Papers Recently Published in Related Journals

Below are abstracts and table of contents for papers recently published in related journals: *Journal of the American Society of Brewing Chemists*, *Journal of the Institute of Brewing*, and *Brewing Science – Monatsschrift für Brauwissenschaft*.

Journal of the American Society of Brewing Chemists

Volume 66(4), 2008

Full abstracts for these papers can be found at http://www.asbcnet.org/journal/toc/2008/jno408tc.htm

Changes in Barley Kernel Hardness and Malting Quality Caused by Microwave Irradiation. *P. López-Perea, J. D. C. Figueroa, E. Sevilla-Paniagua, A. Román-Gutiérrez, R. Reynoso, and R. Martínez-Peniche*. J. Am. Soc. Brew. Chem. 66:203-207, 2008.

Extraction of Spent Hops Using Organic Solvents. *M. Anioł and A. Żołnierczyk*. J. Am. Soc. Brew. Chem. 66:208-214, 2008.

A More Cost- and Labor-Efficient Assay for the Combined Measurement of the Diastatic Power Enzymes β-Amylase, α-Amylase, and Limit Dextrinase. *D. E. Evans*. J. Am. Soc. Brew. Chem. 66:215-222, 2008.

Improved Prediction of Malt Fermentability by Measurement of the Diastatic Power Enzymes β-Amylase, α-Amylase, and Limit Dextrinase: I. Survey of the Levels of Diastatic Power Enzymes in Commercial Malts. *D. E. Evans, C. Li, and J. K. Eglinton*. J. Am. Soc. Brew. Chem. 66:223-232, 2008.

Effect of Oxygen Supply on Flavor Formation During Continuous Alcohol-free Beer Production: A Model Study. *R. Lehnert, M. Kuřec, T. Brányik, and J. A. Teixeira*. J. Am. Soc. Brew. Chem. 66:233-238, 2008.

Effects of Beer Adaptation on Culturability of Beer-Spoilage *Dekkera/Brettanomyces* Yeasts. *K. Suzuki, S. Asano, K. Iijima, T. Ogata, Y. Kitagawa, and T. Ikeda*. J. Am. Soc. Brew. Chem. 66:239-244, 2008.

Determination of Tyrosol, 2-Phenethyl Alcohol, and Tryptophol in Beer by High-Performance Liquid Chromatography. *M. Li, Z. Yang, J. Hao, L. Shan, and J. Dong*. J. Am. Soc. Brew. Chem. 66:245-249, 2008.

2007–2008 Report of the Technical Committee. J. Am. Soc. Brew. Chem. 66:250-252, 2008.

Coordination of New and Alternate Methods of Analysis. J. Am. Soc. Brew. Chem. 66:253-256, 2008.

Soluble Starch. J. Am. Soc. Brew. Chem. 66:257-258, 2008.

Standard Method for Measurement of Oxidative Resistance of Beer by Electron Paramagnetic Resonance. J. Am. Soc. Brew. Chem. 66:259-260, 2008.

Method for Reference Standard for Total Package Oxygen. J. Am. Soc. Brew. Chem. 66:261-263, 2008.

TBA Test as an Indicator for Flavour Stability: Thiobarbituric Acid Index for Wort and Beer. J. Am. Soc. Brew. Chem. 66:264-265, 2008.

PCR Applications to Brewing: Differentiation of Brewing Yeast Strains by PCR Fingerprinting. J. Am. Soc. Brew. Chem. 66:266-270, 2008.

Foam Stability of Beer Using the NIBEM-T Meter. J. Am. Soc. Brew. Chem. 66:271-272, 2008.

Journal of the Institute of Brewing

Volume 114(3), 2008

Links to the full abstracts of these papers can be found at http://www.scientificsocieties.org/jib/contents/2008_114_3.htm

Glucose and Fructose Fermentation by Wine Yeasts in Media Containing Structurally Complex Nitrogen Sources. *M. Miranda, Jr., M. Batistote, and J. R. Ernandes.* J. Inst. Brew. 114:199-204, 2008.

A Simplified Method for the Isolation and Estimation of Cell Wall Bound Glycogen in *Saccharomyces cerevisiae*. *P. P. Aklujkar, S. N. Sankh, and A. U. Arvindekar.* J. Inst. Brew. 114:205-208, 2008.

Sake and Beer Spoilage Lactic Acid Bacteria—A Review. *K. Suzuki, S. Asano, K. Iijima, and K. Kitamoto.* J. Inst. Brew. 114:209-223, 2008.

The Relevance of Different Enzymes for the Hydrolysis of β-Glucans in Malting and Mashing. *M. Kanauchi and C. W. Bamforth.* J. Inst. Brew. 114:224-229, 2008.

