

TABLES AND FIGURES

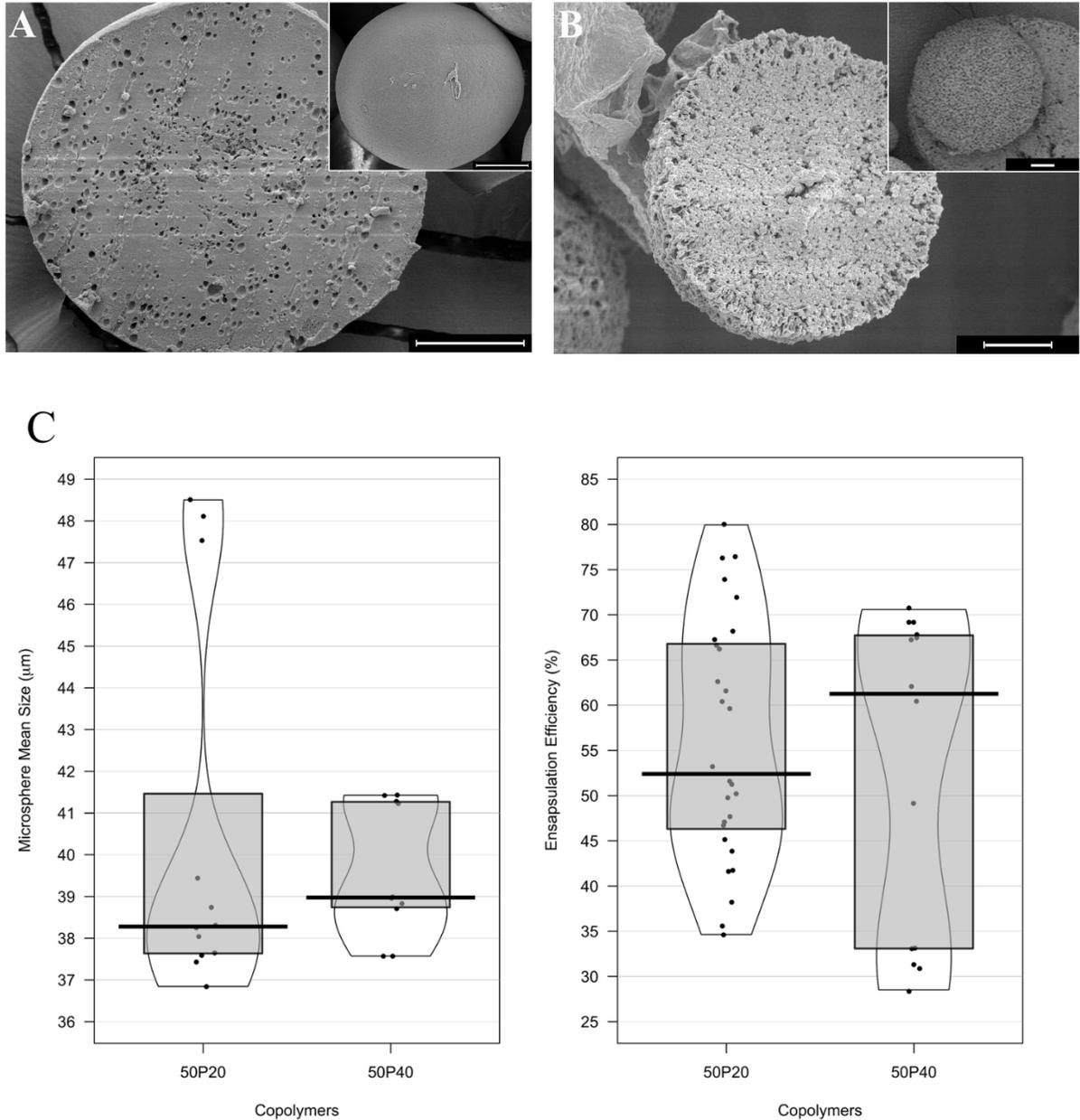


Figure 1. Characterisation of MS produced using copolymers: (A) external/internal structure of 50P40-MS; (B) external/internal structure of 50P20-MS. In both cases, white scale bars represents $10\ \mu\text{m}$; (C) particle mean size ($n=5$) and encapsulation efficiency ($n=5$ for 50P40-MS and $n=10$ for 50P20-MS) as function of copolymers. Grey plot aims to compare the distribution of both interest variable as function of copolymers types. The boxes indicate the 75th percentile (upper