Electronic Supplementary Material (ESI) for Analyst.

Supplementary Materials

Raman spectroscopy as a novel tool for fast characterization of perivascular adipose tissue chemical composition

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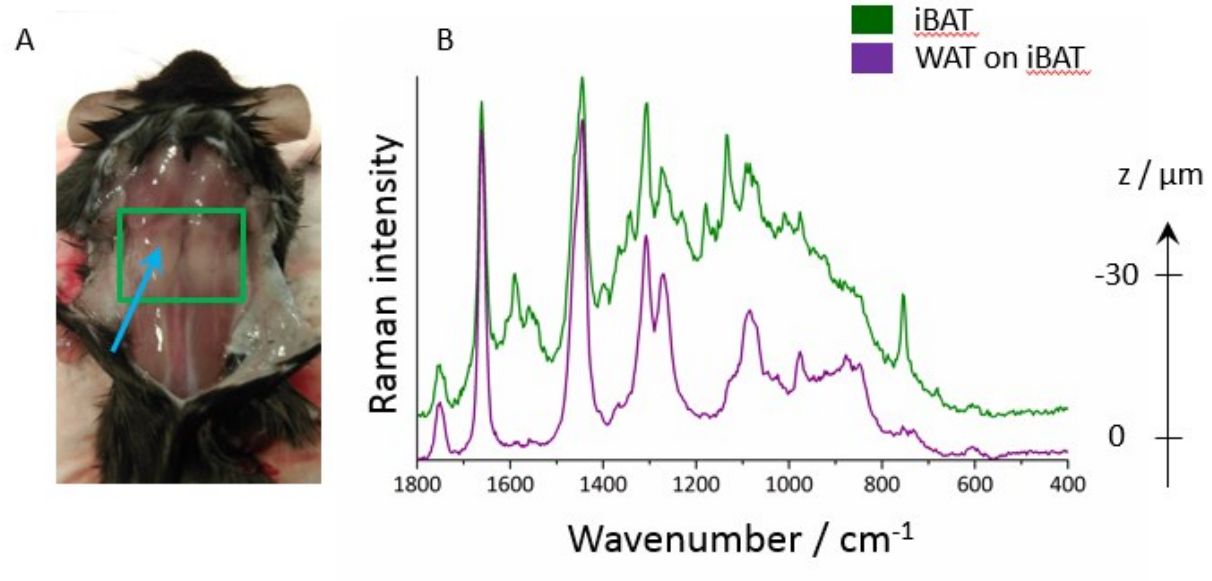

Figure 1S. Heterogeneity of BAT tissue. The photograph of the interscapular adipose tissue (A) with a marked area (green rectangle) of eBAT. The single Raman spectra of eBAT (B) taken from the point (marked with blue arrow) of the surface (purple) and deeper layer of tissue (30 µm in deep, green) presenting white and brown-like characteristic of the adipose tissue, respectively.

