

Supplementary Materials

# Comparison Between Mid-infrared (ATR-FTIR) Spectroscopy and Official Analysis Methods for Determination of the Concentrations of Alcohol, SO<sub>2</sub>, and Total Acids in Wine

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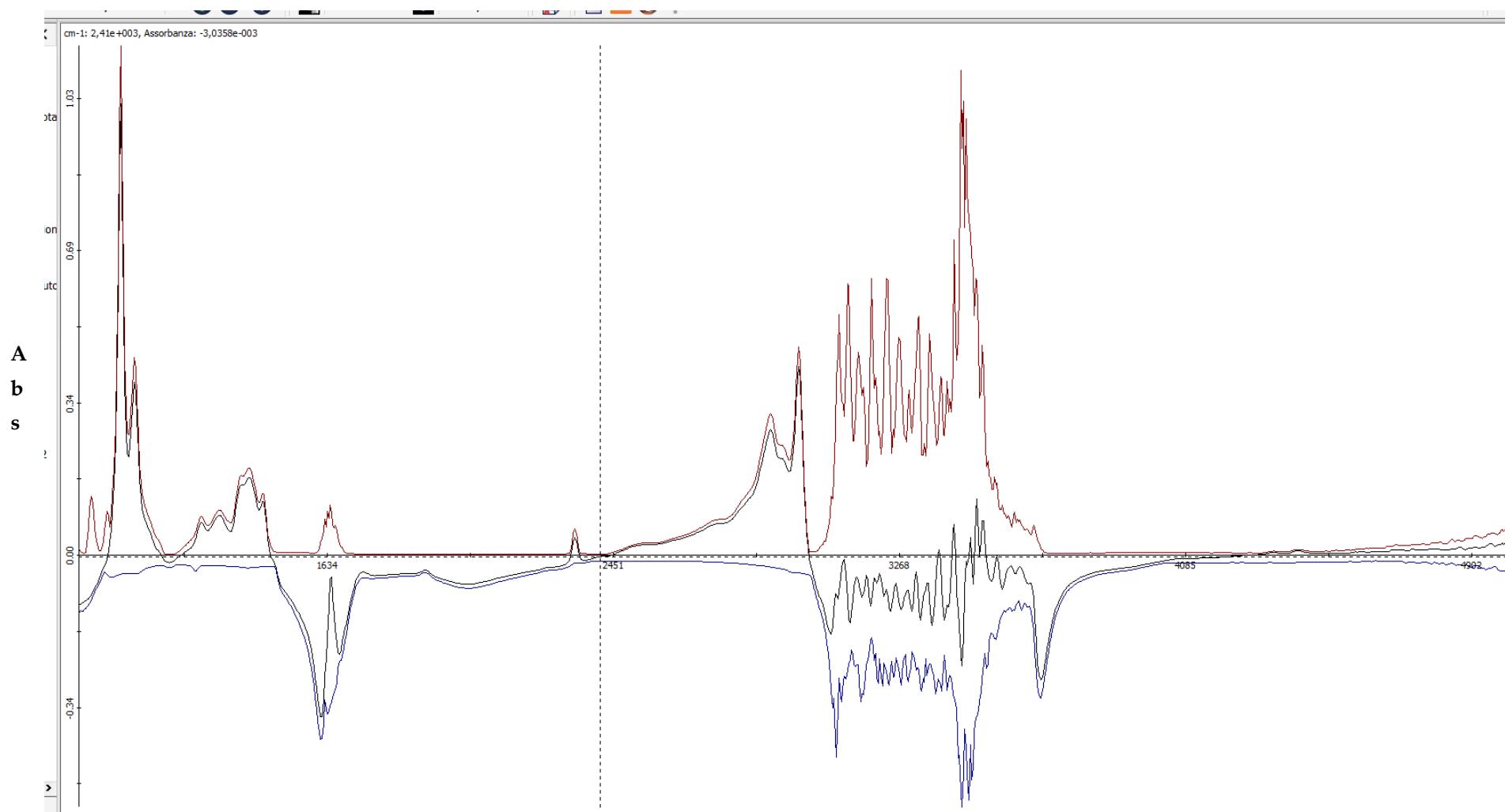
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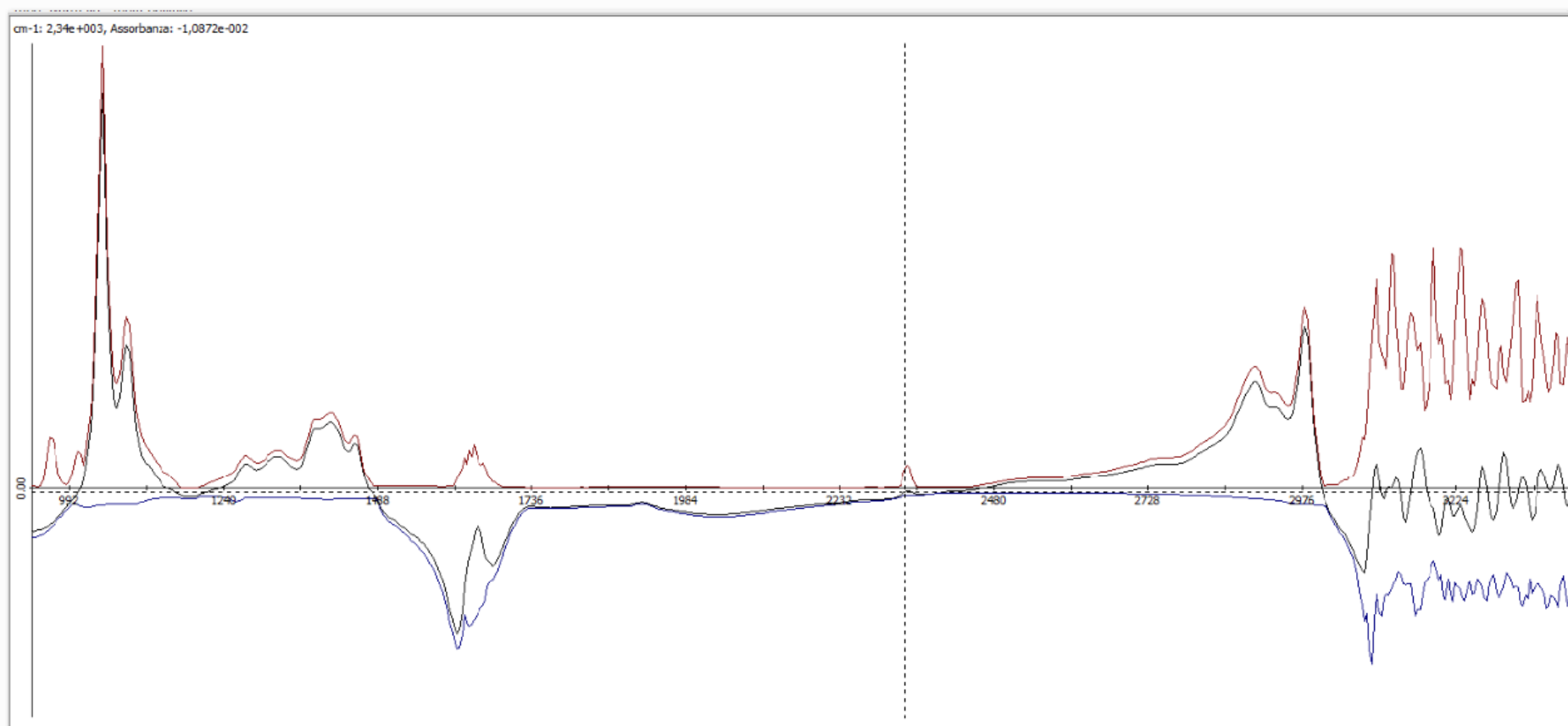