horizontal line), median (black bold horizontal line), and the 25th (lower horizontal line) percentiles of the distribution. Surrounding the boxed (shaded area) on each side is a rotated kernel density plot.

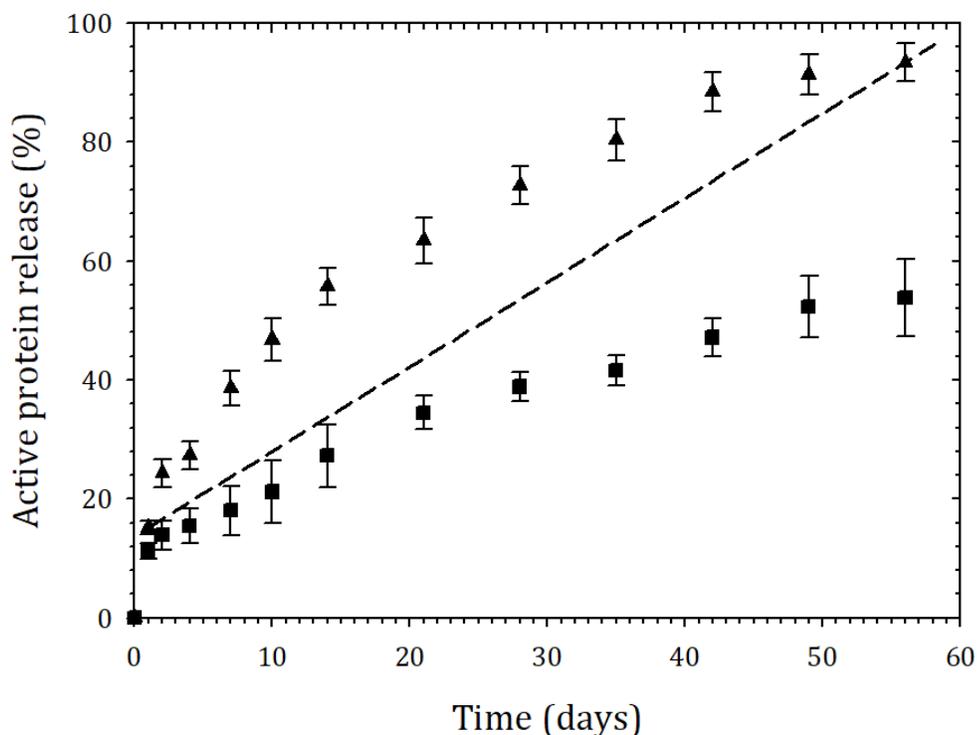


Figure 2. Average protein release profiles from microspheres of copolymer 50P20 (triangles) and copolymer 50P40 (squares). Error bars represent 95% confident intervals of mean values ($n=24$ for 50P20 and $n=10$ for 50P40). The dashed line is a guide to the eyes, it figures out the ideal desired profile.

