

Simultaneous monitoring of gaseous CO(2) and ethanol above champagne glasses via micro-gas chromatography (μ GC).

J. Agric. Food Chem., 2011, 59 (13), pp 7317–7323

In champagne tasting, gaseous CO(2) and volatile organic compounds progressively invade the headspace above glasses, thus progressively modifying the chemical space perceived by the consumer. In this study, a novel, rapid, and nonintrusive method aimed to simultaneously determine the content in gaseous CO(2) and ethanol above a glass poured with champagne, using a micro-gas chromatography technique coupled with a thermal conductivity detector, was presented. The simultaneous quantification of CO(2) and ethanol in the headspace of a champagne glass was monitored, in real tasting conditions, all along the first 15 min following pouring, depending on whether or not the glass shows effervescence. Both CO(2) and ethanol were found to be enhanced by the presence of ascending bubbles, thus confirming the close link between rising bubbles and the release of gaseous CO(2) and volatile organic compounds.