

Supporting Information

Counterfeit and substandard test of the antimalarial tablet Riamet® by means of Raman hyperspectral multicomponent analysis

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Figure S1: Comparison of the calculated Raman spectra (DFT) with the experimentally acquired FT-Raman spectra of the active ingredients lumefantrine and artemether

Figure S2: Exemplary visualization of the spatial distribution of the lumefantrine concentration along one hyperspectral image in the model tablet Lu100Ar100

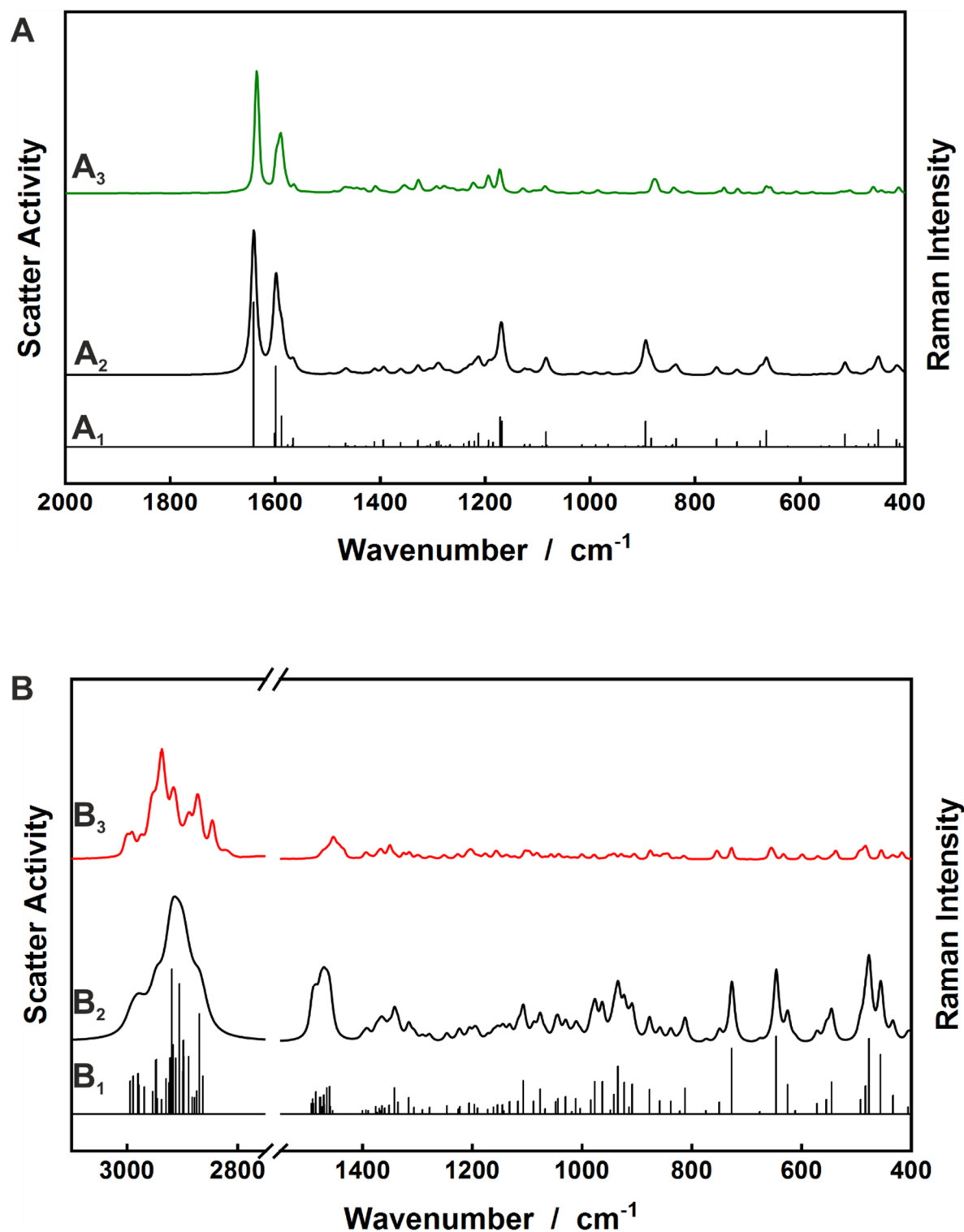
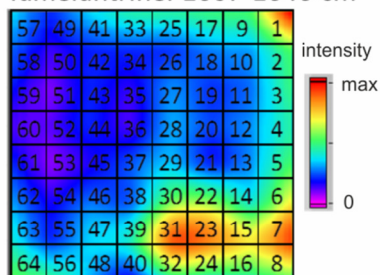


