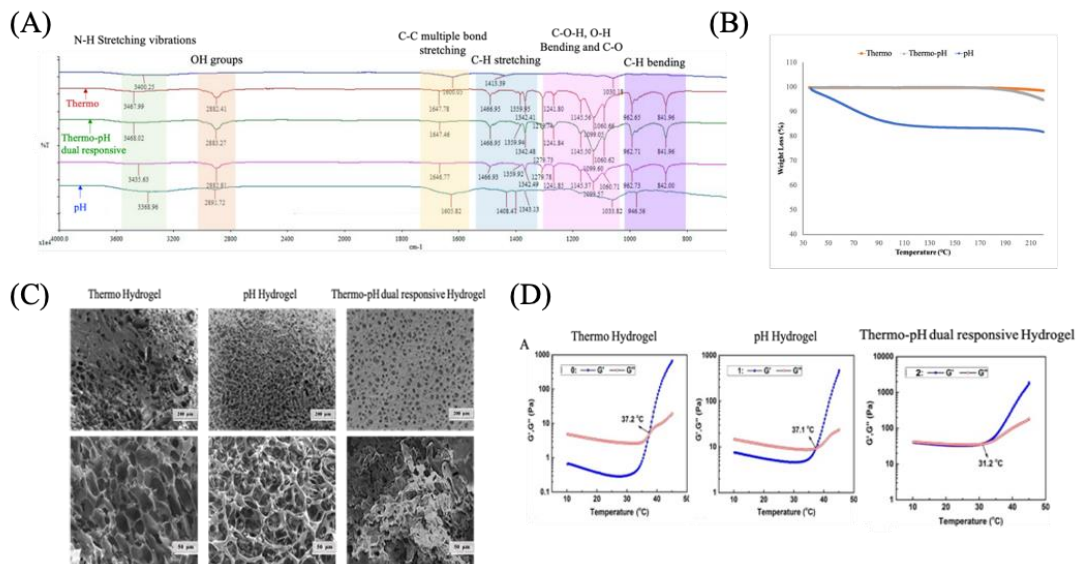
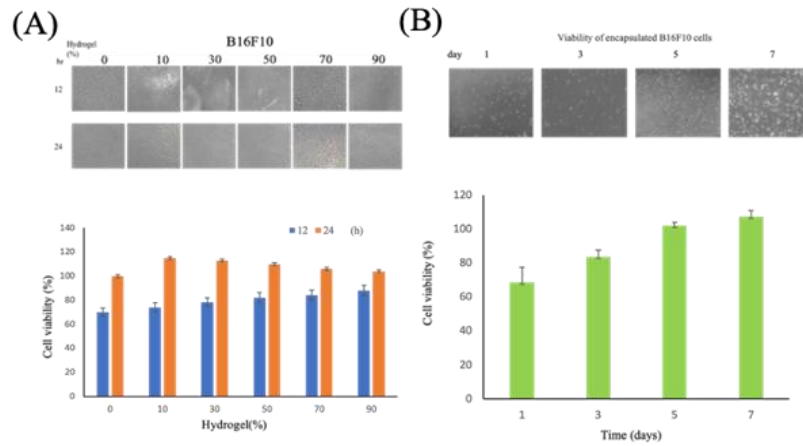


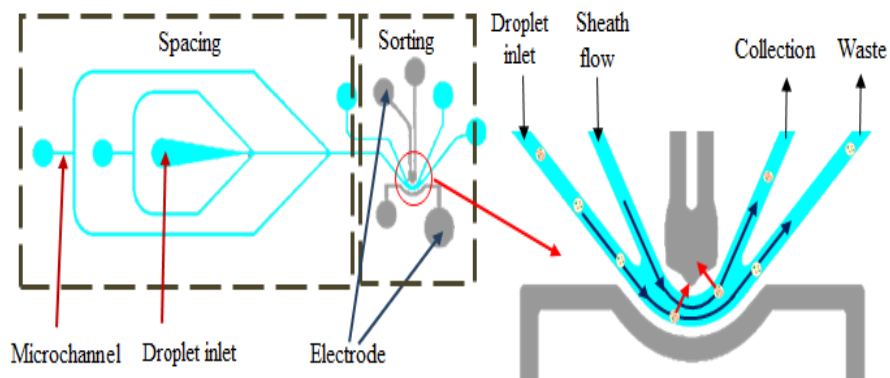
**Figure 1.** CS/F-127/GX temperature sensitive hydrogel and HA/PEG/NaOH/BDDE acid-base hydrogel double reaction preparation process.



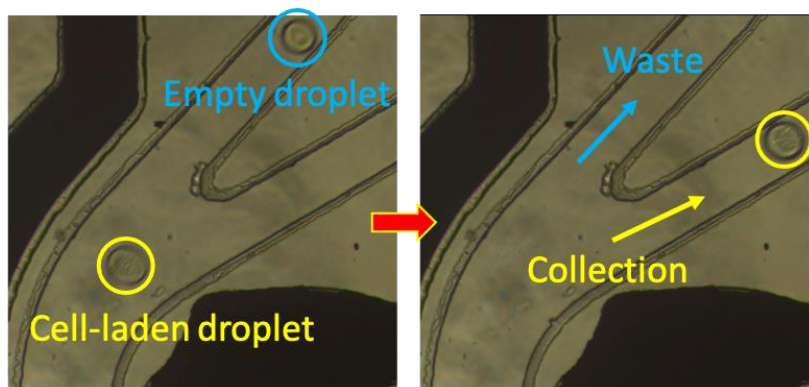
**Figure 2.** Thermal, pH, and thermal pH hydrogels were analyzed by FTIR spectrometer (PerkinElmer (Spectrum 100)), TGA (PerkinElmer TGA8000), SEM (ZEISS ULTRA PLUS), and rheological properties (Brookfield Asset Management, Canada) performance.



**Figure 3.** The B16F10 survival rate of melanoma cells in different concentrations of hydrogel growth environment for 12 and 24 hours is shown in Figure 3A. We have confirmed that different ratios of hydrogels do not affect cell viability. Figure 3B. Melanoma cell viability of B16F10 cells grown on Thermo-pH hydrogels at 1, 3, 5, and 7 days.



**Figure 4.** Schematic diagram of droplet sorting channel.



**Figure 5.** Sorting moment of empty and cell-laden droplet.