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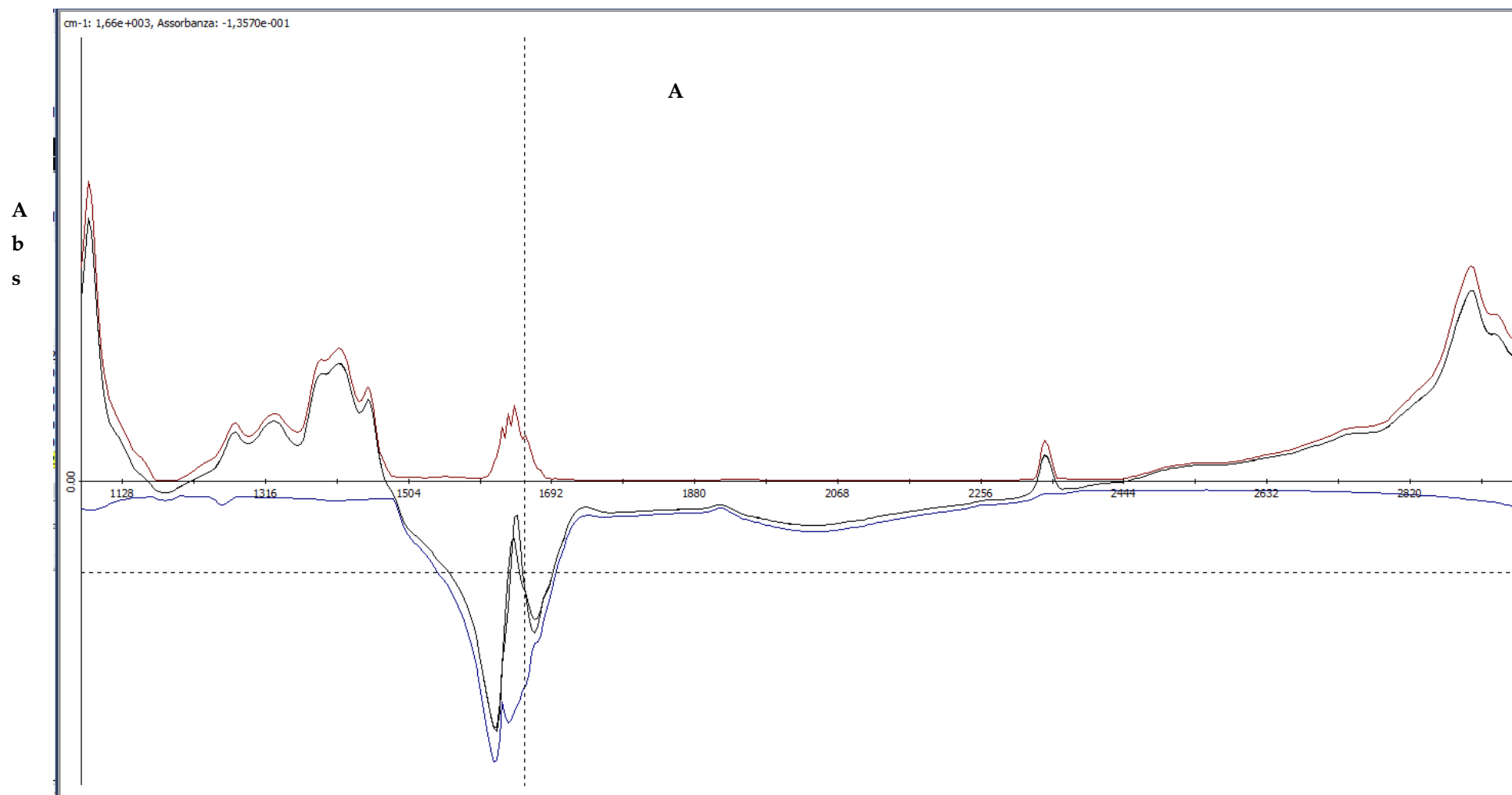


