Support Information of: Effect of PLGA Concentration in Electrospinning Solution on Biocompatibility, Morphology and Mechanical Properties of Nonwoven Scaffolds

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Supporting Figures:

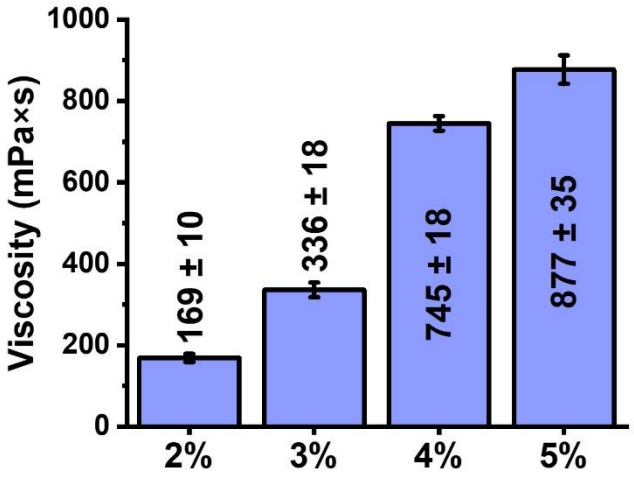

Figure S1. Viscosity and of poly(lactide-co-glycolide) (PLGA) electrospinning solutions prepared with different concentrations of PLGA (2, 3, 4 and 5 wt.%) dissolved in hexafluoro-2-propanol (HFIP).

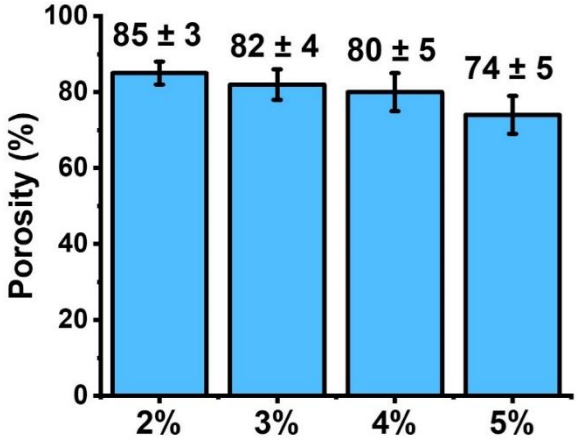

Figure S2. Porosity of the poly(lactide-co-glycolide) (PLGA) scaffolds under investigation, measured by the gravimetric method (for more details, see chapter 2.5 in the main manuscript).

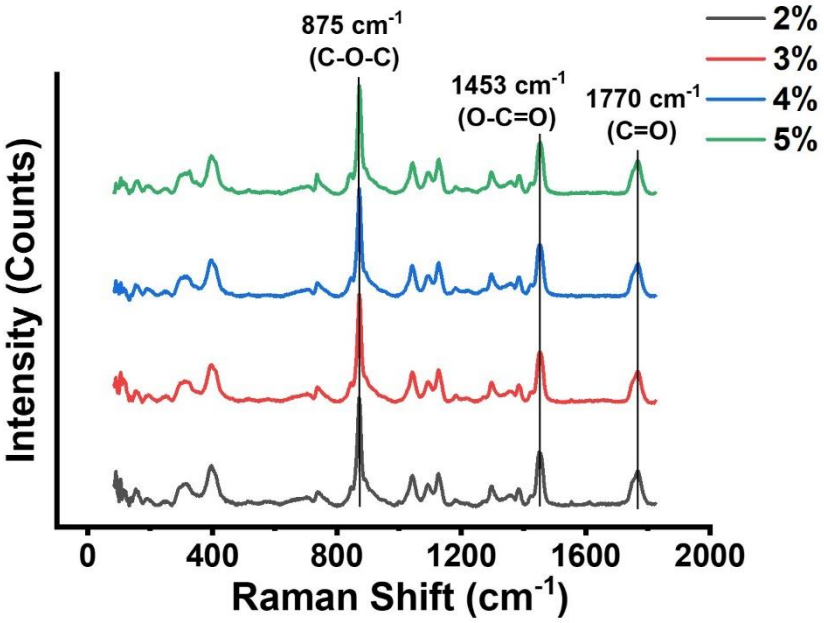

Figure S3. Raman spectra of the studied poly(lactide-co-glycolide) (PLGA) scaffolds made from electrospinning solutions with different PLGA concentrations (2, 3, 4 and 5 wt.%) dissolved in hexafluoro-2-propanol (HFIP).

