ELECTRONIC SUPPLEMENTARY INFORMATION

Transmission *versus* Transflection Mode in FTIR Analysis of Blood Plasma: is the EFSW effect the only reason of the observed spectral distortions?

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3-class UHCA
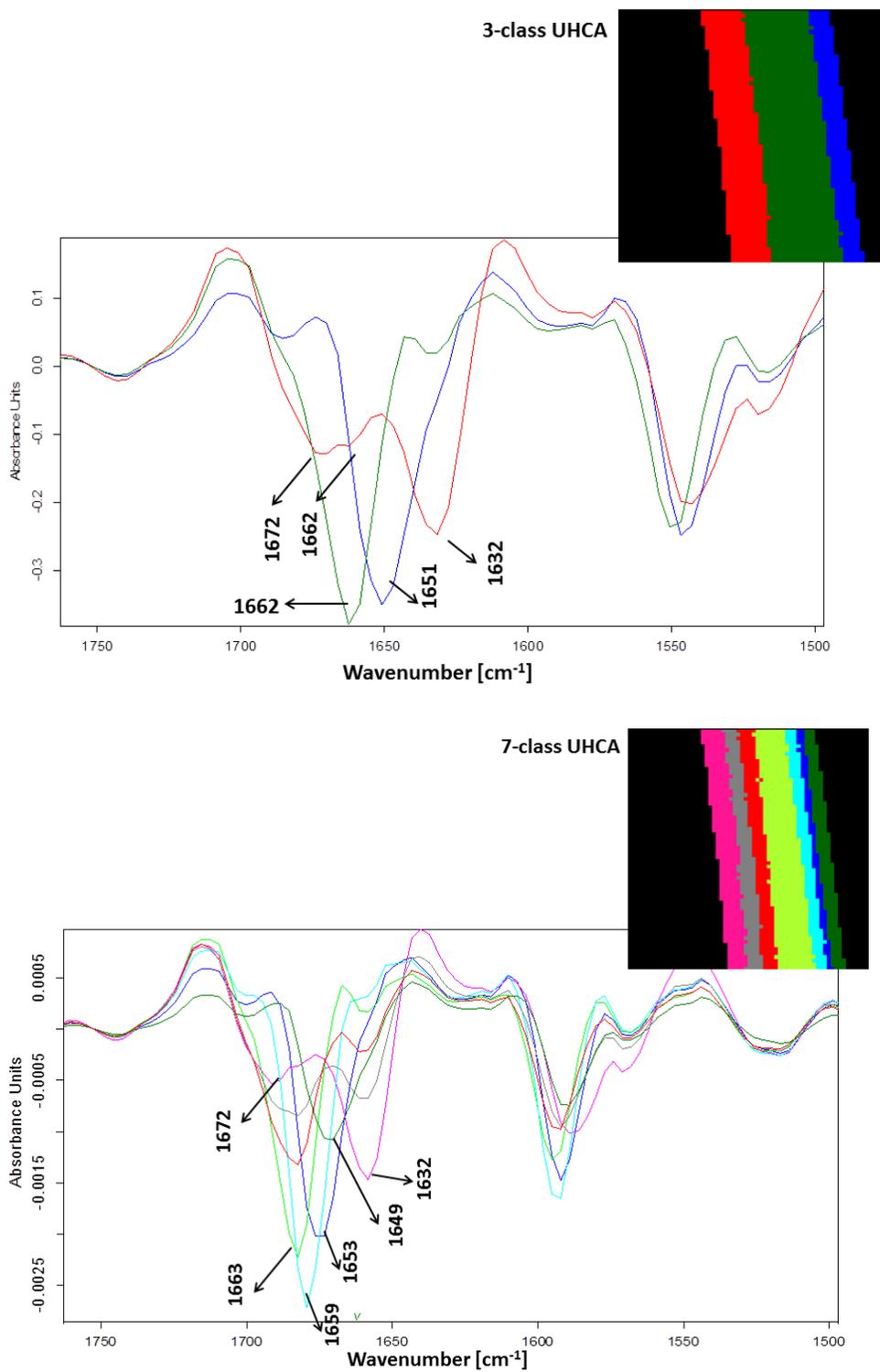
7-class UHCA

Figure S1. 3- and 7-class UHCA analysis of FTIR images for the transflection mode. Second derivative spectra represent mean spectra of each class. Colors of spectra correspond to the colors in cluster maps.
