belgomalt NO-OX

MALT FLAVOUR PROFILE



Belgomalt NO-OX shows great similarity in terms of flavour profile with an industry standard like Planet but reveals no noticeable perception of stale flavours in the malt extract making it an obvious choice for the production of a wide variety of beer styles.

PILOT BREWING TRIAL

Beer Analysis	Belgomalt NO-OX	Planet
Original Gravity (°P)	14,0	14,2
Alcohol (%V/V)	6,4	6,3
ADF (%)	85,6	82,3
EBC Colour	8,4	13,3
Lautering time (min)	39	68
EBC Turbidity	4,77	5,37
Foam Stability NIBEM (s)	192	206
Foam Stability RUDIN (s)	342	215

Beer Profile

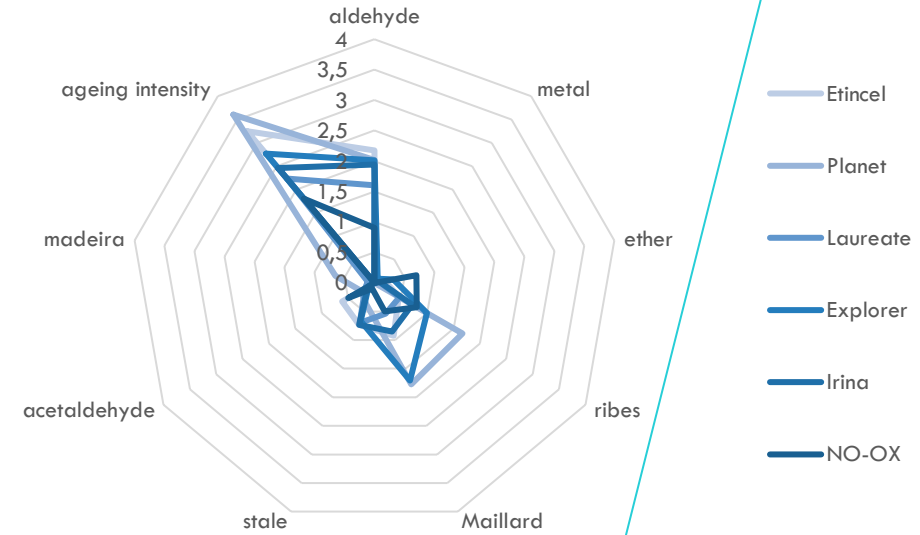
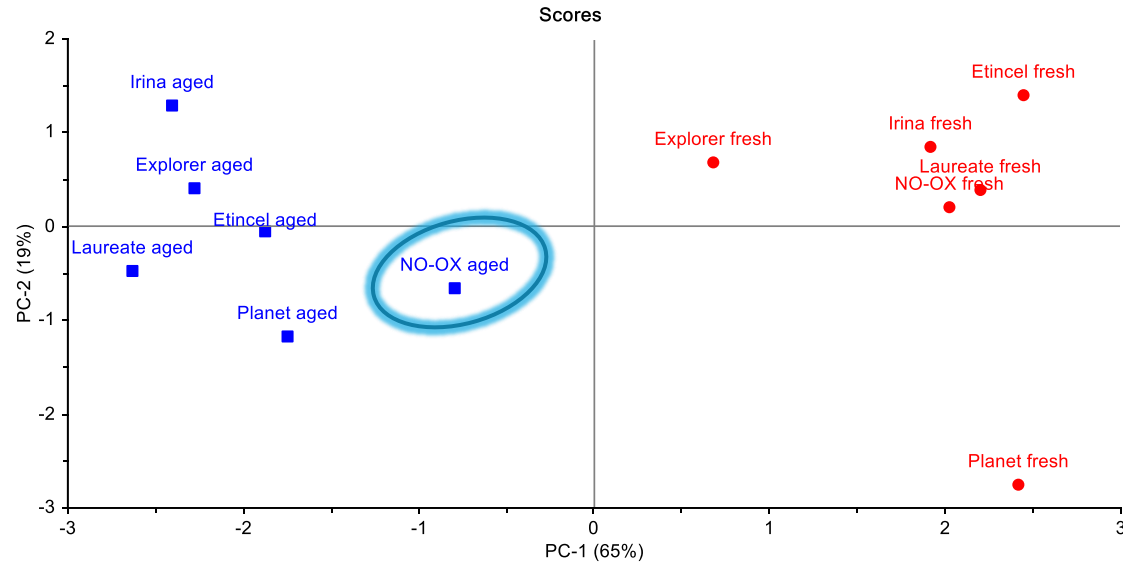
Pilot brewing based on a standard brewing protocol for a top fermented Belgian blonde ale with an automated 5HL brewhouse

Beer Quality

Belgomalt NO-OX provides a high quality premium beer with excellent processing capabilities and an attractive visual aspect in terms of low turbidity and a good foam stability and foam formation (high Rudin-value)

BEER FLAVOUR STABILITY

Pilot beers stored at room temperature for six months



Sensory analysis of aged beers compared to fresh beers made with Belgomalt NO-OX and 5 other common barley malt varieties shows greater flavour stability of the lipoxygenase free beer. Ageing descriptors are consistently scored lower after 6 months of storage time.



CONCLUSION

Belgomalt NO-OX provides brewers with an excellent tool to produce high quality premium beers with a prolonged shelf life and flavour stability without the need to adjust their process.

For more information please visit <https://belgomalt.be>