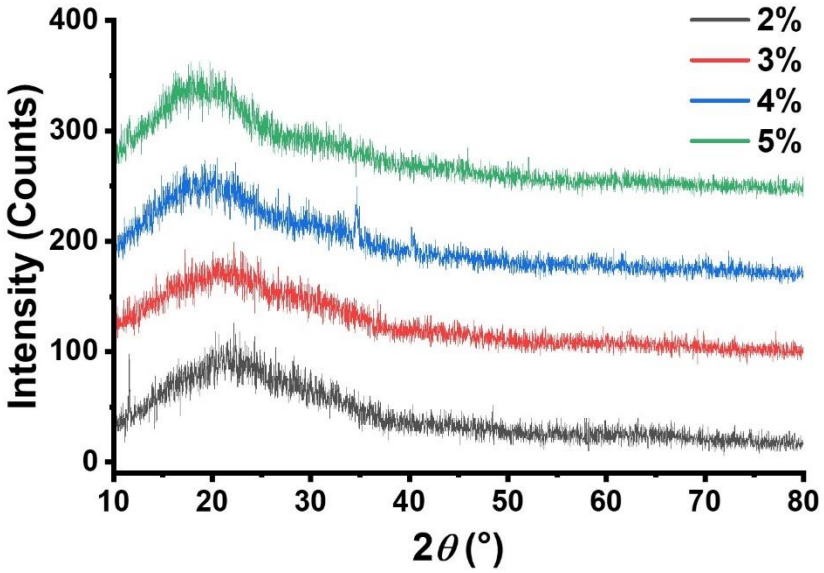

Figure S4. X-ray diffractograms of poly(lactide-co-glycolide) (PLGA) scaffolds made from electrospinning solutions with different PLGA concentrations (2, 3, 4 and 5 wt.%) dissolved in hexafluoro-2-propanol (HFIP).

