Abstracts and Links to Papers of Interest from Other Journals

This section contains links to recent papers, published in a number of Journals considered of interest to our readers.

Journal of the American Society of Brewing Chemists

Volume 67(1), 2009

Links to the full abstracts from the papers below can be found at

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

Development of a Biometric System for the Measurement of Swallowing Motion While Drinking Beer. H. Kojima, H. Kaneda, J. Watari, Y. Nakamura, and T. Hayashi. JASBC, Vol. 67(1), 2009, pp. 1-7.

The Bitter Qualities of Reduced and Nonreduced Iso-alpha-acids. A. Fritsch and T. H. Shellhammer. JASBC, Vol. 67(1), 2009, pp. 8-13.

Improved Prediction of Malt Fermentability by Measurement of the Diastatic Power Enzymes beta-Amylase, alpha-Amylase, and Limit Dextrinase: II. Impact of Barley Genetics, Growing Environment, and Gibberellin on Levels of alpha-Amylase and Limit Dextrinase in Malt. D. E. Evans, C. Li, S. Harasymow, S. Roumeliotis, and J. K. Eglinton. *JASBC,* Vol. 67(1), 2009, pp. 14-22.

Impact of Mashing-off Temperature and Alternative Kettle-Hopping Regimes on Hop alpha-Acids Utilization upon Wort Boiling. B. Jaskula, M. Spiewak, J. De Cock, K. Goiris, S. Malfliet, S. Poiz, G. De Rouck, G. Aerts, and L. De Cooman. *JASBC,* Vol. 67(1), 2009, pp. 23-32.

Identification of Biological Wort Turbidity Caused by Microbial Contamination of Gairdner Barley. T. Zhang, P. Xu, J. Sun, K. Xu, L. Sun, Z. Qian, R. Qiu, and C. Zhao. *JASBC,* Vol. 67(1), 2009, pp. 33-37.

Dietary Fiber Complex in Beer. M. E. Díaz-Rubio and F. Saura-Calixto. *JASBC,* Vol. 67(1), 2009, pp. 38-43.

Hopping Technology in Relation to alpha-Acids Isomerization Yield, Final Utilization, and Stability of Beer Bitterness. B. Jaskula, K. Goiris, F. Van Opstaele, G. De Rouck, G. Aerts, and L. De Cooman. *JASBC,* Vol. 67(1), 2009, pp. 44-57.

Publication no. G-2009-0508-ABS

Expression of the Cell Wall Mannoprotein Genes *CWP* and *DAN* During Industrial-Scale Lager Fermentations. S. J. Lawrence, B. R. Gibson, and K. A. Smart. *JASBC,* Vol. 67(1), 2009, pp. 58-62.

Master Brewers Association of the Americas Technical Quarterly

Volume 46(1), 2009

Links to the full abstracts from the papers below can be found at

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

Nutritional Improvement of Distillers Grains by Solid-State Fermentation. Brian Hoskins and Mark Lyons. *MBAA TQ* Vol. 46(1), 2009, doi:10.1094/TQ-46-1-0326-01 An Evaluation of the Public Understanding of Beer and Brewing. J. E. Smythe and C. W. Bamforth. *MBAA TQ* Vol. 46(1), 2009, doi:10.1094/TQ-46-1-0316-01

Corn Size Distribution, Cold Water Extract, and Diastatic Power in Relation to Malted Barley Quality. Reginald C. Agu. *MBAA TQ* Vol. 46(1), 2009, doi:10.1094/TQ-46-1-0226-01

Comparing Different Rinsing Methods Used During Cleaning-in-Place of Process Vessels to Minimize Water Use. George Agius and Doug Funnell. *MBAA TQ* Vol. 46(1), 2009, doi:10.1094/TQ-46-1-0212-01

5S: A Systematic Approach to Improving Brewery Operations. Mark Fischer. *MBAA TQ* Vol. 46(1), 2009, doi:10.1094/TQ-46-1-0210-01

Wort Boiling by Batch Rectification—Possibilities for Reducing Required Evaporation. Dr.-Ing. Marcus Hertel, and Prof. Dr.-Ing. Karl Sommer. *MBAA TQ* Vol. 46(1), 2009, doi:10.1094/TQ-46-1-0208-01

Brewing Science- Monatsschrift für Brauwissenschaft

Fachverlag Hans Carl, Nürnberg, Germany

Vol 62 (Jan–Feb), 2009

Mineral Nutrients and Malt Quality of Spring Barley *(Hordeum vulgare* L.*).* M. Munzert, M. Baumer, U. Blum, A. Wurzinger, G. Henkelmann, M. Herz and H. Holland-

Moritz. Brewing Science (Monatsschrift für Brauwissenschaft) Vol. 62 (Jan/Feb), 2009, pp. 1-13.

Samples of barley grains from 10 varieties and 8 locations were analysed on 48 mineral nutrients and 13 malt quality parameters. The article presents means, ranges of variation and (expanded) measurement uncertainties. For many elements a significant influence of varieties could be found. The statistical analysis includes the calculation of coefficients of correlation between the element content and the quality parameters using a covariance analysis in order to eliminate the variety effects (partial coefficient rp). The closest positive rp (adjusted by varieties) to malt quality have been found for K, Pb, Mo and Na. Most of minerals correlate negatively to the malt quality index, especially Zn (rp = –0,67), Mg (rp = –0,47) and Fe (rp = –0,43). The opposite behaviour of zinc in malt and yeast is discussed, as well as the physiological background of the minerals with relation to the malt quality and the practical relevance of the results for farming and breeding.

New International Calibration Standard (ICS-I3) for HPLC Analysis of Iso-α-Acids. M. Biendl—Submitted on behalf of the International Subcommittee for Isomerized Hop α-Acids Standards. *Brewing Science* (*Monatsschrift für Brauwissenschaft*) Vol. 62 (Jan/Feb), 2009, p. 25.

The Beer Aroma Wheel. A. Schmelzle. *Brewing Science (Monatsschrift für Brauwissenschaft)* Vol. 62 (Jan/Feb), 2009, pp. 26-32.

Aroma wheels provide a terminology for the sensory description of products. They were developed to help people responsible for quality control and product development to communicate using unambiguous terminology. Thirty years ago, Meilgaard developed the beer flavour wheel. Its development was an important milestone in establishing an accepted terminology for the sensory science of beer. It still serves as the basis for the selection of terms in descriptive profiling tests today. Sensory science has since come a long way in terms of accumulating knowledge and developing sensory standards. In order to guarantee a consistent use of language, the existing beer terminology therefore needs to be reviewed. In Meilgaard's flavour wheel, olfactory, gustatory and haptic sensory perceptions overlap and several terms are not clearly matched with sensory perceptions. Furthermore it is important for the communication with customers that they, too, understand the terminology. In some cases, it can be difficult to assign terms to the individual classes. This assumes that tasters come equipped with the knowledge of a beer connoisseur. This article presents a beer aroma wheel that is structured according to sensory standards. Even people who have no knowledge of the way flavours in beer develop can use it to describe sensory perceptions. Alongside this, a beer aroma wheel is shown that supports assessors in the description of positive and desirable characteristics of beers. Initially an overview of the sensory language in accordance with European standards is provided.