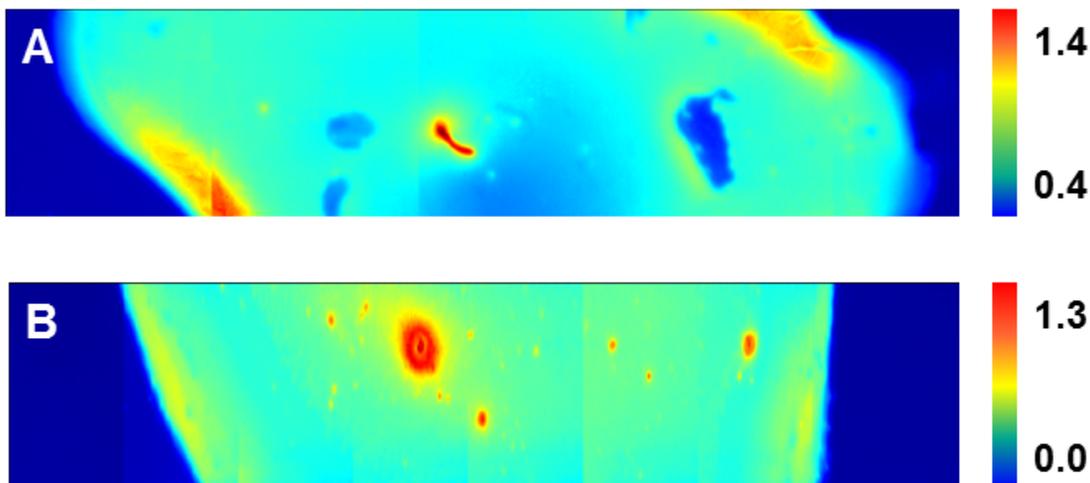
Figure S2. Chemical images for the amide I band constructed on raw FTIR spectra from the deposits of plasma placed on a CaF2 window (**A**) and a low-e microscope slide (**B**).
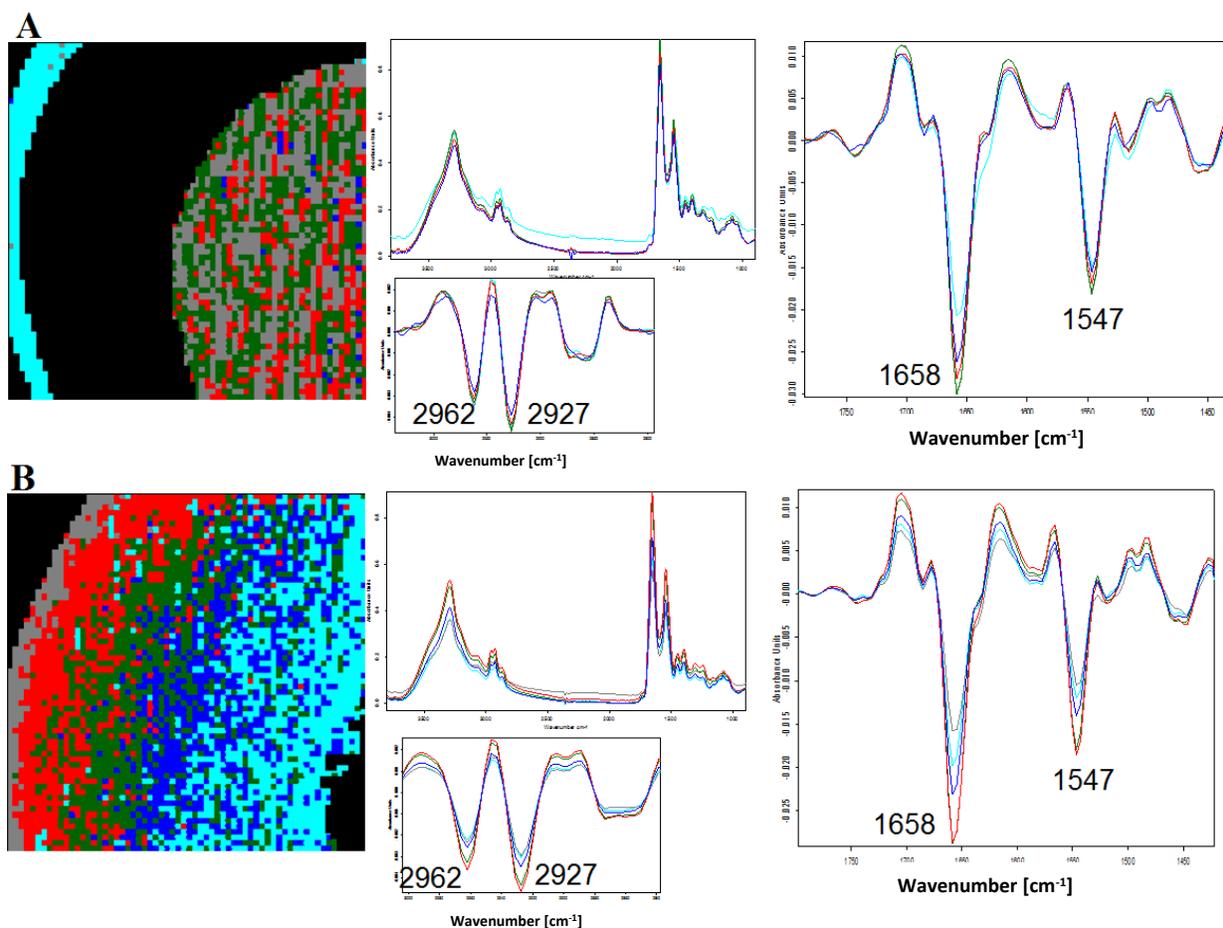
Figure S3. UHCA analysis for plasma of two other animals (transmission mode): (A) 5-class cluster map along with mean