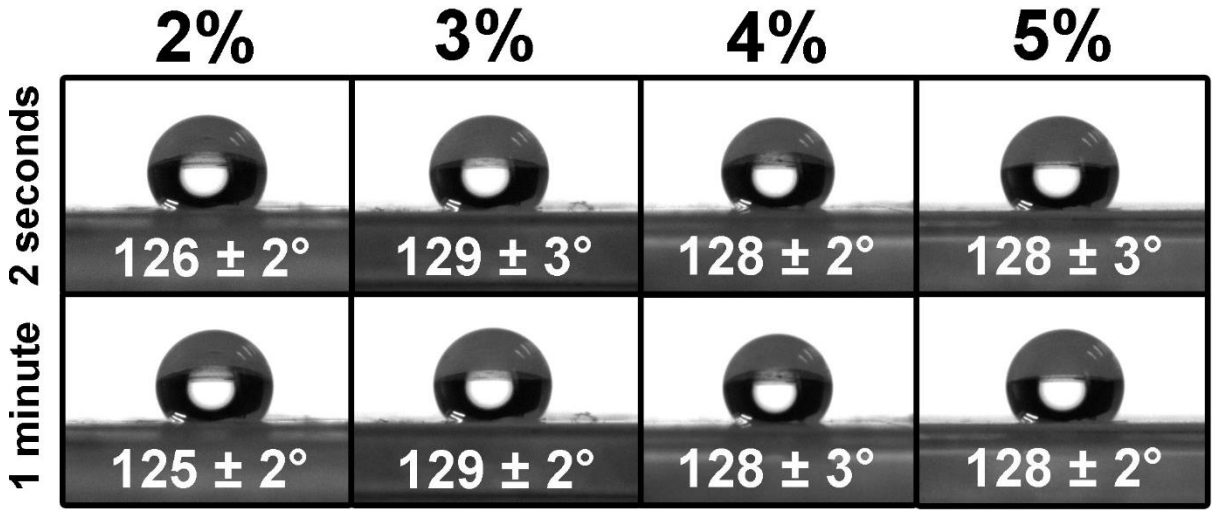

Figure S5. Images of water droplets with the corresponding water contact angles after 2 seconds (top row) and after 1 minute (bottom row) on the surface of poly(lactide-co-glycolide) (PLGA) scaffolds prepared from electrospinning solutions with different PLGA concentrations (2, 3, 4 and 5 wt.%) dissolved in hexafluoro-2-propanol (HFIP).

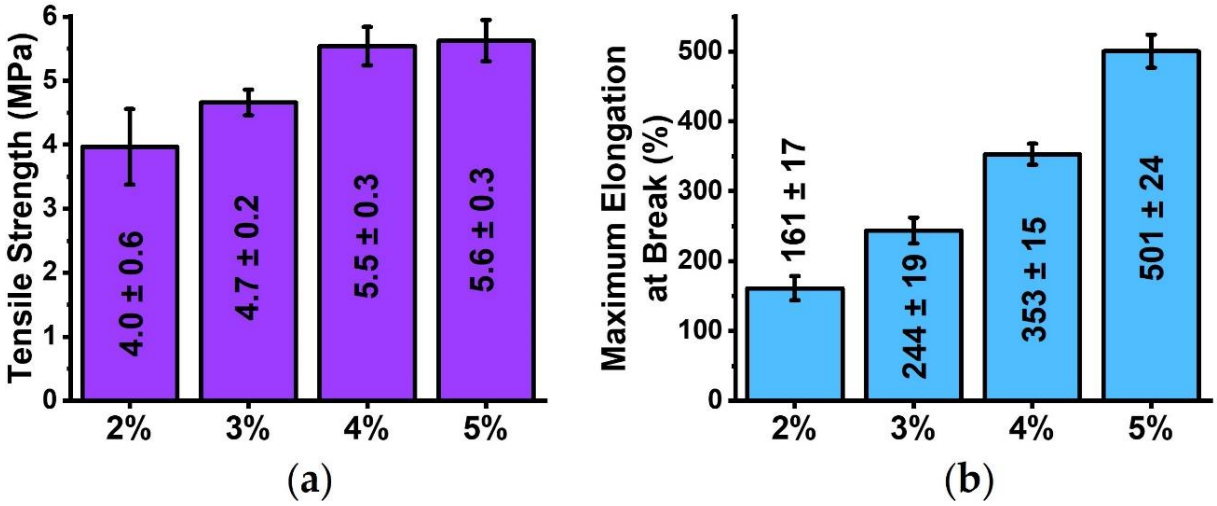

Figure S6. Mechanical properties of the prepared poly(lactide-co-glycolide) (PLGA) scaffolds made from electrospinning solutions with different PLGA polymer concentrations (2, 3, 4 and 5 wt.%) dissolved in hexafluoro-2-propanol (HFIP): a) tensile strength of the PLGA scaffolds under investigation and b) maximum elongation at break.

