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(2), 2008

Full abstracts for these papers can be found at http://www.asbcnet.org/journal/toc/2008/jno208tc.htm

Determination of Ochratoxin A in Beer by Immunoaffinity Cleanup and Liquid Chromatography with Tandem Mass Spectrometry. *M. Omote, Y. Kitagawa, and N. Mochizuki*. J. Am. Soc. Brew. Chem. 66:59-62, 2008.

Multiplex PCR for Putative *Lactobacillus* and *Pediococcus* Beer-Spoilage Genes and Ability of Gene Presence to Predict Growth in Beer. *M. Haakensen, A. Schubert, and B. Ziola*. J. Am. Soc. Brew. Chem. 66:63-70, 2008.

Turbidimetric Titration of a Haze-Active Polyphenol in Beer. *J. Li and K. J. Siebert*. J. Am. Soc. Brew. Chem. 66:71-79, 2008.

Preliminary Study for the Development of a Long-Life, Continuous, Primary Fermentation System for Beer Brewing. *T. Inoue and A. Mizuno*. J. Am. Soc. Brew. Chem. 66:80-87, 2008.

Relative Bitterness of Reduced and Nonreduced Iso-α-acids in Lager Beer. *A. Fritsch and T. H. Shellhammer*. J. Am. Soc. Brew. Chem. 66:88-93, 2008.

Miniaturizing the Fermentation Assay: Effects of Fermentor Size and Fermentation Kinetics on Detection of Premature Yeast Flocculation. *J. C. Lake, R. A. Speers, A. V. Porter, and T. A. Gill*. J. Am. Soc. Brew. Chem. 66:94-102, 2008.

Effect of Enzyme Pretreatments on the Determination of Deoxynivalenol in Barley. *B. Zhou, P. Schwarz, G.-Q. He, J. Gillespie, and R. Horsley*. J. Am. Soc. Brew. Chem. 66: 103-108, 2008.

Use of RP-HPLC-ESI(–)-MS/MS to Differentiate Various Proanthocyanidin Isomers in Lager Beer Extracts. *D. Callemien and S. Collin.* J. Am. Soc. Brew. Chem. 66:109-115, 2008.

Identification of Antiradical Hop Compounds. *P. L. Ting, L. Lusk, J. Refling, S. Kay, and D. Ryder.* J. Am. Soc. Brew. Chem. 66:116-126, 2008.

Protein Changes During Malting of Buckwheat. *B. P. Nic Phiarais, B. D. Schehl, and E. K. Arendt.* J. Am. Soc. Brew. Chem. 66:127-135, 2008.

Journal of the Institute of Brewing

Volume 114(1), 2008

Links to the full abstracts of these papers can be found at http://www.scientificsocieties.org/jib/contents/2008_114_1.htm

A Review of Flavour Formation in Continuous Beer Fermentations. *T. Bányik, A. A. Vicente, P. Dostálek, and J. A. Teixeira.* J. Inst. Brew. 114:3-13, 2008.

Application of Ultrasonic Waves as a Priming Technique for Accelerating and Enhancing the Germination of Barley Seed: Optimization of Method by the Taguchi Approach. *M. Yaldagard, S. A. Mortazavi, and F. Tabatabaie.* J. Inst. Brew. 114:14-21, 2008.

Investigation of Protein Composition of Barley by Gel Electrophoresis and MALDI Mass Spectrometry with Regard to the Malting and Brewing Process. *J. Bobalova, J. Salplachta, and J. Chmelik.* J. Inst. Brew. 114:22-26, 2008.

Antioxidant Properties of Free, Soluble Ester and Insoluble-Bound Phenolic Compounds in Different Barley Varieties and Corresponding Malts. *M. Dvořáková, L. F. Guido, P. Dostálek, Z. Skulilová, M. M. Moreira, and A. A. Barros.* J. Inst. Brew. 114:27-33, 2008.

Production of Isoamyl Acetate from Sugar Beet Molasses by *Williopsis saturnus* var. *saturnus*. *M. Yilmaztekin, H. Erten, and T. Cabaroglu.* J. Inst. Brew. 114:34-38, 2008.