Figure S1: Comparison of the calculated Raman spectra (DFT) of the active ingredients lumefantrine (**A₂**) and artemether (**B₂**) with their experimentally acquired FT-Raman spectra (**A₃** and **B₃**). **A₁** and **B₁** depict the calculated Raman scattering activities, applying the scaling factors 0.98, for the spectral regions below 2000 cm⁻¹, and 0.95 for the region above 2000 cm⁻¹.

A

lumefantrine: 1607-1646 cm^{-1}



B

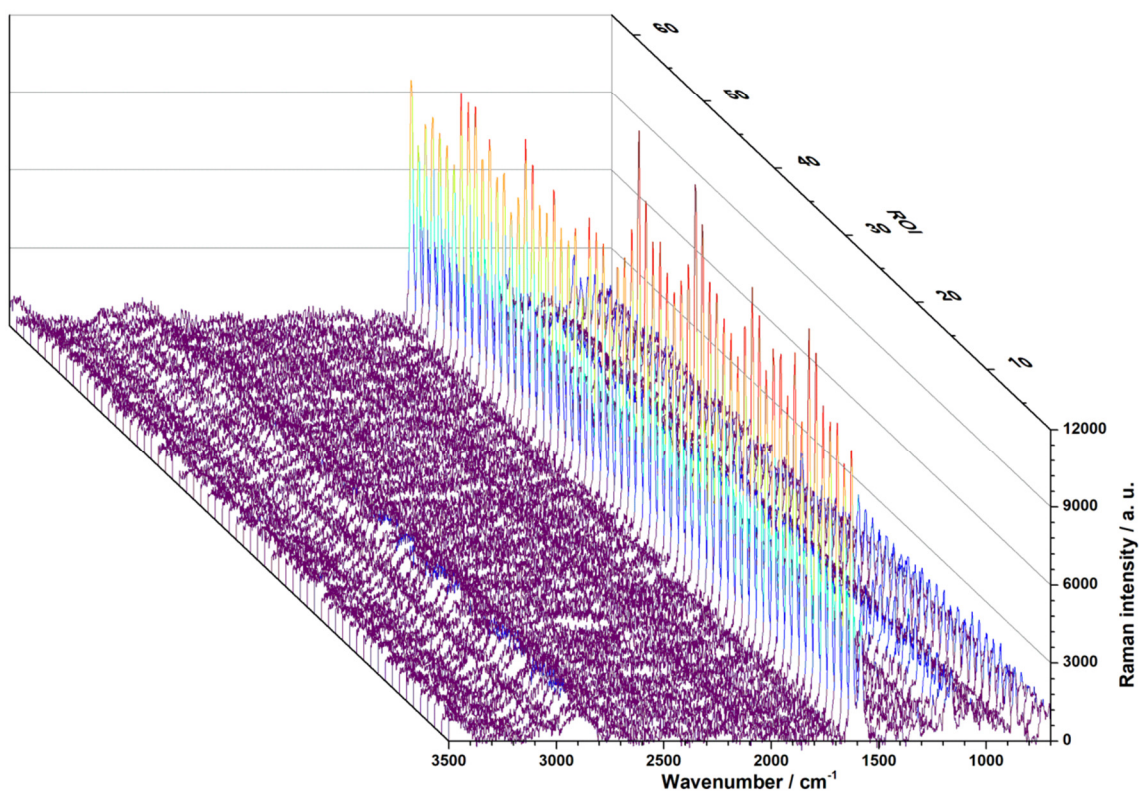


Figure S2: Exemplary visualization of the spatial distribution of the lumefantrine concentration in the model tablet Lu100Ar100 (based on the wavenumber range: 1607-1646 cm^{-1}). **(A)** The numbers 1 to 64 indicate the regions of interest (ROI) for the single fibers in the 8x8 fiber array. **(B)** Raman hyperspectral image consisting of 64 single Raman spectra with varying intensities due to spatial inhomogeneities of the APIs.