

# **Volatile Composition of Concentrated Aroma Extracts of Soluble Coffee Beverage Obtained by Pervaporation**

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## **SUMMARY**

The present work aimed to evaluate the composition of coffee aroma concentrates obtained from pervaporation of an aqueous coffee extract, produced by a soluble coffee processing company. The pervaporation process essays were performed in bench scale, using a polydimethylsiloxane (PDMS) membrane, in which the effect of temperature on flux and permeate quality was evaluated. The volatile compounds were extracted by solid-phase microextraction (SPME) and analyzed by gas chromatography-mass spectrometry (GC-MS). The temperature increase in the pervaporation process has enhanced the permeate flux. The comparative analysis of the chromatographic profiles pointed out relevant differences between feed and permeate, the latter presenting a greater amount of volatile compounds having differentiated intensities. Among the compounds in permeate, 11 substances were considered very important for coffee aroma: acetaldehyde, 2-methylpropanal, 2-methylbutanal, 3-methylbutanal, 2,3-pentanedione, hexanal, 2,3-diethyl-5-methylpyrazine, 3-ethyl-2,5-dimethylpyrazine, 3,5-diethyl-3-isobutylpyrazine, 4-ethylguaiacol and guaiacol.