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**Unraveling different chemical fingerprints between a champagne wine and its aerosols.**

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As champagne or sparkling wine is poured into a glass, the myriad of ascending bubbles collapse and radiate a multitude of tiny droplets above the free surface into the form of very characteristic and refreshing aerosols. Ultrahigh-resolution MS was used as a nontargeted approach to discriminate hundreds of surface active compounds that are preferentially partitioning in champagne aerosols; thus, unraveling different chemical fingerprints between the champagne bulk and its aerosols. Based on accurate exact mass analysis and database search, tens of these compounds overconcentrating in champagne aerosols were unambiguously discriminated and assigned to compounds showing organoleptic interest or being aromas precursors. By drawing a parallel between the fizz of the ocean and the fizz in Champagne wines, our results closely link bursting bubbles and flavor release; thus, supporting the idea that rising and collapsing bubbles act as a continuous paternoster lift for aromas in every glass of champagne.

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