Supplementary Information

Figure 1S: Average and standard deviation (n=20) spectra of rat tail tendon in the 2500-3800 cm^{-1} range in non-polarized mode (b), with IR radiation polarized perpendicular ($\perp$) (a) and parallel (//) (c) to the x-axis of the motorized plate. The tendon was aligned along this x-axis direction.
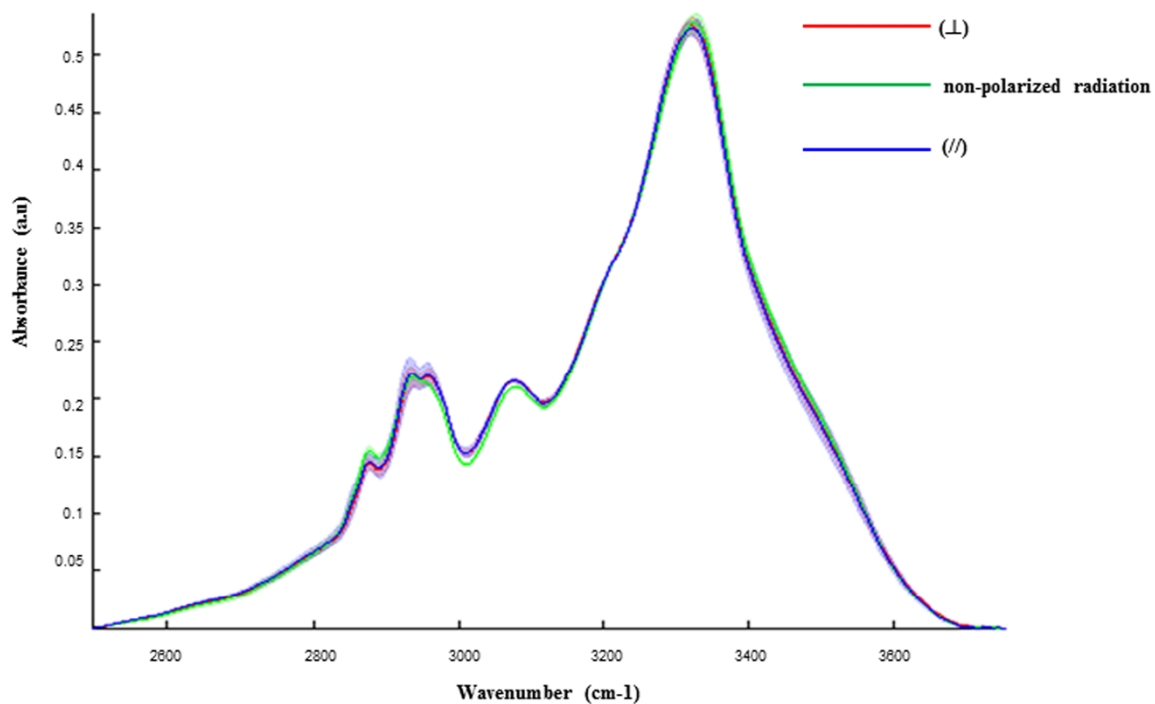
Figure 2S: Dendogram corresponding to the color-coded HCA clusterized images obtained for the 41(1) year old skin sample.
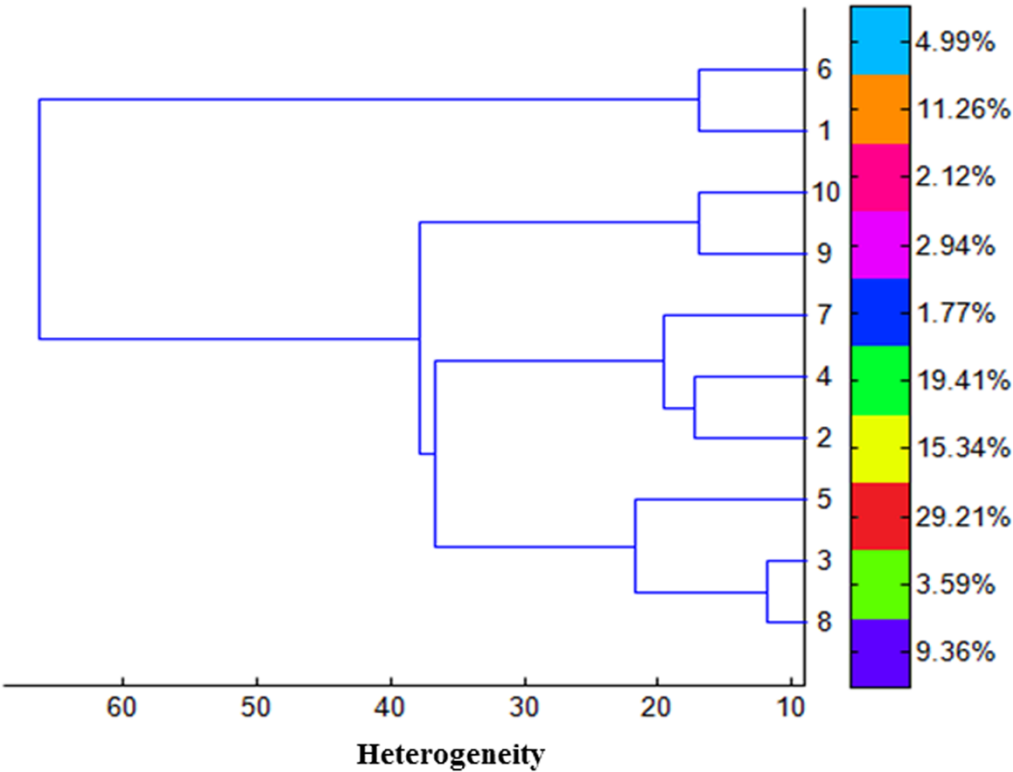
Figure 3S: Centroids (mean spectra and their standard deviation) of HCA clusters representative of the dermis. For each sample, three clusters were recovered.
