Lipidomics and the Influence on Quality of Coffee

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SUMMARY

Lipid oxidation compounds in organisms are involved in important signalling pathways correlated to stress and disease but also to attack defence and physiological response. Current works in brewery science evaluate the influence of germination and storage on lipoxigenase generated hydroperoxides and other lipid degradation products and their influence on staling. In coffee the correlation between LOX (EC 1.13.11.12) generated precursors and aldehyde potential has not been assessed so far. We report here the results of sensible precursor quantification and the generation of free aldehydes (esp. E2-nonenal) in coffee in the processing chain monitored by TDS-GC-SIM analysis for pentafluorobenzylhydroxylamine (PFBHA) derivatives.