

Supplementary Materials: Volatile Compound Profiling by HS-SPME/GC-MS-FID of a Core Olive Cultivar Collection as a Tool for Aroma Improvement of Virgin Olive Oil

Lourdes Garcia-Vico, Angelina Belaj, Araceli Sanchez-Ortiz, Jose M. Martinez-Rivas, Ana G. Perez and Carlos Sanz

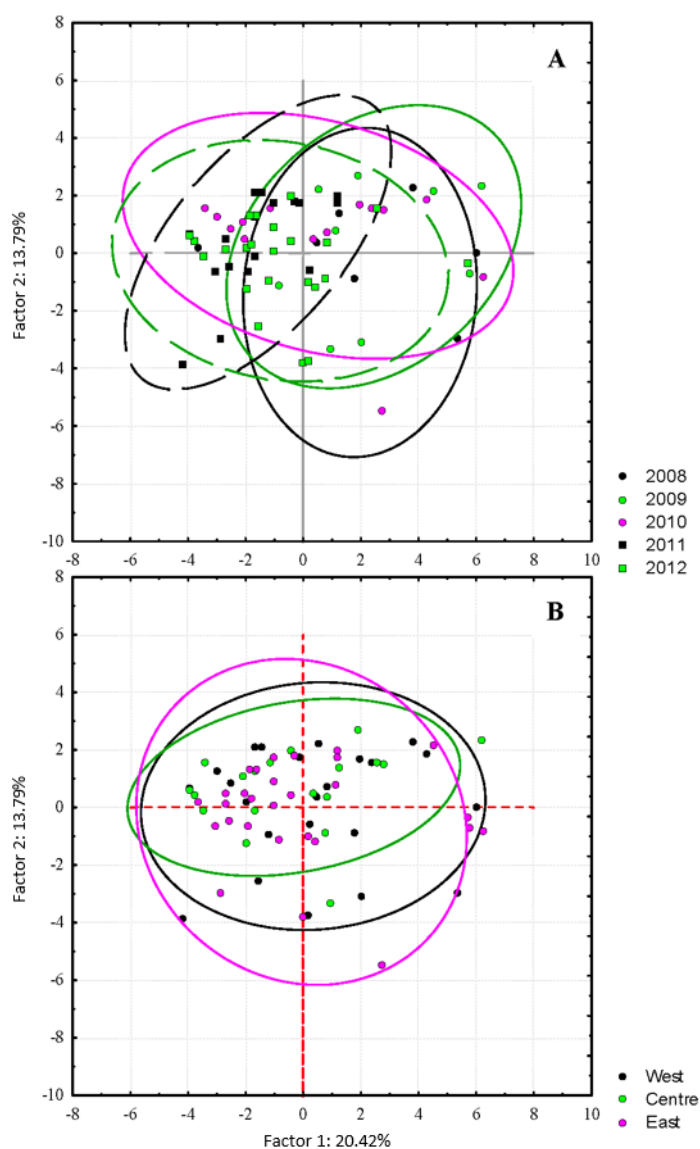


Figure S1. Distribution of the cultivars from the Core-36 olive collection from the World Olive Germplasm Collection at Cordoba, Spain according to the crop year (A) or area of diffusion (B). Prediction ellipses are displayed for each year or area. Principal component analysis was carried out using all of the volatile compounds as variables.

Table S1. Pearson's correlation coefficients among the main classes of volatile compounds found in the oils from the WOGC Core-36 accessions.

	C6/LnA Aldehydes	C6/LnA Alcohols	C6/LA Aldehyde	C6/LA Alcohol	C5/LnA Carbonyls	C5/LnA Alcohols	Pentene Dimers	C5/LA Carbonyls	C5/LA Alcohol	LOX Esters	Non-LOX Esters	BC Aldehydes	BC Alcohol	Terp enes	Total C6 Volatiles	Total C5 Volatiles
C6/LnA alcohols	0.15															
C6/LA aldehyde	*** 0.41	** 0.34														
C6/LA alcohol	0.13	*** 0.73	*** 0.39													
C5/LnA carbonyls	-0.06	* 0.24	0.02	0.04												
C5/LnA alcohols	* -0.28	0.10	-0.17	0.09	** 0.36											
Pentene dimers	0.18	0.21	-0.10	-0.10	*** 0.50	* 0.29										
C5/LA carbonyls	-0.11	*** 0.51	-0.01	*** 0.42	** 0.35	* 0.24	0.12									
C5/LA alcohol	0.18	0.18	* 0.29	0.17	-0.11	-0.17	-0.10	0.08								
LOX esters	-0.15	0.23	0.12	*** 0.42	0.03	*** 0.55	-0.07	* 0.24	-0.09							
non-LOX esters	0.03	0.00	0.09	0.17	-0.20	-0.08	-0.13	0.07	0.19	0.03						
BC aldehydes	-0.11	-0.09	0.05	-0.02	-0.12	0.00	-0.11	-0.04	0.00	-0.07	-0.03					
BC alcohol	-0.15	0.21	0.15	*** 0.44	-0.15	0.08	-0.13	* 0.26	-0.07	* 0.25	0.21	*** 0.39				
Terpenes	-0.16	0.14	0.23	* 0.27	0.04	* 0.28	-0.17	0.13	0.00	*** 0.41	0.18	0.09	* 0.24			
Total C6 volatiles	*** 0.94	* 0.31	*** 0.51	** 0.35	-0.04	-0.11	0.16	0.01	0.18	0.17	0.04	-0.13	-0.03	-0.01		
Total C5 volatiles	0.11	** 0.24	-0.11	-0.06	*** 0.61	*** 0.45	*** 0.98	0.21	-0.12	0.04	-0.15	-0.11	-0.11	-0.10	0.12	
Total volatiles	*** 0.91	** 0.35	*** 0.46	** 0.32	0.11	0.00	** 0.38	0.06	0.14	0.17	0.02	-0.14	-0.05	-0.03	*** 0.97	** 0.35

Marked correlations are significant at: * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.