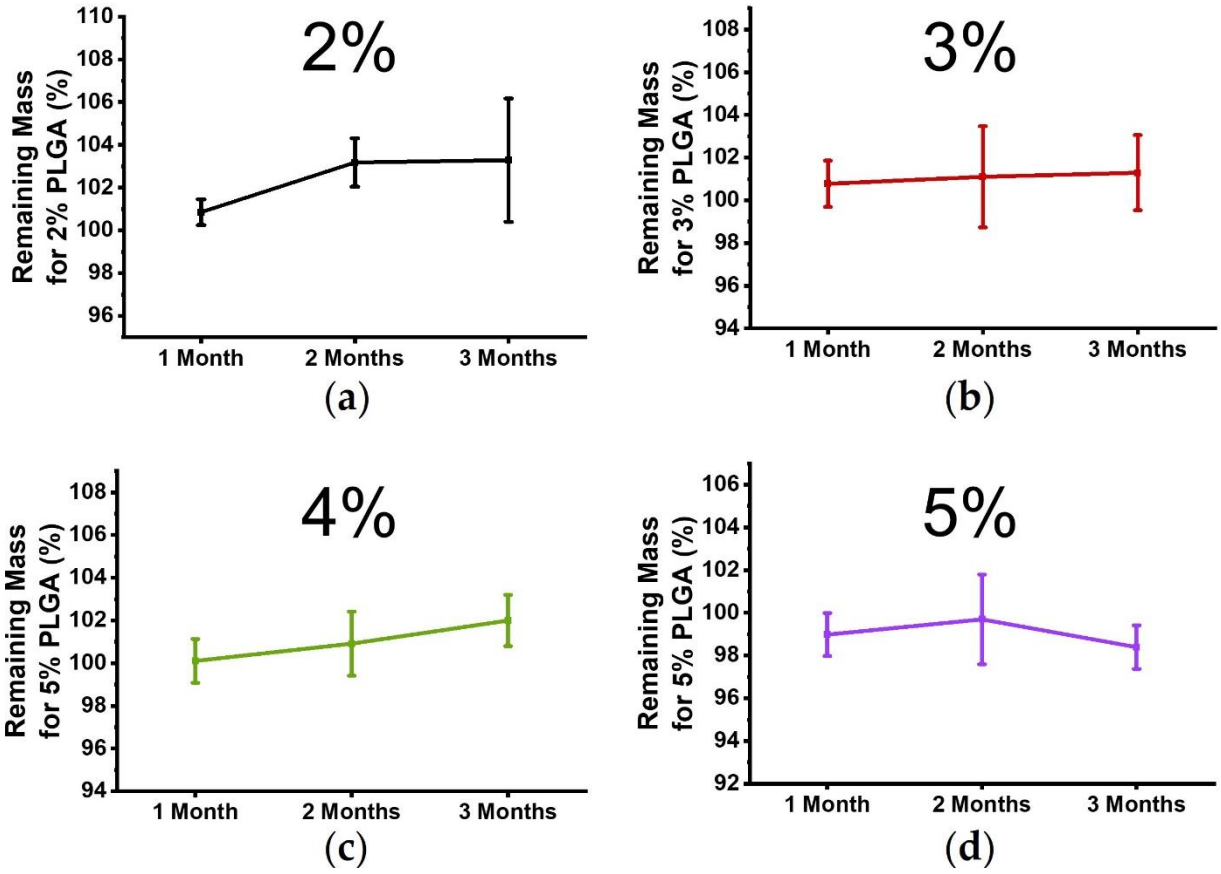

Figure S7. Relative remaining mass of poly(lactide-co-glycolide) (PLGA) scaffolds, prepared from electrospinning solutions with different polymer concentrations (2, 3, 4 and 5 wt.%) dissolved in hexafluoro-2-propanol (HFIP) and immersed in phosphate buffer saline (PBS) for 1, 2 or 3 months: a) 2%, b) 3%, c) 4%, d) 5%.

