



**Supplementary Fig. 1.** GC-based method is anti-correlated with absorbance-based phenolic off-flavor (POF) measurement represented is a correlation plot, comparing the produced amount 4-vinyl guaiacol (4VG) (GC-based method [10]) and the postfermentation amount of ferulic acid, measured with the absorbance-based technique. The red dashed line represents the obtained linear trend line. The corresponding Pearson correlation coefficient and *P* value are depicted on the figure. A.U. = arbitrary units.