**Figure S1.** Ischia DOC Piedirosso or Per'e Palummo wine total spectrum.

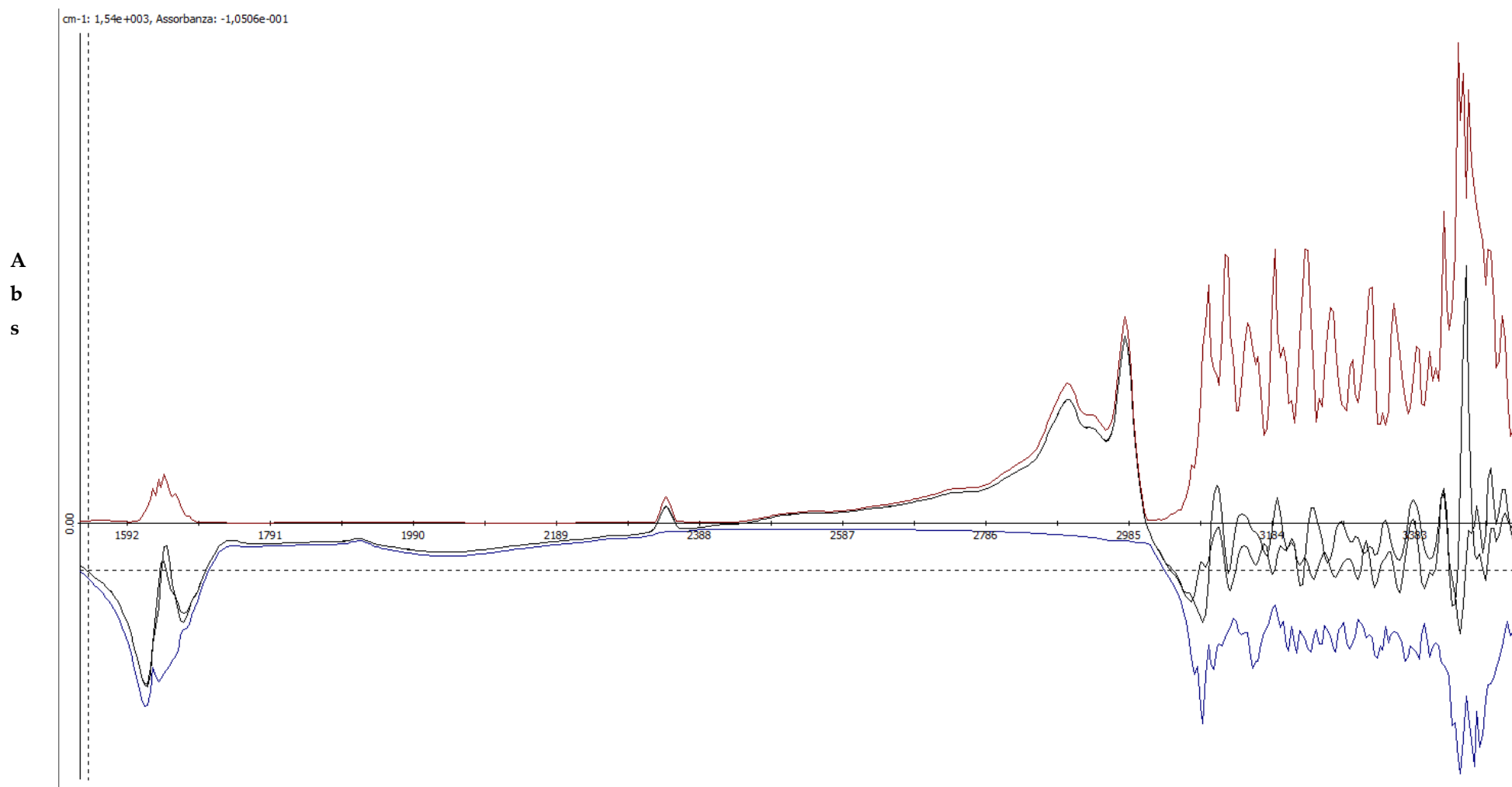
A  
b  
s



**Figure S2.** Most significant spectral frequencies for the identification of sulfur dioxide in Ischia DOC Piediroso (or Per'e Palummo) wine ( $1203.7\text{ cm}^{-1}$ ,  $1184.41\text{ cm}^{-1}$ ,  $3391.18\text{ cm}^{-1}$ ,  $1199.84\text{ cm}^{-1}$ ,  $3360.32\text{ cm}^{-1}$ ,  $1064.81\text{ cm}^{-1}$ ).



**Figure S3.** Most significant spectral frequencies for the determination of alcohol in Ischia DOC Piedirosso (or Per'e Palummo) wine ( $1103.39\text{ cm}^{-1}$ ,  $2982.23\text{ cm}^{-1}$ ,  $2970.66\text{ cm}^{-1}$ ,  $1126.54\text{ cm}^{-1}$ ).



**Figure S4.** Most significant spectral frequencies for the determination of total acidity in Ischia DOC Piediroso (or Per'e Palummo) wine ( $3001.52\text{ cm}^{-1}$ ,  $2997.67\text{ cm}^{-1}$ ,  $3005.38\text{ cm}^{-1}$ ,  $1219.13\text{ cm}^{-1}$ ,  $1068.67\text{ cm}^{-1}$ ,  $1064.81\text{ cm}^{-1}$ ).

Acidità totale: 929,778cm<sup>-1</sup>; 1709,09 cm<sup>-1</sup>; 999,222 cm<sup>-1</sup>; 1728,38 cm<sup>-1</sup>; 1211,41cm<sup>-1</sup>;  
1712,95 cm<sup>-1</sup>; 995,364 cm<sup>-1</sup>; 1724,53 cm<sup>-1</sup>; 1215,27 cm<sup>-1</sup>; 1720,67 cm<sup>-1</sup>