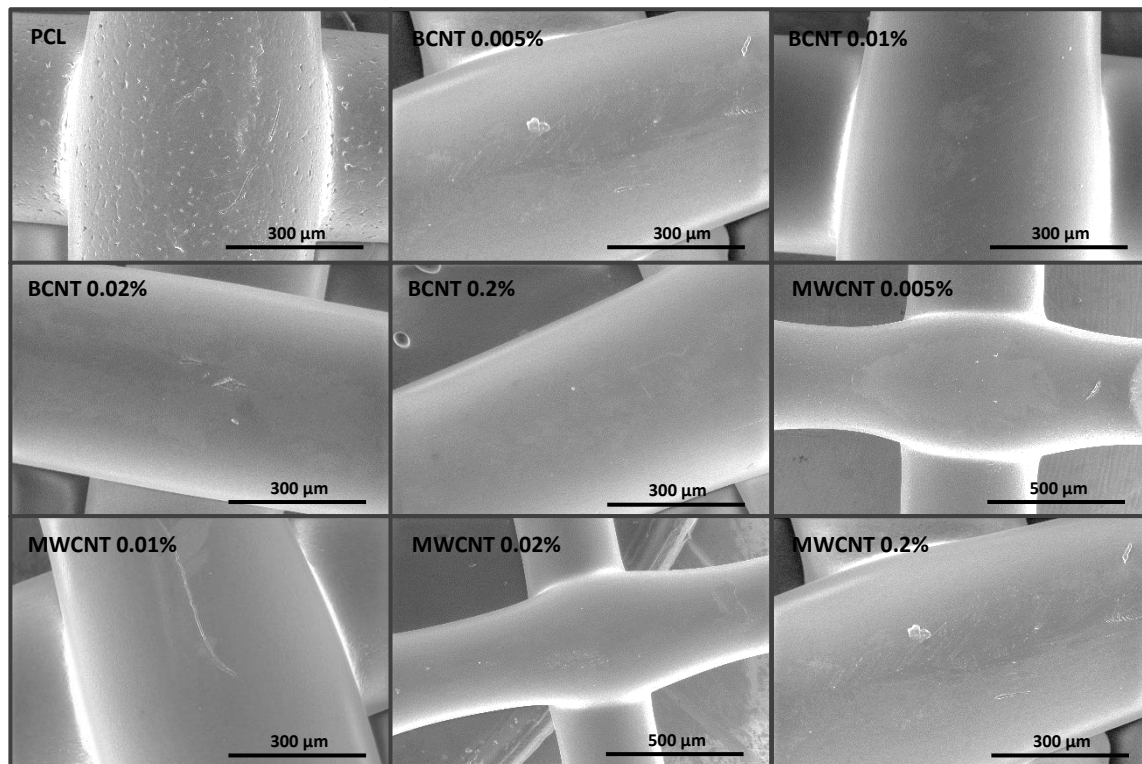


## Supplementary File



**Figure S1.** SEM images of 3D-printed grids

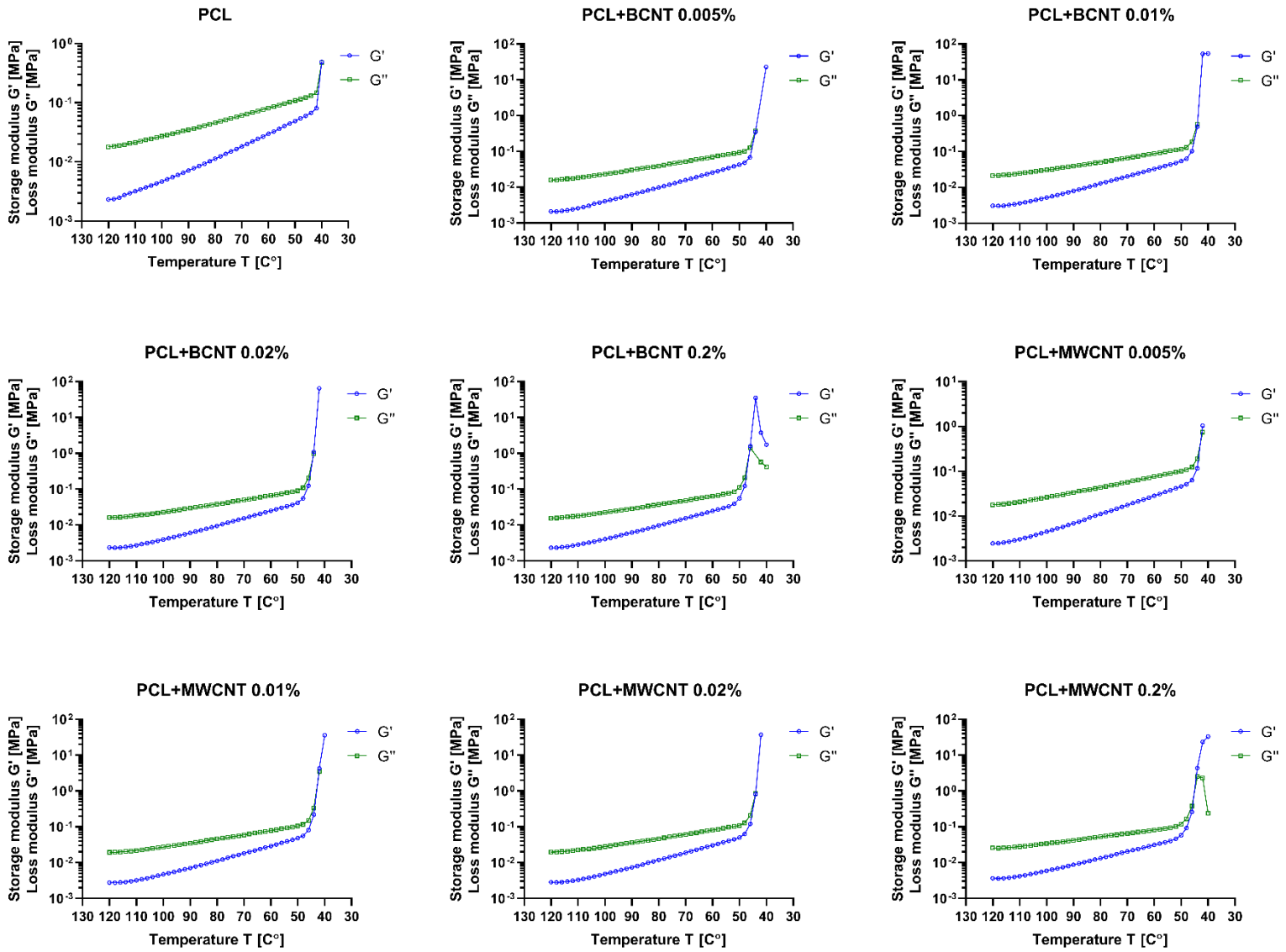


Figure S2. Temperature sweep analysis for 120–40°C range

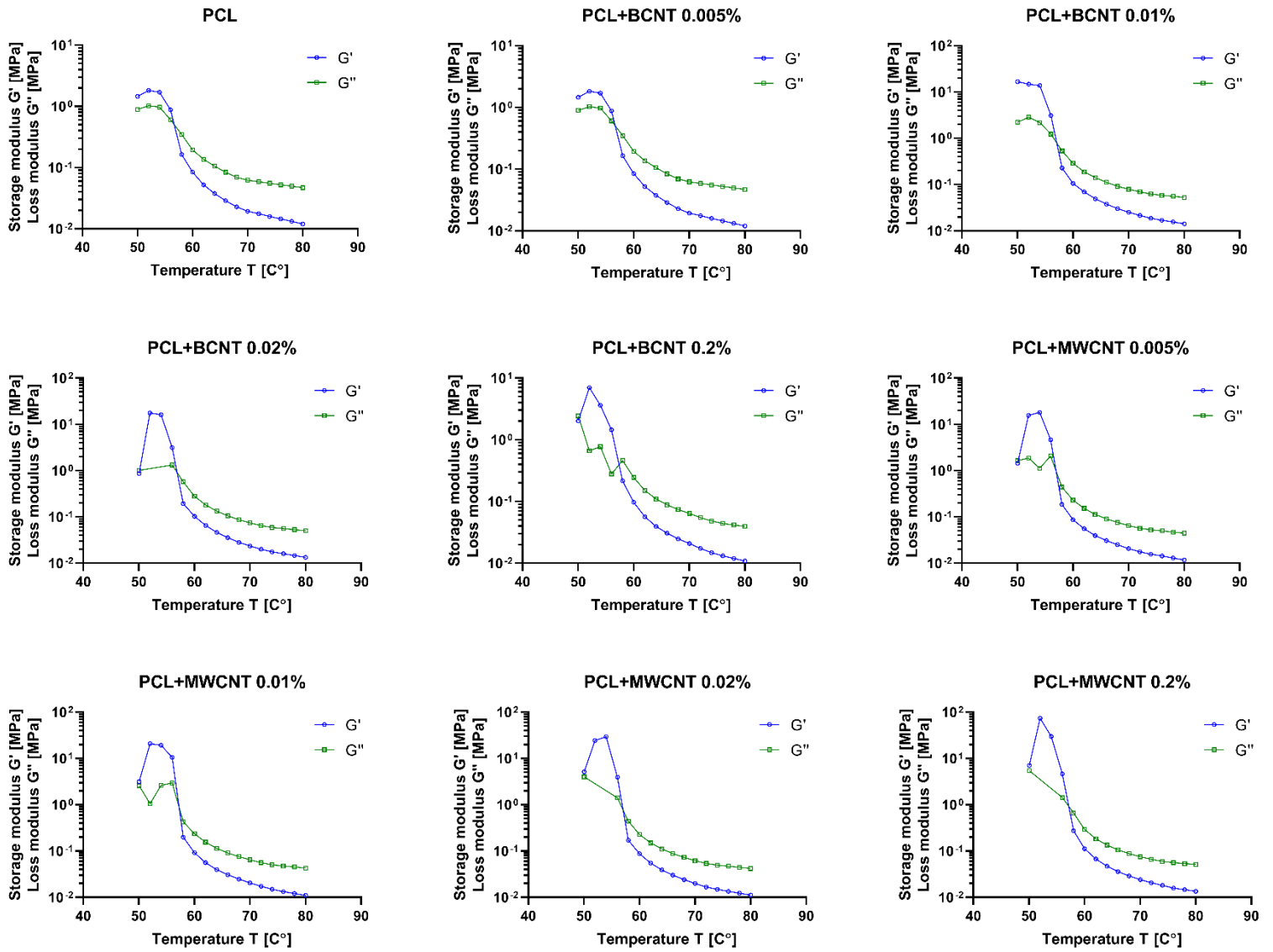
