

Figure S1. Selective ion chromatograms of m/z 273 specific for citrate TMS derivatives from standard mixtures analyzed with a single-tapered (top) and laminar cup splitter liner (middle and bottom). Citrate 3 TMS derivatives grew much more abundant compared to the 4 TMS derivative in the reference samples (*i.e.*, without saturated compounds) and those samples added with saturated late eluting compounds (not shown). In the samples added with 20 mM lactate, no citric acid derivative was found.

5 mM cholesterol

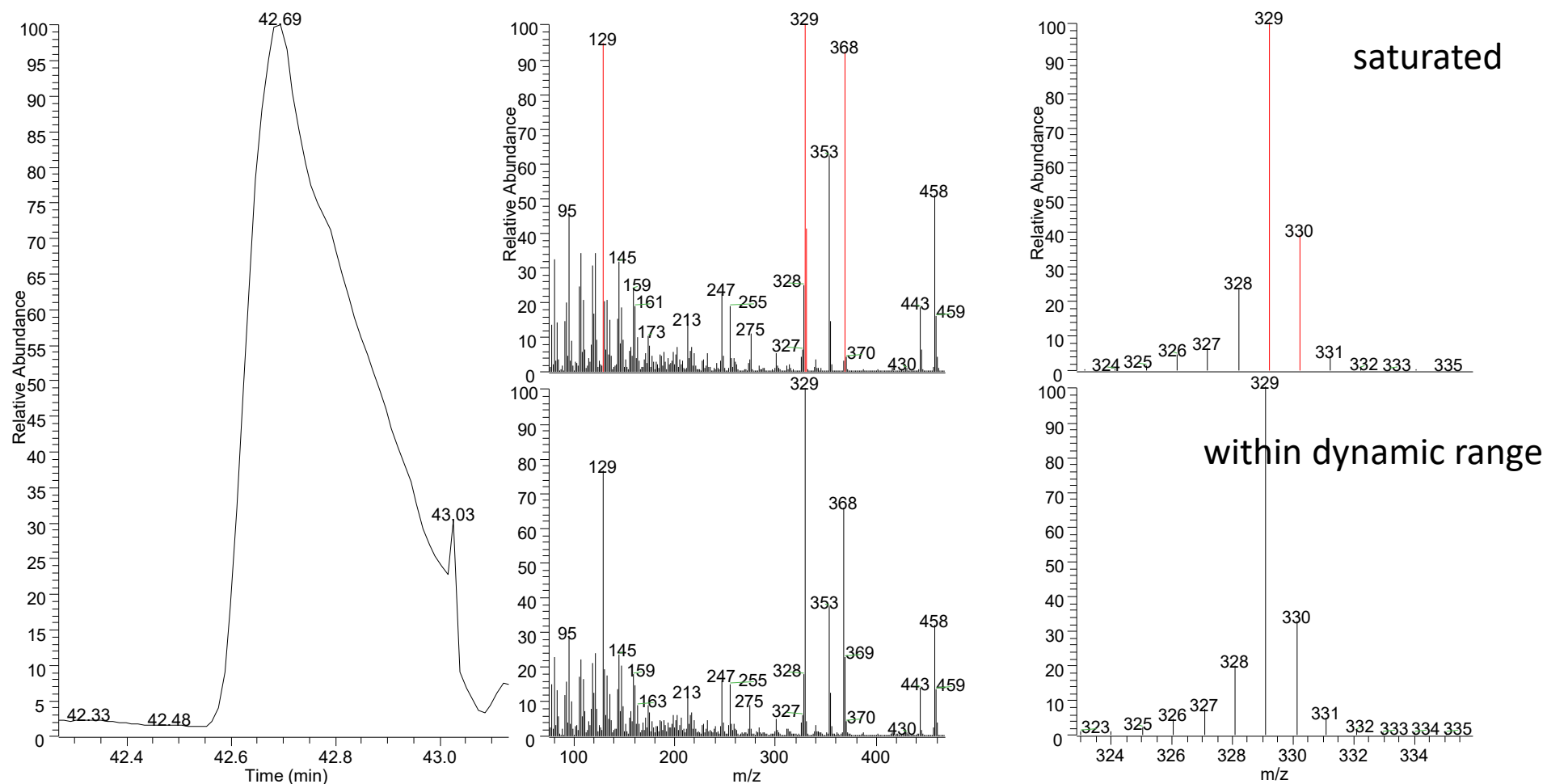


Figure S2. Appearance of compound saturation on the example of cholesterol. **Left:** chromatographic appearance was accompanied by serious peak broadening and deviation from Gaussian peak shape. **Middle:** The MS spectrum of cholesterol on the saturated apex (top spectrum, red-colored peaks are saturated) is compared with the downslope spectrum without saturated MS peaks (bottom). **Right:** A zoom into the base peak region shows the distortion of the isotopic pattern in the saturated spectrum, where peak m/z 330 has an intensity of ~45%, while in the downslope spectrum it is ~35%.