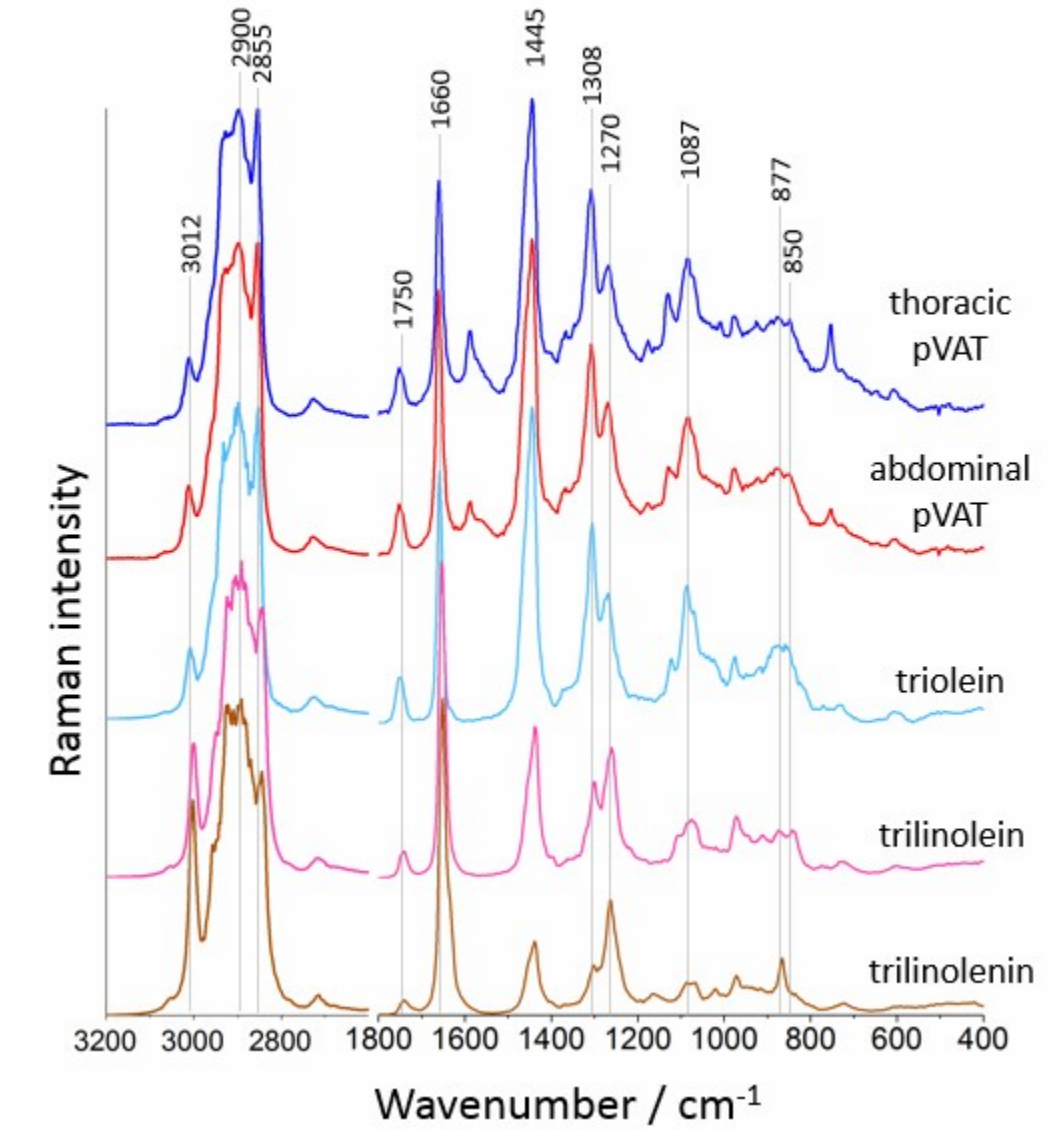

Figure 2S. Raman spectra of periaortic pVATs and standards of unsaturated triacylglycerols. The averaged Raman spectra of pVATs taken from the thoracic (blue) and abdominal (red) aorta compared with spectra of triolein (C18:1, cyan), trilinolein (C18:2, pink) and trilinolenin (C18:3, brown) analytical standards. Spectra have been shifted vertically for clarity.