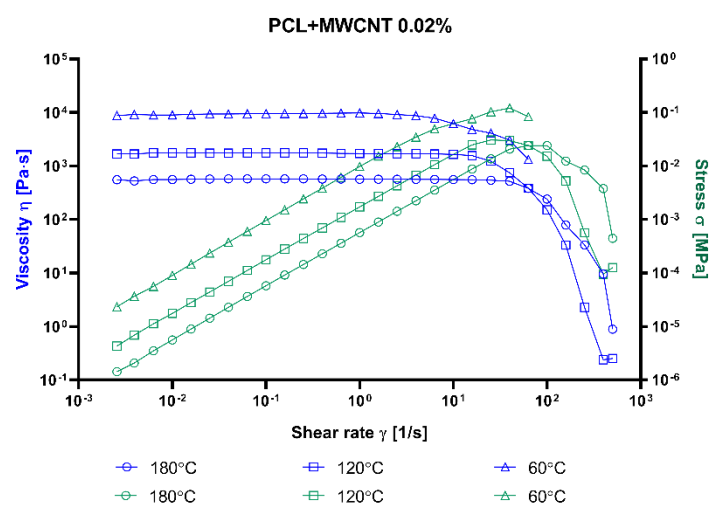
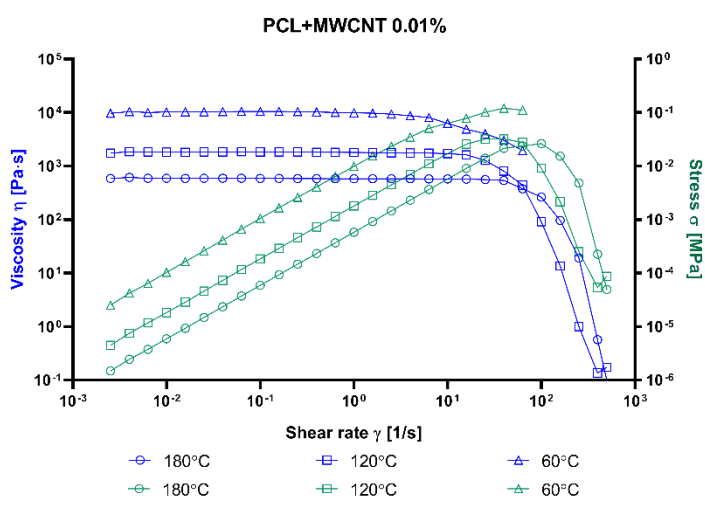
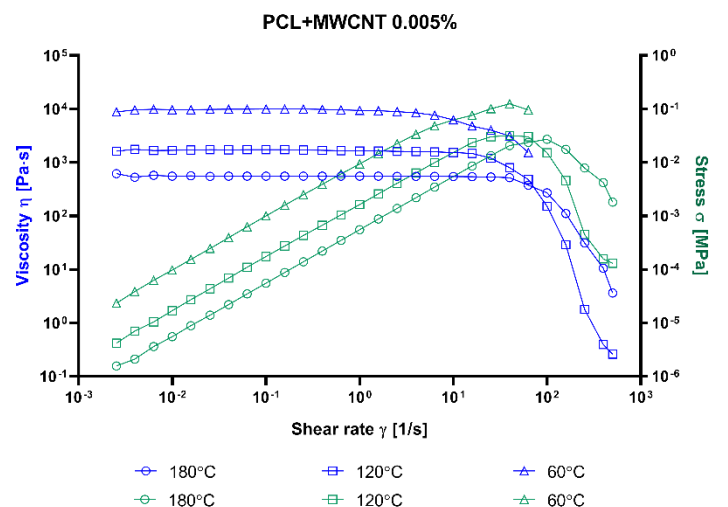
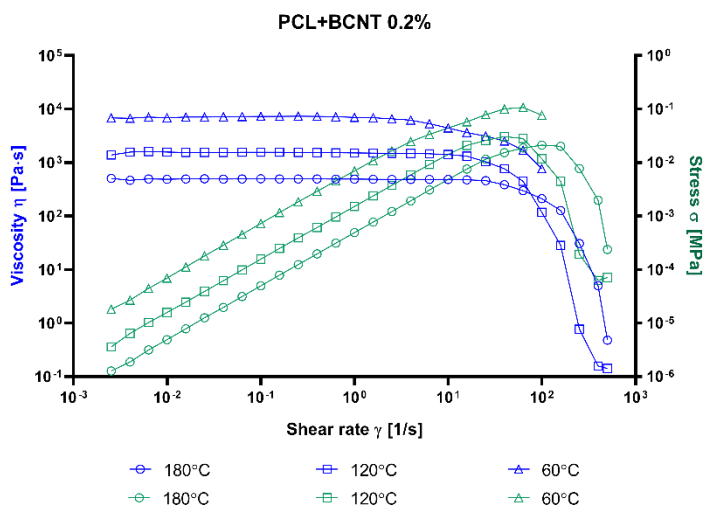
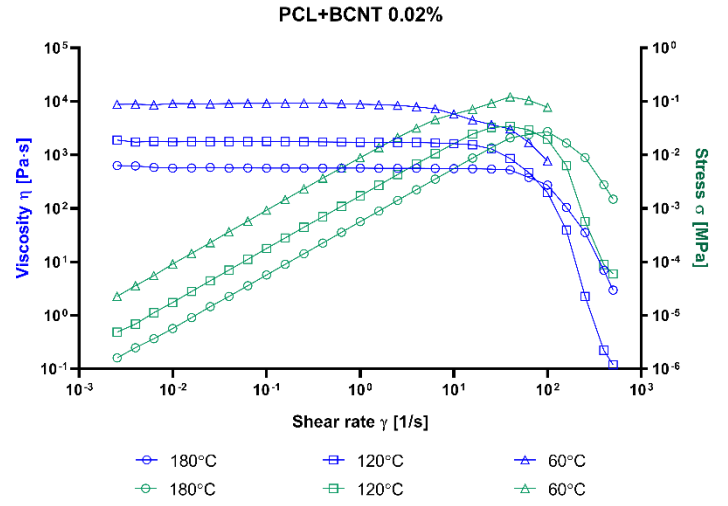
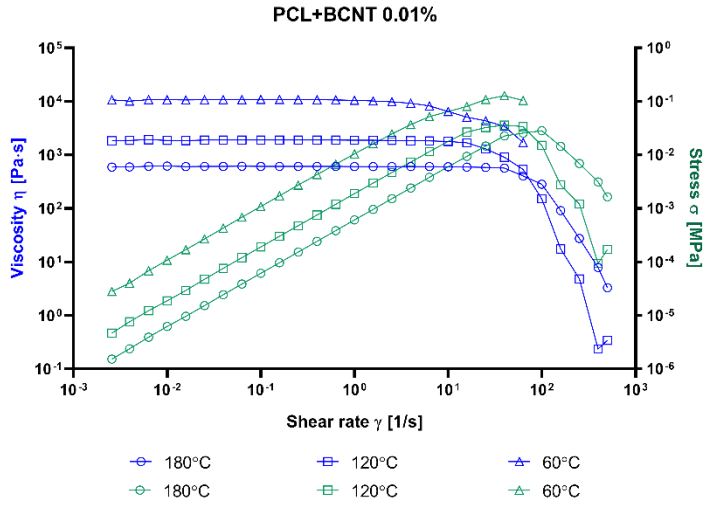
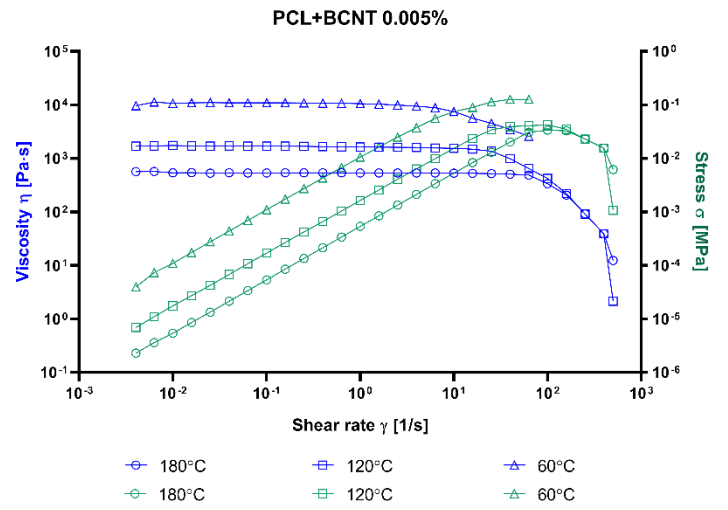
