

## Supplementary Materials

### **Tunable Production of Diesel Bio-blendstock by Rhenium-catalyzed Hydrogenation of Crude Hexanoic Acid from Grape Pomace Fermentation**

Domenico Licursi <sup>1</sup>, Anna Maria Raspolli Galletti <sup>1,\*</sup>, Claudia Antonetti <sup>1</sup>, Gonzalo A. Martinez <sup>2</sup>, Emma Jones <sup>2</sup>, Lorenzo Bertin <sup>2</sup>, Nicola Di Fidio <sup>1</sup>, Sara Fulignati <sup>1</sup>, Gianluca Pasini <sup>3</sup> and Stefano Frigo <sup>3</sup>

<sup>1</sup> Department of Chemistry and Industrial Chemistry, University of Pisa, Via Giuseppe Moruzzi 13, 56124, Pisa, Italy;

<sup>2</sup> Department of Civil, Chemical, Environmental and Materials Engineering (DICAM), University of Bologna, via Terracini 28, 40131, Bologna, Italy;

<sup>3</sup> Department of Energy, System, Territory and Construction Engineering (DESTEC), University of Pisa, Largo Lucio Lazzarino, 56122, Pisa, Italy;

\* Correspondence: [anna.maria.raspolli.galletti@unipi.it](mailto:anna.maria.raspolli.galletti@unipi.it), Phone: +39 050 2219 290

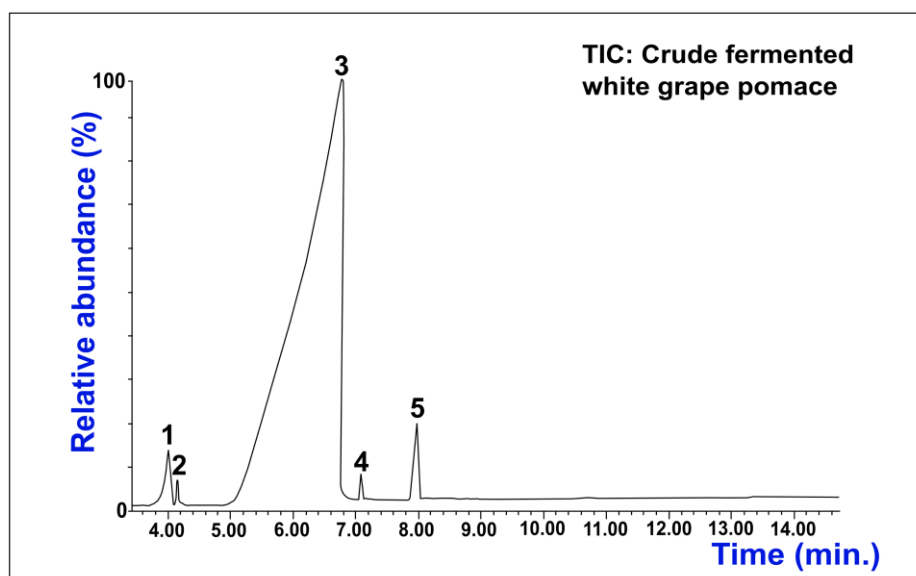


Figure S1. Total ion chromatogram (TIC) of crude fermented white grape pomace.

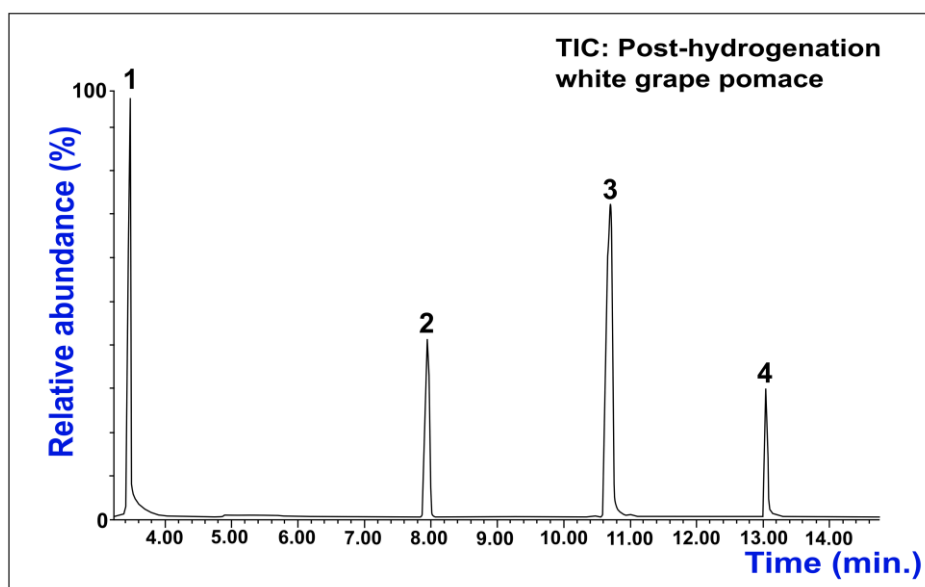


Figure S2. Total ion chromatogram (TIC) of post-hydrogenated white grape pomace.

**Table S1.** Products identified in the crude fermented white grape pomace.

#	Name	Retention time (min)	<i>m/z</i>
1	Butanoic acid	3.771	<b>88</b> , 73, 60, 41, 27
2	Pentanoic acid	4.050	<b>102</b> , 87, 73, 60, 41, 27
3	Hexanoic acid	6.360	<b>116</b> , 99, 87, 73, 60, 41, 27
4	Heptanoic acid	7.099	<b>130</b> , 101, 87, 73, 60, 55, 41, 27
5	Octanoic acid	7.991	<b>144</b> , 115, 101, 85, 73, 60, 55, 43, 41, 27

**Table S2.** Products identified in the crude fermented white grape pomace.

#	Name	Retention time (min)	<i>m/z</i>
1	1-Hexanol	3.466	<b>102</b> , 84, 69, 56, 43, 31
2	Butyl butanoate	7.959	<b>144</b> , 117, 101, 89, 71, 56, 41, 29
3	Hexyl hexanoate	10.724	<b>200</b> , 157, 117, 99, 84, 71, 56, 43, 29
4	Hexyl octanoate	13.052	<b>228</b> , 185, 145, 127, 115, 101, 84, 73, 69, 57, 43, 29