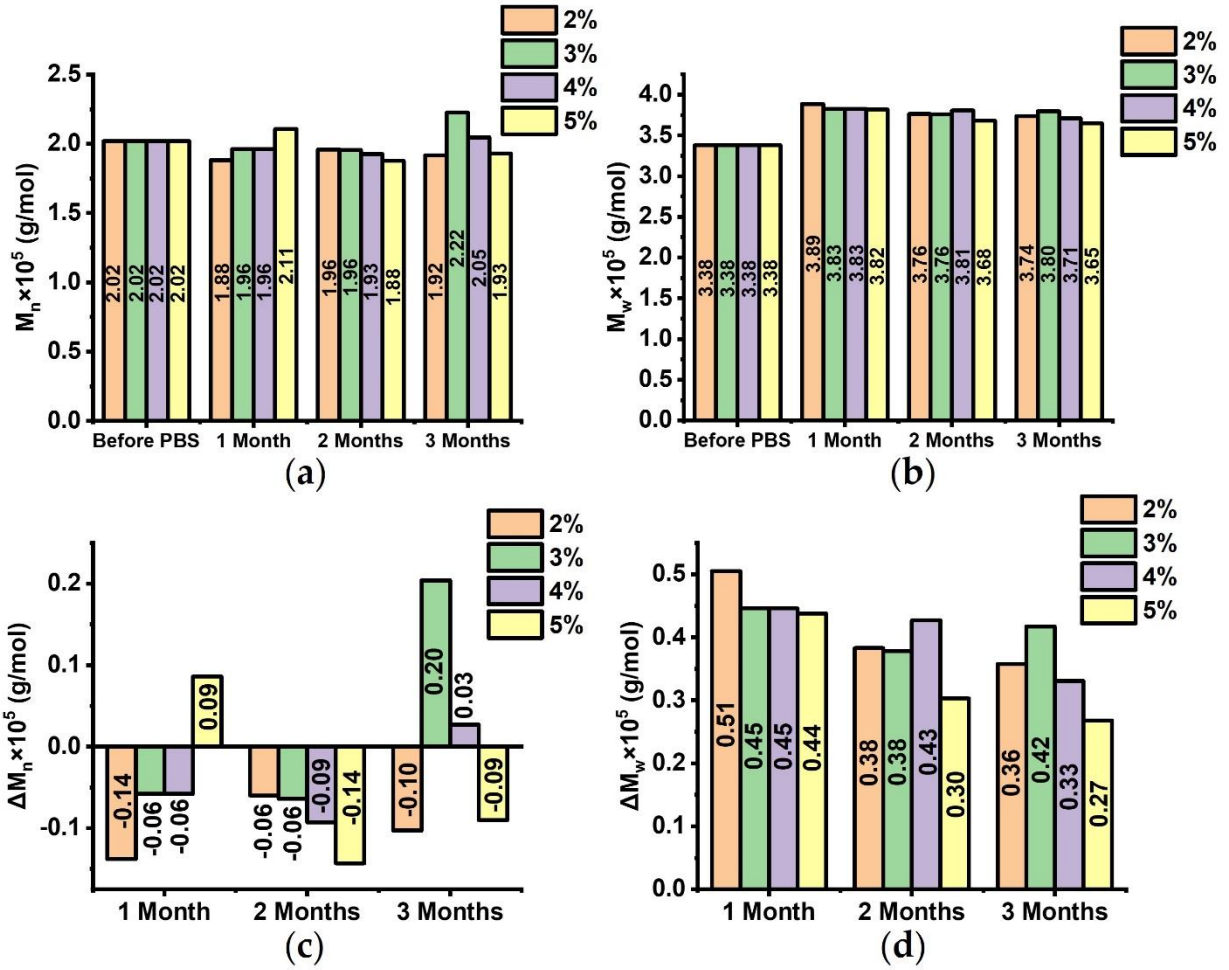

Figure S8. Molecular weights (number average molecular weight (M_n) and molecular weight (M_w)) and molecular weight differences (ΔM_n, ΔM_w) of poly(lactide-co-glycolide) (PLGA) scaffolds prepared from electrospinning solutions with different PLGA concentrations (2, 3, 4 and 5 wt.%) dissolved in hexafluoro-2-propanol (HFIP), not immersed (Before PBS) and immersed in phosphate-buffered saline (PBS) for 1, 2 or 3 months: a) M_n, b) M_w c) ΔM_n and d) ΔM_w.