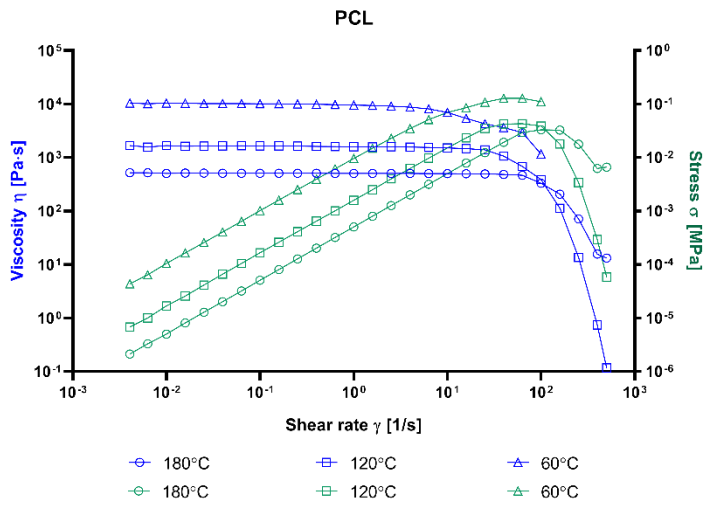
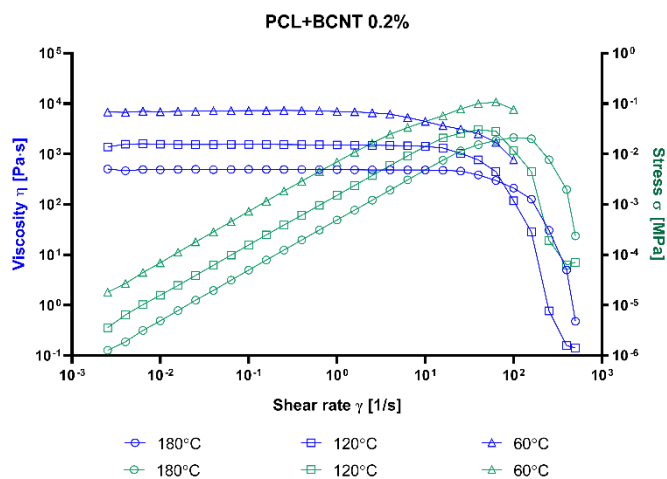


Figure S3. Temperature sweep analysis for 50–80°C range





**Figure S4.** Flow sweep analysis at 180°C, 120°C and 60°C

**Table S1.** Results of the CellTiter-Glo 2.0 cell viability assay.

Pair	Statistical significance	
	3 days	6 days
PCL vs. Ctrl	***	**
PCL vs. BCNT 0.005%	***	ns
PCL vs. BCNT 0.01%	ns	**
PCL vs. BCNT 0.02%	ns	ns
PCL vs. BCNT 0.2%	***	***
PCL vs. MWCNT 0.005%	**	**
PCL vs. MWCNT 0.01%	*	***
PCL vs. MWCNT 0.02%	ns	ns
PCL vs. MWCNT 0.2%	*	***

Statistical analysis was performed using one-way Anova and post -hoc Dunnett`s T3 multiple comparisons test. The mean of each column was compared to the mean of PCL column.

CI=95%, P value: 0.12 (ns), 0.033(\*), 0.002 (\*\*), <0.001 (\*\*\*)).