

Abstracts and Links to Papers of Interest from Other Journals

This section contains titles and links to recent papers published in a number of Journals considered of interest to our readers. Rather than full abstracts there are internet links to Journals that have abstracts available on-line at no charge.

ABSTRACT COMMITTEE 2004

Chair: R.E. Wheeler

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F. Jack, I. Russell, R. Stevens and G.G. Stewart

Abstract brief from *Monatsschrift für Brauwissenschaft*

Formulation of an alternative tasting scheme for the sensory evaluation of beer. C. Schönberger, M. Krottenhaler and W. Back. *Monatsschrift für Brauwissenschaft* 57, April 2004, 16–24.

Descriptors: Tasting scheme, sensory evaluation, beer flavours, “trueness of type”-scheme, flavour plot profile.

In terms of sensory evaluation beer often suffers compared to wine since consumers often refuse to concede a sophisticated sensory evaluation for a beer as necessary. In this research a tasting scheme was developed emanating from the “trueness of type”-scheme, which allows a sensory evaluation not only of the characteristic volatile flavours of beer but also of taste qualities in addition to the main off-flavours. The interpretation may be done in two different ways, in the form of visual comparisons, or in the form of score relations. It was shown that this scheme settles statistical claims in terms of reproducibility. Using this scheme in addition to the widespread DLG-scheme as an instrument for internal quality management holds the possibility to get substantial sensory information of the beer sample.

Raw materials

A link to the full abstract of this paper can be found at

<http://www.rsc.org>

Photolysis of hop-derived trans-iso- α -acids and trans-tetrahydroiso- α -acids: product identification in relation to the lightstruck flavour of beer. A. Hederick, Y. Zhao, P. Sandra, K. Huvaere, F. Roelens and D. De Keukeleire, *Photochem. Photobiol. Sci.*, 2003, 3, pp. 306–414.

The non volatile products of the photolysis of trans-isohumulone and trans-isocohumulone, formed by radical recombination, were studied using HPLC. A large number of products were identified including dimers, and humu-

lone itself was found to be formed by retro-rearrangement. Photolysis of the tetrahydro iso- α -acids showed them to behave in a similar manner, but without the unpleasant off flavour methylbutenethiol.

Microbiology

A link to the full abstract of this paper can be found at

<http://mic.sgmjournals.org>

TCA cycle activity in *Saccharomyces cerevisiae* is a function of the environmentally determined specific growth and glucose uptake rates. L. M. Blank and U. Sauer. *Microbiology*, 2004, 150, pp. 1085–1093.

Respiratory TCA-cycle fluxes exhibited a strong correlation with the maximum specific growth rate attained under different environmental conditions.

Yeast

A link to the full abstract of this paper can be found at

<http://www3.interscience.wiley.com/cgi-bin/abstract/107631641/ABSTRACT>

The *Saccharomyces cerevisiae* alcohol acetyl transferase *Atf1p* is localized in lipid particles. K. J. Verstrepen, S. D. M. van Laere, J. Vercammen, G. Derdelinckx, J.-P. Dufour, I. S. Pretorius, J. Winderickx, J. M. Thevelein and F. R. Delvaux. *Yeast*, 2004, 21(4), 367–377.

Yeast alcohol acetyl transferase, *Atf1p*, is responsible for the major part of volatile ester production in beer and wine fermentations. Overexpressed constructs showed a significant increase in acetate ester formation. By a combination of UV fluorescent microscopy and staining by the fluorescent dye Nile red, the enzyme was shown to be concentrated in lipid particles. Also, *Atf* activity was demonstrated in purified lipid particles.

Applied and Environmental Microbiology

A link to the full abstract of this paper can be found at

<http://blackwellpublishing.com>

(follow the link to Journals, then Table of Contents to reach the full abstract).

Carbohydrate carbon sources induce loss of flocculation of an ale-brewing yeast strain. E. V. Soares, A. Vroman, J. Mortier, K. Rijsbrack and M. Mota. *Journal of Applied Microbiology*, 2004, 96(5), pp. 1117–1123.

The paper demonstrates CHO nutrients stimulate loss of flocculation, and the effect is prevented by ethanol. Glucose-induced loss of flocculence requires de novo protein synthesis.

