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TITLE: Revealing the relationship between vegetable oil composition and oxidative stability: a multifactorial approach

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HIGHLIGHTS

- 22 oils and fats samples showed a huge diversity in composition
- Oils and fats were grouped in 3 differentiated clusters by PCA
- TPC and SFA correlate positively with IP
- UFA, PUFA and total tocopherols correlate negatively with IP
- SFA, MUFA and PUFA account for 67% of variability of IP

ABSTRACT

A detailed composition analysis was performed for 22 diverse oils and fats and included determination of tocopherols (α , γ and δ), β -carotene, chlorophyll, total phenolic compounds (TPC) and fatty acid (FA) composition, as well as the determination of their oxidative stability (Rancimat test). Principal components analysis was applied to obtain an overview of the sample variations and to identify

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