FTIR spectra and their second derivatives corresponding to each class (animal 2); (B) 5-class cluster map along with mean FTIR spectra and their second derivatives corresponding to each class (animal 3).
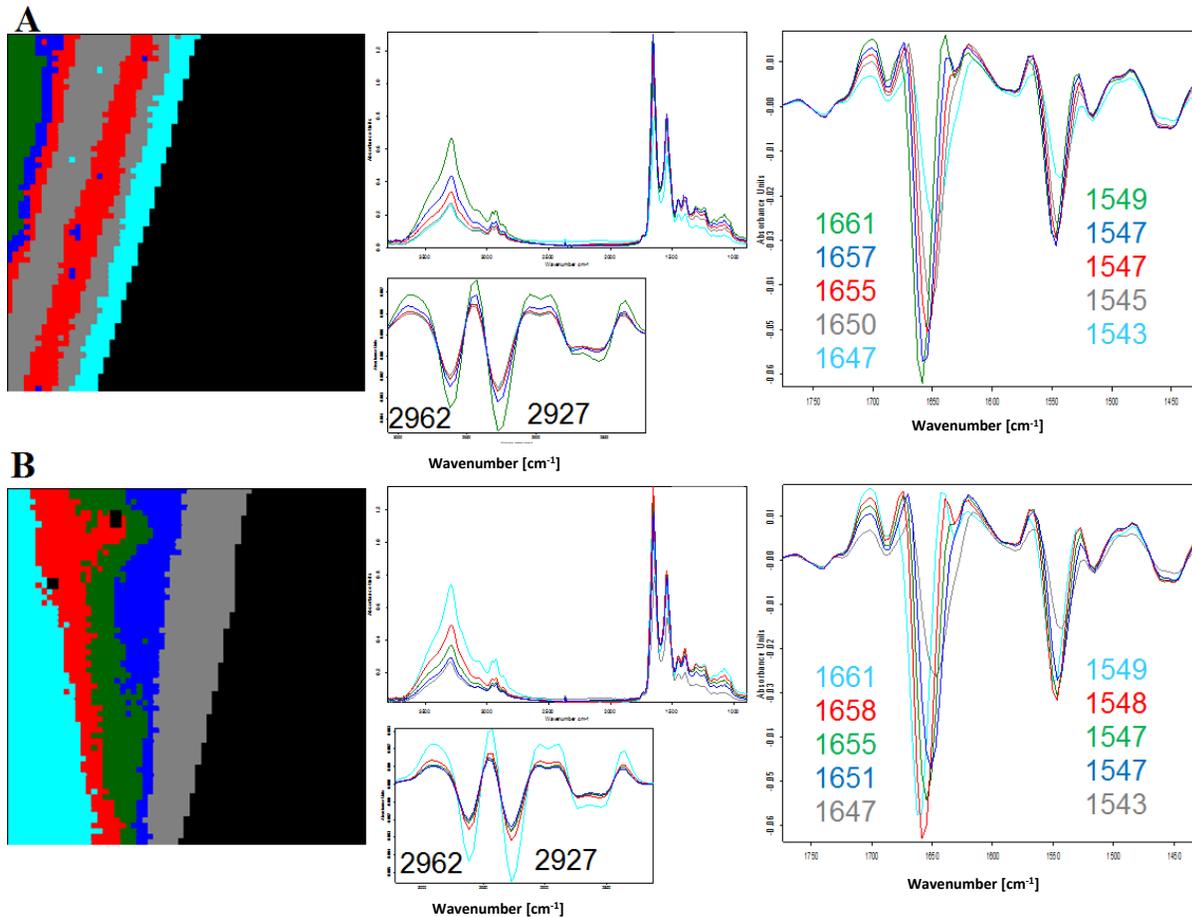
Figure S4. UHCA analysis for plasma of two other animals (transflection mode): (A) 5-class cluster map along with mean FTIR spectra and