Archives of Internal Medicine

A link to the full abstract of this paper can be found at

<http://archinte.ama-assn.org/>

Alcohol consumption and cardiovascular disease mortality in hypertensive men. M. K. Malinski, H. D. Sesso, F. Lopez-Jimenez, J. E. Buring and J. M. Gaziano. *Arch. Intern Med.*, Vol. 164 (6), 2004, pp. 623–628.

This study examined the relationship between light to moderate alcohol consumption and total mortality from cardiovascular disease (CVD) among 14,125 male physicians who reported having current or past hypertension. The results, which require confirmation in other large-scale studies, suggest that light to moderate alcohol consumption is associated with a reduction in risk of total and CVD mortality in hypertensive men.

Journal of Cereal Science

Links to the full abstracts of these papers can be found at

<http://www.sciencedirect.com>

Starch composition, fine structure and architecture. R. F. Tester, J. Karkalas and X. Qi. *Journal of Cereal Science*, Vol. 39 (2), 2004, pp. 151–165.

The authors of this review provide an updated catalogue of research on the chemical composition, the fine structure of the components and the macromolecular organisation of starch granules.

Xylan-degrading enzymes and arabinoxylan solubilisation in barley cultivars of differing malting quality. J. Sungurtas, J. S. Swanston, H. V. Davies and G. J. McDougall. *Journal of Cereal Science*, Vol. 39 (2), 2004, pp. 273–281.

It is now apparent that the enzymic breakdown of barley endosperm cell walls is as much dependent on arabinoxylan hydrolases as it is on β -glucanases. The authors of this paper differentiate some malting barley cultivars by measuring xylan degrading enzymes and the dissolution of arabinoxylan.

Quantitative trait loci affecting germination traits and malt friability in a two-rowed by six-rowed barley cross. M. J. Edney and D. E. Mather. *Journal of Cereal Science*, Vol. 39 (2), 2004, pp. 283–290.

The genetic tracing of particular malt parameters is important to barley breeders. This paper describes the quantitative determination of loci which govern germination energy and friability in 2-row/6-row crosses.

Master Brewers Association of the Americas Technical Quarterly

Links to the full abstracts of these papers can be found at

<http://www.mbaa.com/TechQuarterly/>

A critical control point analysis for flavor stability of beer. C. W. Bamforth. *MBAA TQ*, Vol. 41 (2), 2004, pp. 97–103.

New Canadian malting barley varieties and their malting and brewing characteristics. Yueshu Li and Aleksandar Egi. *MBAA TQ*, Vol. 41 (2), 2004, pp. 104–110.

Acid cleaning: your future to greater savings, higher productivity, increased safety, and a better environment. Mauricio Colosia. *MBAA TQ*, Vol. 41 (2), 2004, pp. 111–114.

VIT-bier: the rapid and easy detection method for beer-spoiling bacteria. Karin Thelen, Claudia Beimfohr, and Jiri Snaidr. *MBAA TQ*, Vol. 41 (2), 2004, pp. 115–119.

Ninkasi – an ancient brew revisited. Fred M. Scheer. *MBAA TQ*, Vol. 41 (2), 2004, pp. 120–124.

Journal of the American Society of Brewing Chemists

Links to the full abstracts of these papers can be found at

<http://www.asbcnet.org/Journal/>

Preharvest sprout damage as measured by pearling. S. Heisel, P. Schwarz, and J. Barr. *JASBC*, Vol. 62 (2), 2004, pp. 59–62.

Potential heterotic crosses in hops as estimated by AFLP-based genetic diversity and coefficient of co-ancestry. J. A. Henning, M. S. Townsend, and S. Kenny. *JASBC*, Vol. 62 (2), 1, 2004, pp. 63–70.

Isolation of hop-sensitive variants from beer-spoilage *Lactobacillus brevis* strains. K. Suzuki, M. Koyanagi, and H. Yamashita. *JASBC*, Vol. 62 (2), 1, 2004, pp. 71–74.

The relative importance of temperature and time in the cold conditioning of beer. M. Niedl and C. W. Bamforth. *JASBC*, Vol. 62 (2), 2004, pp. 75–78.

Fractionation of Colored Maillard Reaction Products from Dark Specialty Malts. S. Coghe, B. Adriaenssens, S. Leonard, and F. R. Delvaux. *JASBC*, Vol. 62 (2), 2004, pp. 79–86.

The effect of acid washing and fermentation gravity on mechanical shear resistance in brewing yeast. B. van Bergen and J. D. Sheppard. *JASBC*, Vol. 62 (2), 2004, pp. 87–91.