Aims & scope

*Flavour and Fragrance Journal* publishes original research articles, reviews and special reports on all aspects of flavour and fragrance. Its high scientific standard and international character will be ensured by regional editorial support and a strict refereeing system. Emphasis will be placed on analytical aspects and the important role that analysis in its widest sense plays in the support of research and applications.

As well as essential oils and other natural and naturally derived products, complementary synthetic products will be included, where appropriate. The comprehensive coverage of the journal will be reflected in the wide range of product types embraced, such as fragrances and their compositions, and the flavour, colours and odours of foodstuffs. There are many associated topics of interest, often requiring the use of interdisciplinary techniques. In addition to discussion of their end uses, coverage will include such important integral areas as biomedical sciences and legislation.

Research Articles

This laboratory previously reported that peroxyhemiacetals may be present in some citrus oils, formed by reaction of terpene hydroperoxides with endogenous aldehydes. Peroxyhemiacetals can dissociate back to the corresponding terpene hydroperoxides in polar solvation environments. Because of this potential for reversion to terpene hydroperoxides, the analysis of peroxyhemiacetals is important to the fragrance industry, which currently utilizes iodometric titration to monitor terpene hydroperoxide levels in many raw materials. This paper reports on the iodide reaction time required for peroxyhemiacetals to be quantitatively measured by iodometric titration, and on the implications to citrus oil raw material testing.

Iodide reaction times of peroxyhemiacetals (PHAs) in the peroxide value titration; implications for the testing of citrus oils 131–138

M. J. Calandra, Y. Wang and C. Beckett

Effect of pretreatment and low-temperature low humidity drying on quality characteristics of coriander foliage 139–148

S. Priyadarshi, C. Ramakrishna, R. Cheluvadasaiah and M. M. Naidu

Contents continued overleaf
Research Articles

The fragrance micro/nanocapsules with three corresponding sizes were matched into cotton textiles with different pore diameters through vacuum impregnation process in order to reveal the size effect on the durability of fragrant micro-/nanocapsules in cotton textile.

Morphology and release of Lavender oil (LO) microcapsules produced could be controlled using spray drying through different combination of coating materials. Morphology of microcapsules has better sphericity because of presence of polyvinyl alcohol, which illustrated that polyvinyl alcohol might be contributed to surface modification of particles; the release mechanism was illustrated as burst release and diffusion. A better understanding of this knowledge will be helpful for preparation of controllable microcapsules via tailoring the combination of wall materials.

Fragrance design for consumer laundry products involves different physical and chemical interactions amongst multi-component mixtures of chemicals. In this study, we validated a simple and fast process model to predict the intensity and character of the fragrance at multiple sensorial stages.

Pore size matching up: A novel insight into cotton textile aromatic finishing
X. Liu, L. Huang, H. Chen, M. C. Qian and H. Ji
149–156

Preparation and release mechanism of lavender oil microcapsules with different combinations of coating materials
R. Zhang, L. Huang, X. Xiong, M. C. Qian and H. Ji
157–166

A rapid approach to optimize the design of fragrances for fabric care products
W. Zhan, F. Doro and M. A. Teixeira
167–173

Contents continued overleaf
In this study, triblock polymer was synthesized. Lavender oil was encapsulated using this block polymer. Paper coating formulations were prepared from the obtained capsules and coatings were made. Color and gloss properties of the obtained coatings were determined. As a result, PEO-b-PPG-b-PEO polymer can be used to encapsulate lavender oil, and the resulting capsules have functioned without degradation in the paper coating.

Peppermint essential oil was effective against the growth of the tested mycotoxigenic Aspergillus strains isolated from baby foods; (A) Aspergillus flavus-42, (B) Aspergillus niger-40 and (C) Aspergillus niger-41 and aflatoxin production was highly reduced by this oil but ochratoxin inhibition was very low.

Flavour esters preparation is easily and efficiently achieved by using mycelium of Aspergillus oryzae. This biocatalyst is considerably robust allowing the direct esterification of acetic acid with different alcohols in a continuous mode without immobilization and remarkable productivity.

Biocontrol of toxigenic Aspergillus strains isolated from baby foods by essential oils 182–189
A. S. Yassein, A. H. M. El-Said and E. G. A. El-Dawy

Continuous preparation of flavour-active acetate esters by direct biocatalytic esterification 190–196
I. Chiarelli Perdomo, M. Letizia Contente, A. Pinto, D. Romano, P. Fernandes and F. Molinari
The correlation between volatile organic compounds (VOCs) in ten berries from China and antibacterial activity, antioxidant capacity were investigated. The metabolic pathways of polyphenols and volatile organic compounds are correlated, indicating a rapid evaluation of the biological activity of berries using the determination of volatile components.

Comparative assessment of chemical compositions, antioxidant and antimicrobial activity in ten berries grown in China

R. Yu, L. Chen and X. Xin

The synthesis of three flavour esters, namely cis-3-hexenyl acetate, via transesterification and esterification of the natural corresponding alcohols or acids. The result (e.g., higher conversion by controlled addition of acetic acid) suggest a possible strategy applicable to the synthesis of many other esters starting form natural substrates.

Natural flavor ester synthesis catalyzed by lipases


HPMC antioxidant assay was modified to extend its application to samples poorly soluble in water. Effect of addition of four organic solvents miscible with water in originally used Clark and Lubs (CL) buffer (pH 9.8) was followed. Ethanol and CL buffer in ratio 1:1 as electrolyte enabled the assay application on essential oils, extracts and constituents of spices. The influence of gradual addition of ethanolic extract of Ocimum basilicum L. on polarograms and its height is shown.

Modification of DC polarographic antioxidant assay—Application to aromatic plants and their active principles

A. S. Stojićević, F. T. Pastor, S. Ž. Gorjanović, T. M. Šolević Knudsen and M. P. Antić

A total of 124 volatile components were in nine peony species. The results of PCA and HCA showed P decomposita, P qiui, Prockii, Pijeskanensis and Postii in the Subsect. Vagiatae were mixed to form one cluster with P lutea, P delavayi, P lundowii and P potanini in the Subsect. Delavayaneae formed the other cluster, which was consistent with the distribution of wild tree peony species.

Variation of floral volatiles and fragrance reveals the phylogenetic relationship among nine wild tree peony species

X. Luo, M. Yuan, B. Li, C. Li, Y. Zhang and Q. Shi

Forthcoming Meetings

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