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Integrated Comprehensive Two-dimensional Gas-Chromatographic and Spectroscopic Characterization of Vetiveryl Acetates: Molecular Identifications, Quantification of Constituents, Regulatory and Olfactory Considerations

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Highlights

- GC × GC-MS allowed for a detailed characterization of vetiveryl acetates
- Ester constituents of vetiveryl acetates were isolated by pc-GC
- Isolated or synthesized compounds were fully characterized by NMR
- Quantification of constituents was carried out by internal calibration using PRRFs
- Toxicological and olfactory implications are discussed in regards to the analytical data

Abstract:

Vetiveryl acetate is a common ingredient of the perfume industry highly prized by perfumers for its crisp vetiver note and thus often used in high-end perfume compositions. Vetiveryl acetate is currently manufactured from vetiver oil by means of various industrial processes that result in the conversion of the main vetiver alcohols into their corresponding acetates. Despite being used for decades as perfume ingredient, vetiveryl acetate has barely been studied in the past, therefore its chemical composition is poorly documented. While vetiveryl acetate is currently under investigation by regulation authorities, it was crucial to fill this gap of knowledge. We report here the first detailed investigation of different types of vetiveryl

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