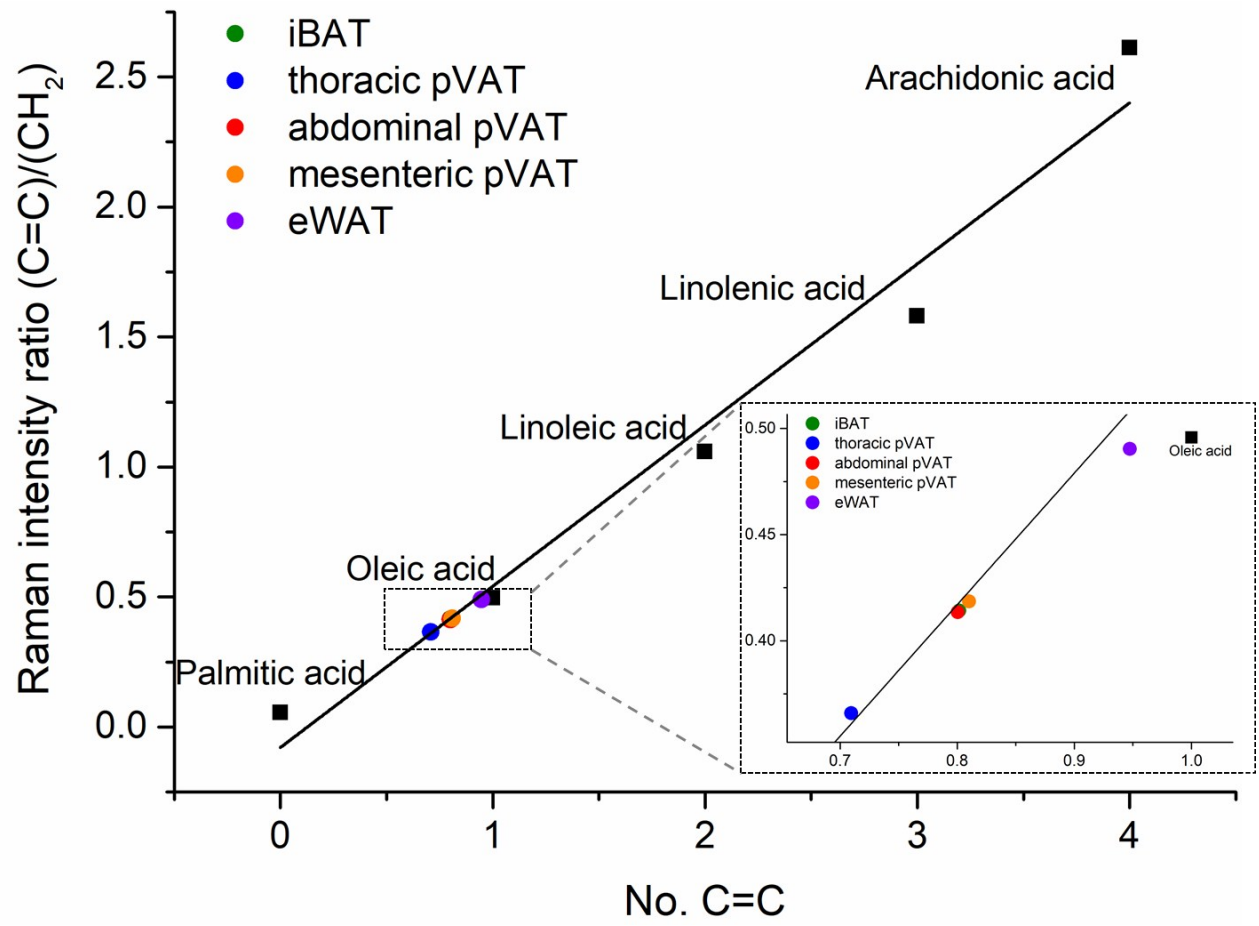

Figure 3S. Calibration curve for lipid unsaturation of studied adipose tissues. The unsaturation ratios calculated for all types of studied tissues compared with values obtained for fatty acids analytical standards.

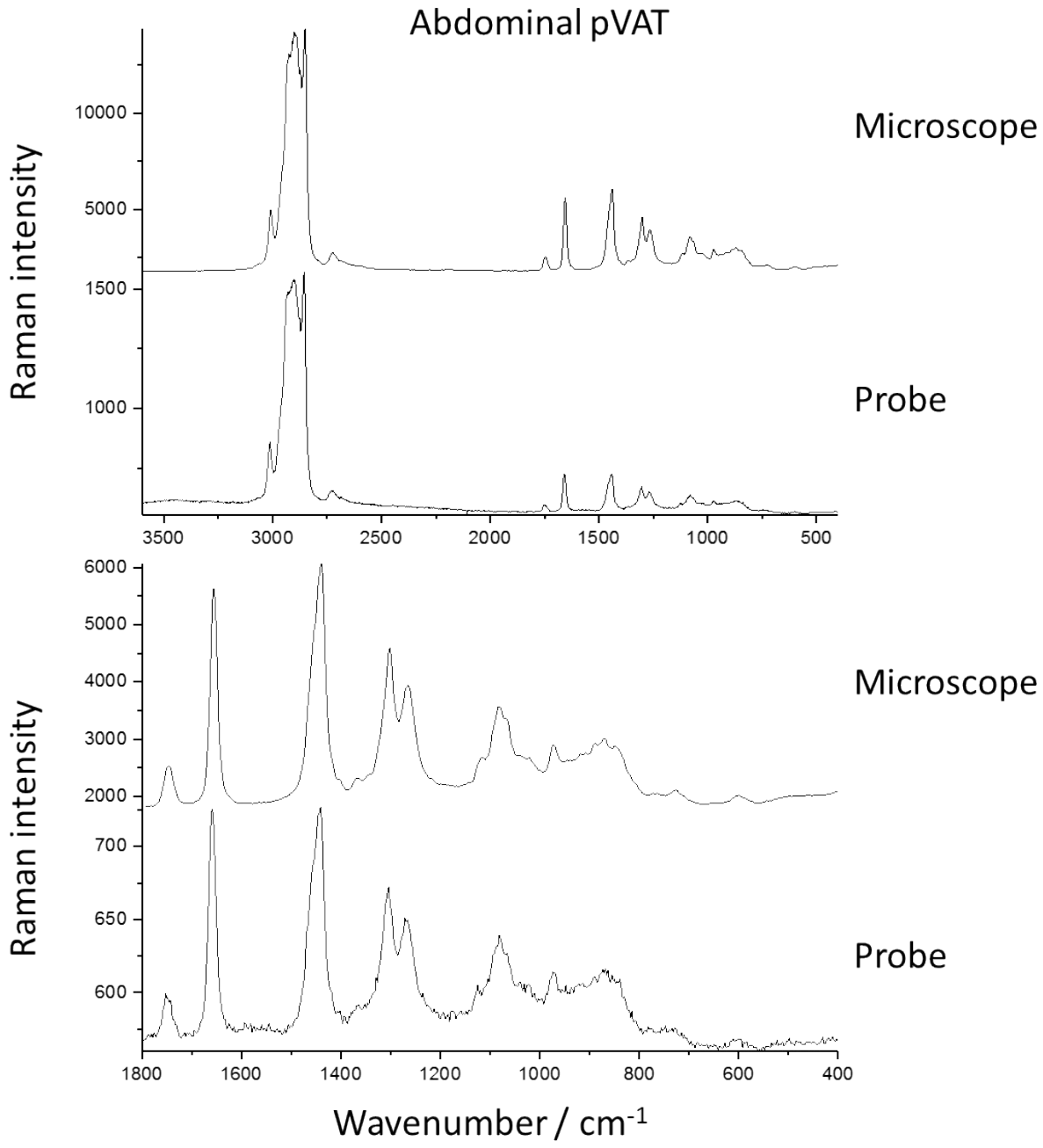

Figure 4S. Exemplary raw single Raman spectra from abdominal pVAT obtained using the Raman microscope and the fiber optic probe setup. The quality of spectra are almost the same and small differences, especially in the S/N ratio, resulted from a different number of accumulations: 32 for the microscope and 10 for the probe, respectively.