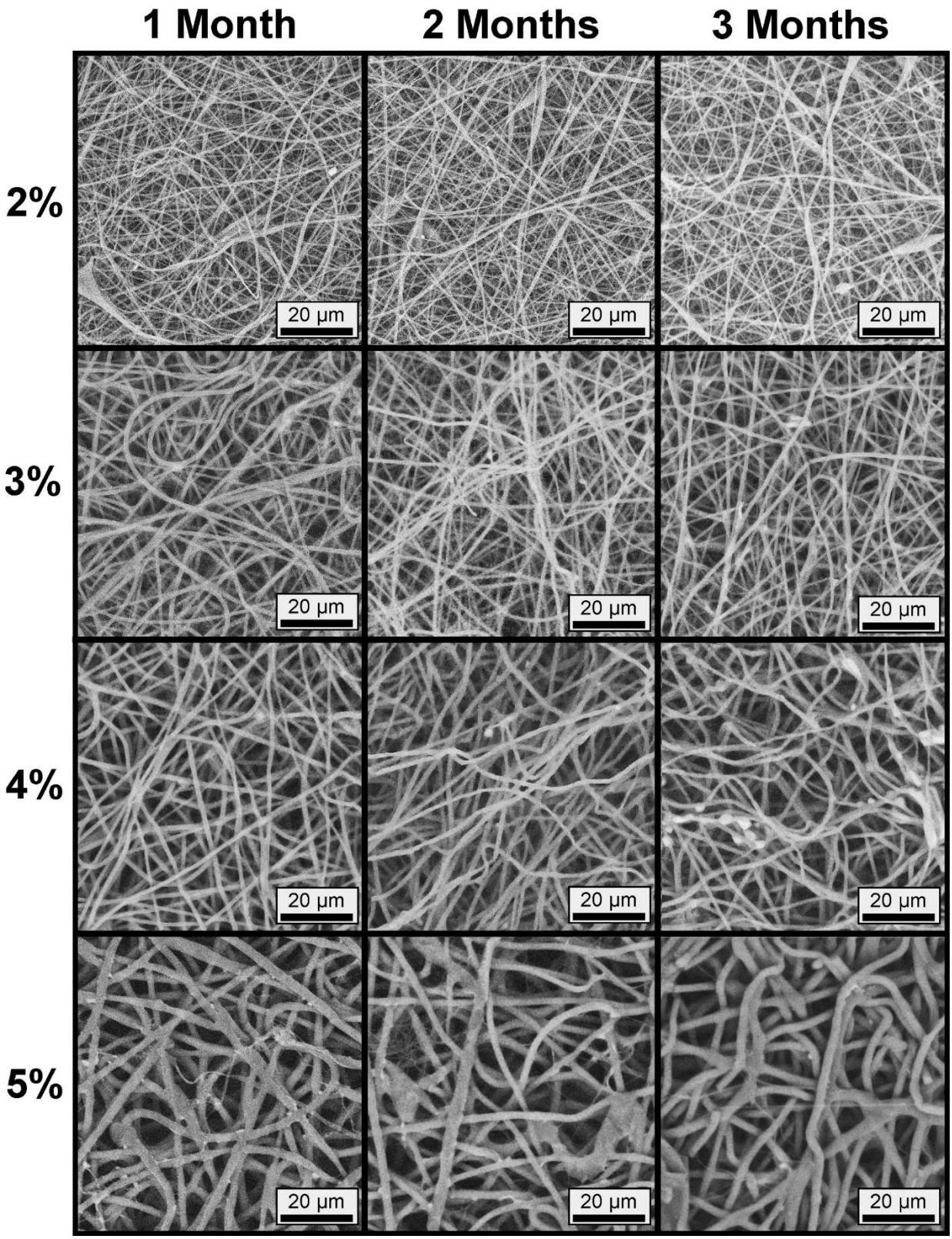

Figure S9. Scanning electron microscopy (SEM) micrographs at 1000× magnification of poly(lactide-co-glycolide) (PLGA) scaffolds fabricated from electrospinning solutions with different PLGA concentrations (2, 3, 4 and 5 wt.%) and immersed in phosphate buffer saline (PBS) for 1, 2 or 3 months.