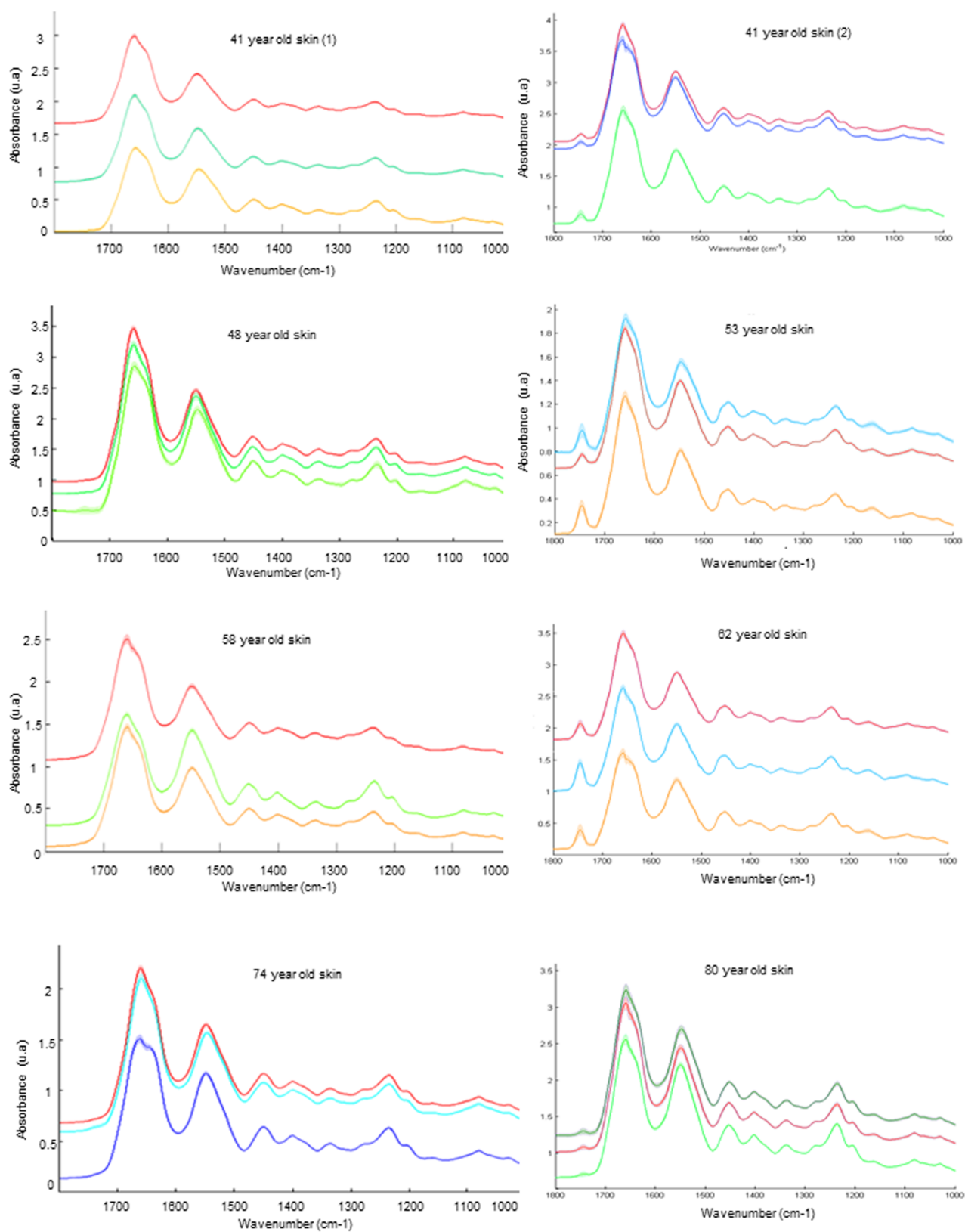
Figure 4S: SHG intensity for the eight skin samples of different age.