

Supercritical fluid extraction of pyrazines in roasted cocoa beans: Effect of pod storage period

Abstract

Selected cocoa beans samples which had been subjected to various pod storage periods prior to fermentation were analysed for pyrazines. Carbon dioxide supercritical fluid extraction was used for the extraction of the compounds and quantitative and qualitative analyses of the extracts were achieved by using gas chromatography and gas chromatography mass spectrometry. Pyrazine compounds identified in the extract included pyrazine, 2-ethylpyrazine, 2,3-dimethylpyrazine, 2,6-dimethylpyrazine, trimethylpyrazine and tetramethylpyrazine. The concentration of pyrazine compounds in the cocoa beans, in particular 2,6-dimethylpyrazine and tetramethylpyrazine were found to be largely proportional to pod storage period.