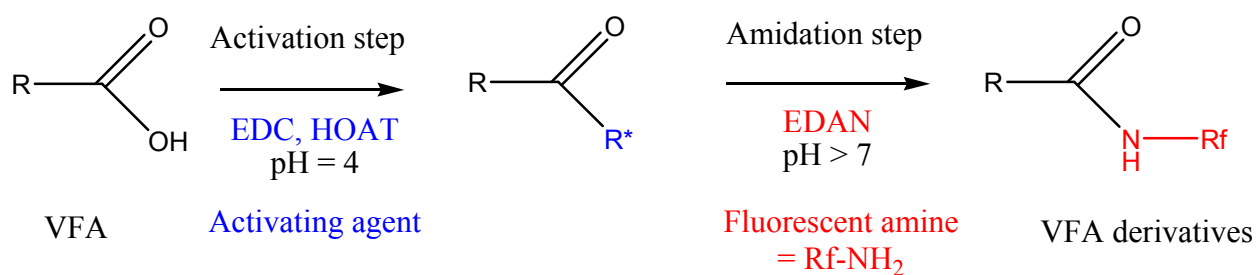


## Development of a simple, low-cost and rapid thin-layer chromatography method for the determination of individual volatile fatty acids

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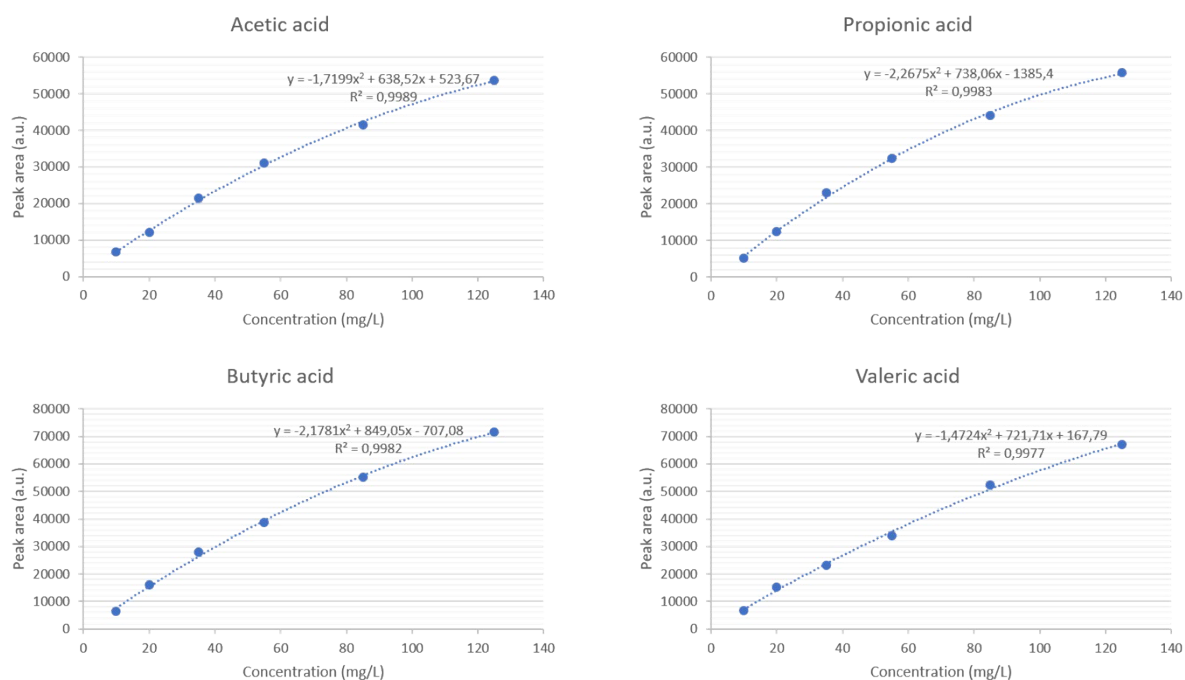
### SUPPLEMENTARY INFORMATION



Supp. Figure 1. Derivatization reaction scheme used in the analytical protocol.



Supp. Figure 2. CAD drawing of the box used for homogeneous and reproducible lighting of TLC plates.



Supp. Figure 3. Calibration curves with polynomial regression for VFA (a.u. is arbitrary units)

Extraction protocol for sewage sludge composts (composting platform [Biotechna] located in Ensues-la-Redonne (Bouches-du-Rhône, France, GPS coordinates 43.376838N, 5.190849E)):

The water extractions were performed in PTFE Teflon tube (triplicates per soil sample) on an orbital shaker (Fisher Scientific Bioblock SM30B) at 125 rpm and at room temperature. Organic matter containing VFA was extracted through shaking 6 g of fresh compost with 60 mL of ultrapure water (resistivity of  $18 \text{ M}\Omega \text{ cm}^{-1}$  at  $25^\circ \text{C}$ , and total organic carbon  $< 20 \mu\text{g L}^{-1}$ ) with a soil/water ratio of 1/2 (w/v) for 2 h under  $\text{N}_2$ . After extraction step, the tubes were centrifuged at 8000 rpm for 15 min (JP SELECTA, Medifriger BL-S), and the supernatants were collected and filtered through  $0.45 \mu\text{m}$  membrane filters (PES membrane, Millipore, France).