Effect of Process Conditions on Alcohol Yield of Wheat, Maize and Other Cereals. *R. C. Agu, T. A. Bringhurst, J. M. Brosnan, and F. R. Jack.* J. Inst. Brew. 114:39-44, 2008.

Disc Stack Centrifuge Operating Parameters and Their Impact on Yeast Physiology. *P. H. Chlup, D. Bernard, and G. G. Stewart.* J. Inst. Brew. 114:45-61, 2008.

Performance of Husked, Acid Dehusked and Hull-less Barley and Malt in Relation to Alcohol Production. *R. C. Agu, T. A. Bringhurst, and J. M. Brosnan.* J. Inst. Brew. 114:62-68, 2008.

Diversity in Spoilage Yeast *Dekkera/Brettanomyces bruxellensis* Isolated from French Red Wine. Assessment During Fermentation of Synthetic Wine Medium. *P. Barbin, J.-L. Cheval, J.-F. Gilis, P. Strehaiano, and P. Taillandier.* J. Inst. Brew. 114:69-75, 2008.

Brewing Science – Monatsschrift für Brauwissenschaft

Volume 61(1/2) 2008

The Impact of Liquid Adjunct and Barley on Wort and Beer Quality. *M. Yano, W. Back, and M. Krottenthaler.* Brew. Sci. (Monatsschr. Brauwiss.) 61(1/2):10-24, 2008.

The use of adjunct is one of the most important factors in the beer industry, since adjunct not only influences production variables such as quality and cost, but also has an influence on market sales strategy, such as pricing strategy in Japan where liquor tax is assessed according to malt usage. Although a great deal of knowledge has been accumulated regarding adjuncts such as liquid adjunct (L. A.) and barley, not many reports have been published regarding special quality characteristics derived from these adjuncts, such as beer flavor stability. In this study, we have performed exhaustive research to elucidate the impact of L. A. and barley on process and quality, specifically with regard to taste and flavor stability, by comparing wort and beer made from 100 % malt, 75 % malt with 25 % adjunct, and 60 % malt with 40 % adjunct, using a pilot plant capable of making 60 L of cold wort. No exogenous enzymes were used in the brews. As a result of our experiments, we discovered a tendency toward improved flavor stability when 40% of malt was substituted for L. A. We also found a ten-

dency that flavor stability decreased when 40 % of malt was substituted for barley. Other process and quality characteristics of adjunct beers are also discussed as well.

Efficient Formation of Iso-Humulones in Aqueous Hop Solutions at Low Temperatures. *L. Gabel, K. Glas, F. Jacob, A. Friess, and H. Parlar.* Brew. Sci. (Monatsschr. Brauwiss.) 61(1/2):25-31, 2008.

In this work, new cognitions on the influence of common parameters for the isomerization of humulones, such as the temperature, pH, storage time, the concentration of humulones, microbial growth and pressure in especially prepared aqueous hop solutions were observed. The results provided an important background for future works regarding the enrichment of humulones and iso-humulones from aqueous solutions by using foam fractionation, in order to produce isomerized and non-isomerized marketable hop products. At low pHs between 2 and 3, higher isomerization rates were observed. Isomerization took place already at low temperatures between 8 and 10 °C, which previously has not been observed. At higher pHs, sufficient isomerization was also induced, but after a duration of ca. 72 hours. Higher isomerization rates occurred at longer storage duration of up to, e.g., 240 hours. Regarding the concentration of humulones in the hop solutions, it was found that the ratio of solved humulones to the formation of iso-humulones remained nearly the same (mostly 50 %, but at least 25 %). The ratio observed over a period of 240 hours continued almost unchanged, except for 144 hours (more than 75 %). Isomerization under the applied conditions took place at normal pressure. A relationship between the concentration of humulones and iso-humulones towards microbial growth could not be established, because microorganisms grew in aqueous hop solutions spiked with a disinfectant, as well as in those without disinfectant.