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(1), 2008

Full abstracts for these papers can be found at http://www.asbcnet.org/journal/toc/2008/jno108tc.htm

Comparison of Foam Quality and the Influence of Hop α-Acids and Proteins Using Five Foam Analysis Methods. *D. E. Evans, A. Surrel, M. Sheehy, D. C. Stewart, and L. H. Robinson.* J. Am. Soc. Brew. Chem. 66:1-10, 2008.

A Comparison of Standard and Nonstandard Measures of Malt Quality. *C. A. Henson and S. H. Duke.* J. Am. Soc. Brew. Chem. 66:11-19, 2008.

Sensory Evaluation of Beer Enriched with Antioxidant Vitamins. *E. Jeney-Nagymate and P. Fodor.* J. Am. Soc. Brew. Chem. 66:20-28, 2008.

Evaluation of Indigenous Botswana Sorghum Cultivars with Respect to Their Diastatic Power, α-Amylase, β-Amylase, and Limit Dextrinase Potentials for Malting. *R. Letsididi, B. Bulawayo, M. Kebakile, and L. I. Ezeogu.* J. Am. Soc. Brew. Chem. 66:29-36, 2008.

Application of Multiplex PCR to the Detection of Beer-Spoilage Bacteria. *S. Asano, K. Suzuki, K. Ozaki, H. Kuriyama, H. Yamashita, and Y. Kitagawa.* J. Am. Soc. Brew. Chem. 66:37-42, 2008.

Monitoring Spoilage Bacteria and Wild Yeasts in Eastern Chinese Breweries. *J. Lin, Y. Cao, J. Sun, and J. Lu.* J. Am. Soc. Brew. Chem. 66:43-47, 2008.

On the Mechanisms of Adsorbent Interactions with Haze-Active Proteins and Polyphenols. *K. J. Siebert and P. Y. Lynn.* J. Am. Soc. Brew. Chem. 66:48-54, 2008.

Journal of the Institute of Brewing

Volume 113(4), 2007

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

Alternatives to Isinglass for Beer Clarification. *S. L. Walker, M. C. Donet Camarena, and G. Freeman.* J. Inst. Brew. 113:347-354, 2007.

Proso millet (*Panicum miliaceum* L.): An Evaluation of the Microstructural Changes in the Endosperm during the Malting Process by Using Scanning-Electron and Confocal Laser Microscopy. *M. Zarnkow, A. Mauch, W. Back, E. K. Arendt, and S. Kreisz.* J. Inst. Brew. 113:355-364, 2007.

Control of Superoxide Dismutase Activity during Malting Using Plackett-Burman and Box-Behnken Experimental Design and Its Effect on Reducing Power of Wort. *D.-J. Meng, J. Lu, W. Fan, J.-J. Dong, Y. Lin, and L.-J. Shan.* J. Inst. Brew. 113:365-373, 2007.

Design and Operation of an Artificial Pit for the Fermentation of Chinese Liquor. *Y. Yue, W. Zhang, R. Yang, Q. Zhang, and Z. Liu.* J. Inst. Brew. 113:374-380, 2007.

Enhanced Quantitative Extraction and HPLC Determination of Hop and Beer Bitter Acids. *B. Jaskula, K. Goiris, G. De Rouck, G. Aerts, and L. De Cooman.* J. Inst. Brew. 113:381-390, 2007.

High Gravity Brewing by Continuous Process Using Immobilised Yeast: Effect of Wort Original Gravity on Fermentation Performance. *G. Dragone, S. I. Mussatto, J. B. Almeida e Silva.* J. Inst. Brew. 113:391-398, 2007.

Brewing Science – Monatsschrift für Brauwissenschaft

Volume 60(9/10) 2007

Controlled coculture fermentation for the production of new beverages. *J. Bader, E. Mast-Gerlach, and U. Stahl.* Brew. Sci. (Monatsschr. Brauwiss.) 60(9/10):128-134, 2007.

Special strains of *Gluconobacter*, *Lactobacillus* and *Kluyveromyces* have been selected for the production of a new beverage on the basis of wort. This beverage contains the health benefiting substances gluconic acid, lactic acid and an ethanol concentration below 0.5 % (v/v). Fermentation was adapted for growth behaviour and to maximise production – the strategy developed concurrently produces (a) gluconic acid by using the strictly aerobic *Gluconobacter* strain and (b) lactic acid by using the anaerobic strain of *Lactobacillus*. The concentrations of the simultaneously produced organic acids are controlled by the level of oxygen in the fermentation medium. The following mixed fermentation of *Lactobacillus*, *Gluconobacter* and *Kluyveromyces* using the chosen yeast strain resulted in producing a pleasant flavour.

The use of response surface methodology to optimise malting conditions of quinoa (*Chenopodium quinoa* L.) as a raw material for gluten-free foods and beverages. *M. Zarnkow, Th. Geyer, B. Lindemann, F. Burberg, W. Back, E. K. Arendt, and S. Kreisz.* Brew. Sci. (Monatsschr. Brauwiss.) 60(9/10):118-126 2007.

Response surface methodology was used to investigate the influence of the three malting parameters, degree of steeping, germination time and temperature, on the quality of quinoa malt. Each predictor variable was tested at three levels. Germination times were set to 5, 6, and 7 d, degrees of steeping were set to 46, 50, and 54 %, and germination temperatures were 8, 11.5, and 15 °C. A kilning temperature of 74 °C was used for all malts. A series of malt quality attributes was investigated including extract, β-amylase activity, limit dextrinase activity, α-amino nitrogen (FAN), and dimethyl sulfide precursor (DMSP). The optimal malting programme was achieved with 5 d germination time, 46 % degree of steeping, 15 °C steeping and germination temperature. The obtained amylolytic and proteolytic attributes were 59.6 % extract, 2021 U/kg limit dextrinase activity, 20 U/g β-amylase activity, 19.1 mg/100 mL FAN, and 12.7 mg/kg dimethyl sulfide precursor (DMSP). α-amylase activity could not be proved, therefore it was not considered for the evaluation.

Volume 60(11/12) 2007

Role of ns-LTP1 in the Development of Primary Gushing. *D. Hecht and S. Hippeli.* Brew. Sci. (Monatsschr. Brauwiss.) 60(11/12): 1-9, 2007.

Our investigations were focussed on ns-LTP1 (non specific lipid transfer protein 1) as the main inductor of the primary gushing phenomenon. We asserted that gushing beer contains more ns-LTP1 than nongushing beer and these overbalance is responsible for over foaming. Surprisingly, less to non ns-LTP1 was detectable in a set of gushing beers. We showed that loss of ns-LTP1 depends on fungal infestation and heating procedure. ns-LTP1 degrading activity of heated culture filtrates of *Fusarium culmorum* and *Fusarium graminearum* support the assumption that heat stable extracellular proteinases secreted by the two Fusaria strains are responsible for protein degradation. Heating procedure also results in a destruction of naturally occurring proteinase inhibitors in wheat kernels. This is the condition precedent to an effective operation of the fungal proteases. Furthermore our results support the conception that not ns-LTP1 itself, but rather glycated peptides generated during proteolytic fragmentation of modified ns-LTP1 species initiate gushing activity.