Extrusion of the blend

Filaments having different diameters (Fig. S1a) were obtained by extrusion and subsequent mechanical stretching. The extrusion was performed by feeding chopped films into a single screw extruder (Micro extruder, Rheoscam Scamex, France, Fig. S1b). The temperature along the extruder was 50-70°C and the speed of the screw was 30-40 rpm. The fibers were stretched manually immediately after extrusion.

![Figure S1](image)

Figure S1. (a) Extruded filaments of a 50/50 blend having different diameters. (b) Extruder used to produce the filaments.
XRD patterns

Figure S2. XRD pattern of PCL and different PCL/PFA blends.

Biocompatibility study

Figure S3. Optical view of CHO cells at the end of the indirect toxicity cells for control (left) and 50/50 sample (right). In both cases, cells were confluent; in the control CHO cells built multilayers and create aggregates (scale bar 100 μm).