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The study of β-myrcene extraction efficiency in beers using 2 types of equipment and process characteristics

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Dry hopping is a method used in the beer industry to improve the aroma profile of the given beer styles. Usually it is done after the cooling of the wort or at the end of the fermentation. Different methods are used, there is no strict consensus about the specific time of usage, but the efficiency of the process varies heavily based on the methods, process characteristics and equipments used. One of the tests was conducted using a continuous set-up with a filter candle and pump equipped machine, while the second test was conducted in a semi-continuous set-up with a filter basket and overpressure driven mass transfer. In both cases samples were taken from different batches of beers, n-hexane was used as a solvent for the aromatic compounds. After 1 hour at 25oC stirring the samples were centrifuged at 6000 RPM for 10 minutes, 5 mL of supernatant was transferred to a sampling glass containing Na_2SO_4. The samples were analyzed using a GC-MS analyzer. We could conclude that both types of equipment showed effective extraction parameters compared to the traditional method, while also being faster and more economical.

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Effect of the temperature on the rheological properties of compound coating

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Cocoa butter is one of the most valuable components of chocolate, but due to its high world market price, various cocoa butter replacements are increasingly used in the confectionery industry. The objective of our experiment was to investigate the rheological properties of a compound coating depending on the pre-treatment temperature regimes. Compound coating samples were measured at six different temperatures with 2°C resolution between 40 and 50°C. The melted samples were measured by RV1 rotational rheometer at the actual melting temperatures. The remaining melted samples were filled into 9x9x9mm cubes molds. These were cooled in refrigerator and at room temperature for 3 hours with different combinations. The solid cubes were measured with TPA, cutting test and puncture test by SMS TA-XTplus precision penetrometer at room temperature. Results show the effect of pre-treatment on the viscosity of the coating. Furthermore significant differences were found among the samples cooled with different cooling methods. Our results stress the importance of the correct handling of the materials for confectioners.