their second derivatives corresponding to each class (animal 2); (B) 5-class cluster map along with mean FTIR spectra and their second derivatives corresponding to each class (animal 3).
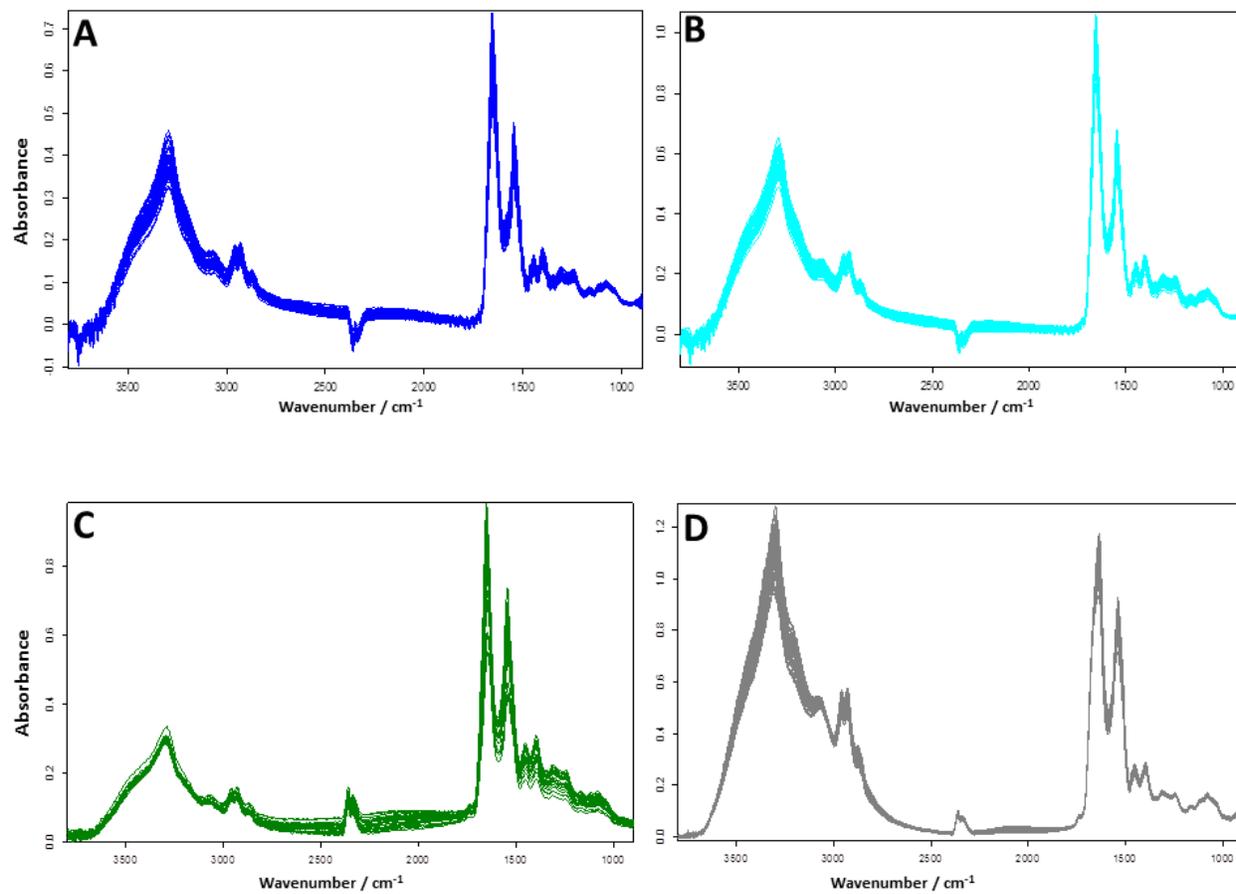
Figure S5. Raw FTIR spectra extracted from UHCA analysis for (A) transmission geometry (blue and magenta classes in Fig. 1C) and (B) transflection geometry (green and grey classes in Fig. 2C).