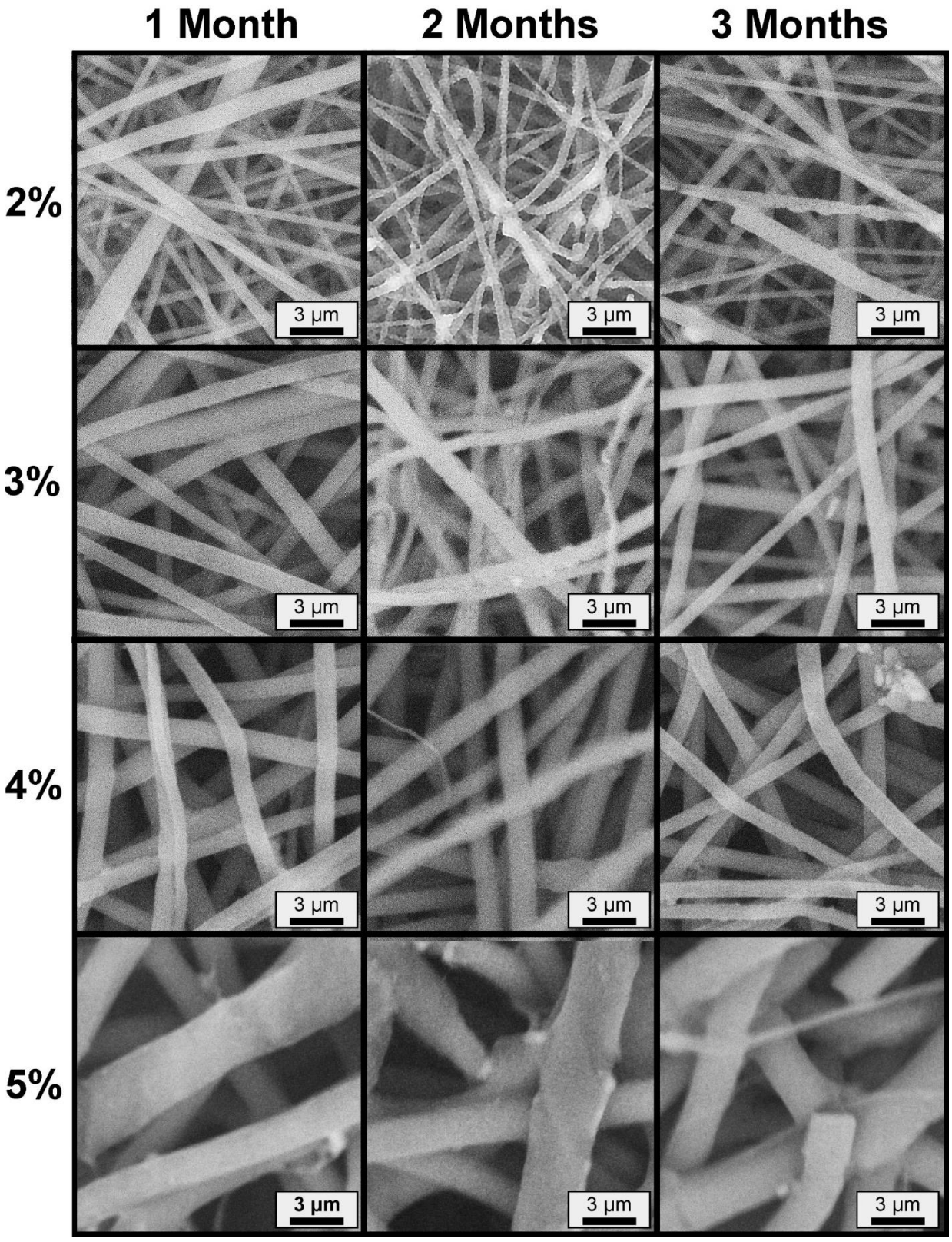

Figure S10. Scanning electron microscopy (SEM) micrographs at 5000× magnification of poly(lactide-co-glycolide) (PLGA) scaffolds fabricated from electrospinning solutions with different PLGA concentrations (2, 3, 4 and 5 wt.%) and immersed in phosphate buffer saline (PBS) for 1, 2 or 3 months.