

Supporting Information

for

Analysis of sesquiterpene hydrocarbons in grape berry exocarp (*Vitis vinifera* L.) using in vivo-labeling and comprehensive two-dimensional gas chromatography–mass spectrometry (GC×GC–MS)

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Extracted ion chromatograms (EIC) of genuine (d_0) , partially labeled (d_4, d_6) and fully deuterium-labeled $(d_8) \alpha$ -cubebene after administration of $[6,6,6^{-2}H_3]$ -(±)-mevalonolactone $(d_3$ -MVL) to isolated exocarp of grape berries (Lemberger cultivar)



¹t_R (mins)

Figure S2: Enlarged sections of a GC×GC chromatogram showing the detected peaks (blobs) of genuine (*d*₀), partially labeled (*d*₄, *d*₆) and fully deuterium-labeled (*d*₈) α -cubebene after feeding experiments using *d*₃-MVL. The individual contour plots were obtained by selecting the corresponding mass-to-charge ratios: *m*/*z* = 204 (*d*₀), *m*/*z* = 208 (*d*₄), *m*/*z* = 210 (*d*₆) and *m*/*z* = 212 (*d*₈). The gas chromatographic separation of the shown isotopologues is due to the inverse isotope effect, whereby compounds with higher deuterium incorporation elute earlier.