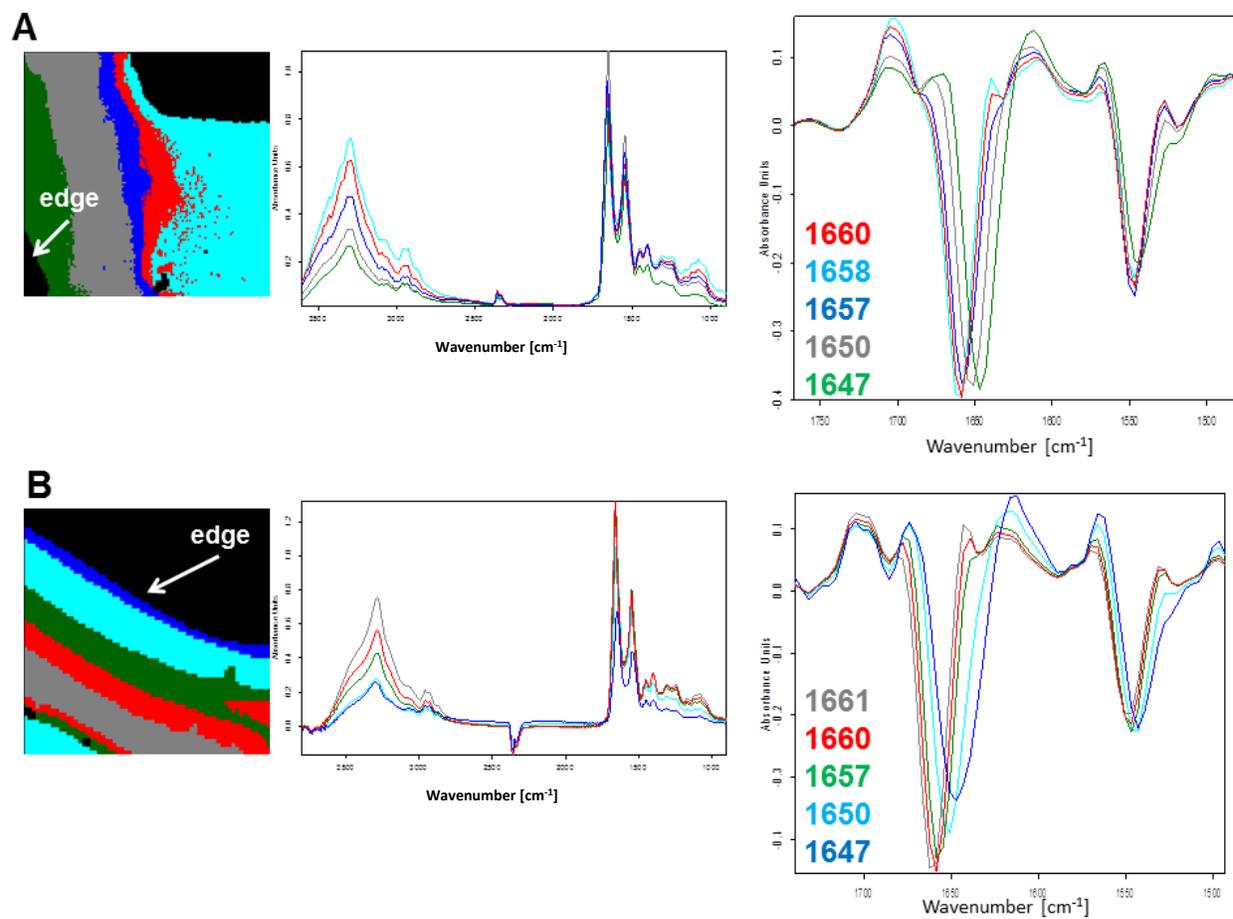
Figure S6. 5-class UHCA analysis of plasma after 1-hour (A) and 1-month (B) storing a sample on a low-e microscope slide in a desiccator.
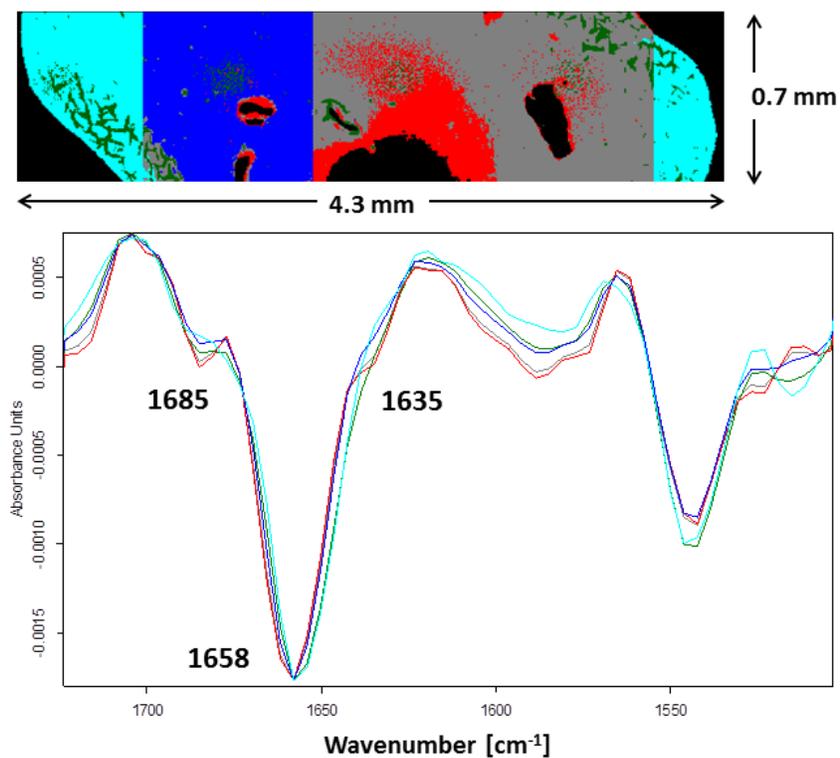
Figure S7. 5-class UHCA analysis of the whole plasma deposit for FTIR image collected in the transmission mode. Second derivative spectra represent mean spectra of each class. Colors of spectra correspond to the colors in cluster maps. Due to very subtle spectral differences within the investigated area, UHCA analysis discriminated individual images of the mosaic. Nevertheless, this clearly shows that no shift of amide I and II bands appears in the plasma sample deposited on the CaF_2 window.