The Effect of Barley Adjuncts on Free Amino Nitrogen Contents in Wort. *M. Yano, H. Tsuda, T. Imai, Y. Ogawa, and M. Ohkochi.* J. Inst. Brew. 114:230-238, 2008.

An Alternative Method for the Determination of Some of the Antioxidant Phenolics in Varietal Turkish Red Wines. *R. E. Anlı, N. Vural, and E. Kızılet.* J. Inst. Brew. 114:239-245, 2008.

The Impact of a Xanthohumol-Enriched Hop Product on the Behavior of Xanthohumol and Isoxanthohumol in Pale and Dark Beers: A Pilot Scale Approach. *P. J. Magalhães, P. Dostalek, J. M. Cruz, L. F. Guido, and A. A. Barros.* J. Inst. Brew. 114:246-256, 2008.

A Semi-quantitative Method for the Detection of Trace Amounts of Native Collagen in Beer. *K. Hofman, K. Bulling, S. Marshall, and T. Chadderton.* J. Inst. Brew. 114:257-261, 2008.

A Study on the Relationship Between the Volatile Composition of Moscato and Prosecco Grappa and Enzymatic Activities Involved in Its Production. *F. Zocca, G. Lomolino, P. Spettoli, and A. Lante.* J. Inst. Brew. 114:262-269, 2008.

Optimised Acidification Power Test of Yeast Vitality and Its Use in Brewing Practice. *P. Gabriel, M. Dienstbier, D. Matoulková, K. Kosař, and K. Sigler.* J. Inst. Brew. 114:270-276, 2008.

Brewing Science – Monatsschrift für Brauwissenschaft

Volume 61(9/10) 2008

Vaporisation of Aromatic Components During Beer Production. *H. Scheuren, K. Sommer, and M. Hertel.* Brew. Sci. (Monatsschr. Brauwiss.) 61(9/10):162-169, 2008.

In a lot of processes and production steps in the life-science-industry liquid semi-finished products are in contact with high temperatures and associated pressures. As a result steaming

operations occur which have to be seen as thermodynamic separation processes. Concerning the exhaustion of aromatic components these steps influence intentionally or unintentionally the quality of the final product. The purport of this article is an overview of the thermodynamic basics concerning the steaming of aromatic components. Therefore the process of vaporisation by vaporescence and vaporisation by boiling are both explained and defined. Furthermore this theoretical background and the corresponding formulas are tested and proofed by two samples of the sum of all existing experiments.

Changes of the Content of Water-Soluble Bioactive Compounds During the Malting Process of Spelt Wheat (*Triticum aestivum var. spelta*). *M. Krahl, C. Hagel, M. Zarnkow, W. Back, and S. Kreisz.* Brew. Sci. (Monatsschr. Brauwiss.) 61(9/10):170-174, 2008.

Spelt wheat (*Triticum aestivum var. spelta*), a hexaploid variety of the genus *Triticum* is a cereal closely related to common wheat (*Triticum aestivum*). The major non-starchy carbohydrates in spelt wheat are arabinoxylans and fructans. Furthermore spelt wheat is known to contain relatively high levels of thiamine and riboflavin, two vitamins from the B-group. In this work the influence of a standard malting process on the content of these four bioactive compounds was studied. The amount of water-extractable arabinoxylan increased significantly during the malting process, as well as the water-extractable riboflavin content. The fructan concentration in the analysed samples showed a slight increase and thiamine levels stayed stable.

γ-Nonalactone in Beer: Biosynthesis by Yeast. *L.-A. Garbe.* Brew. Sci. (Monatsschr. Brauwiss.) 61(9/10):175-180, 2008.

γ-Nonalactone is known as an aroma active and chiral compound in beer and other fermented products. Labeling experiments with tetra deuterated (9,10,12,13-$^{2}H_{4}$)-linoleic acid, single deuterated 13- and 9- hydroxyoctadecadienoic acids (HODE) and its corresponding oxygen-18 labeled oxidation product [$^{18}O_{1}$]– 13- and 9- HODE elucidated two different biosynthetic routes from linoleic oxidation products (HODE) to γ-nonalactone in brewers yeast *Saccharomyces cerevisiae* and a model yeast *Sporobolomyces odorus*. I) 13-Peroxidation of linoleic acid into 13-HODE in barley or during malting and β-oxidation followed by one α-oxidation type step finally resulting in γ-nonalactone with (*S*)-stereospecificity ((*S*) ~ 60 % e.e.). II) 9-Peroxidation of linoleic acid into 9-HODE in barley or during malting and Baeyer-Villiger type oxidation resulting in 2*E*,4*E*-nonadien-1-ol and azelaic acid. 2*E*,4*E*-nonadien-1-ol was further transformed to γ-nonalactone with (*R*)-stereospecificity ((*R*) ~ 46 % e.e.).