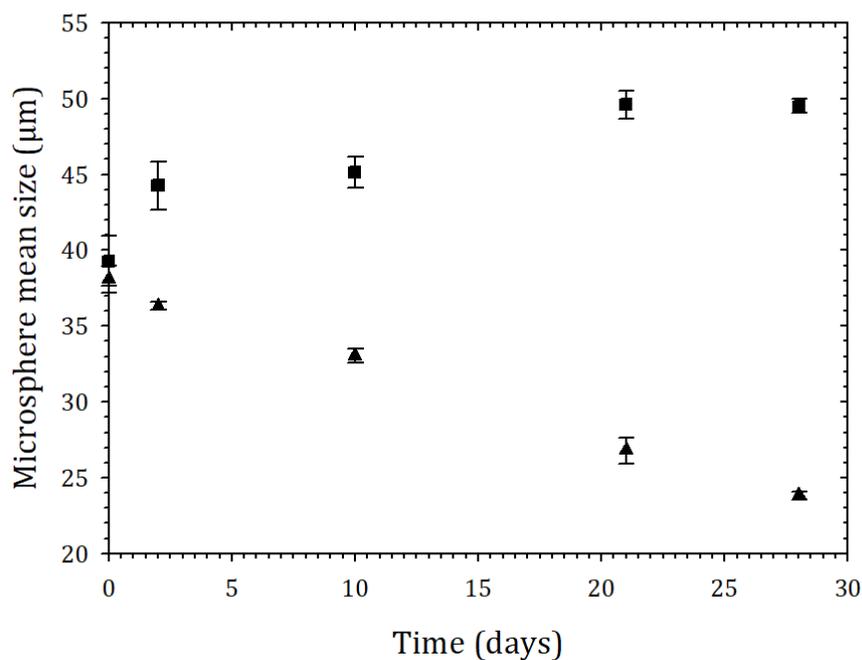
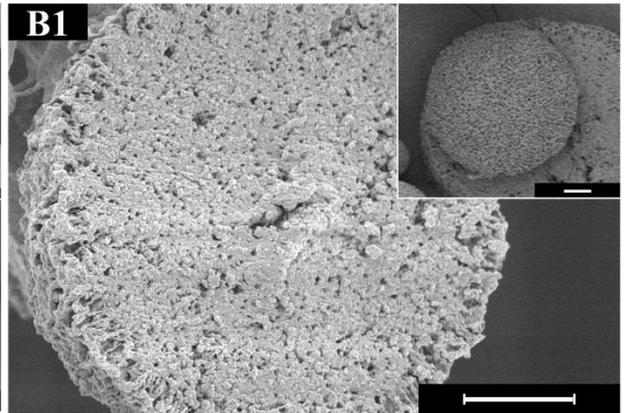
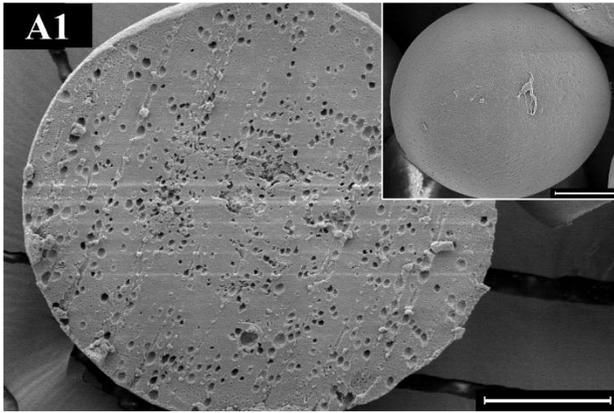


Figure 3. Evolution of microsphere mean sizes as a function of the release time for 50P20 (triangles) and 50P40 (squares). Error bars represent 95% confident intervals of the mean value ($n=6$ for 50P20 and 50P40).

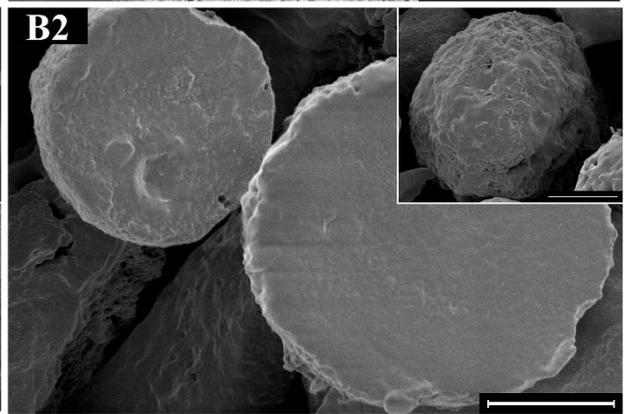
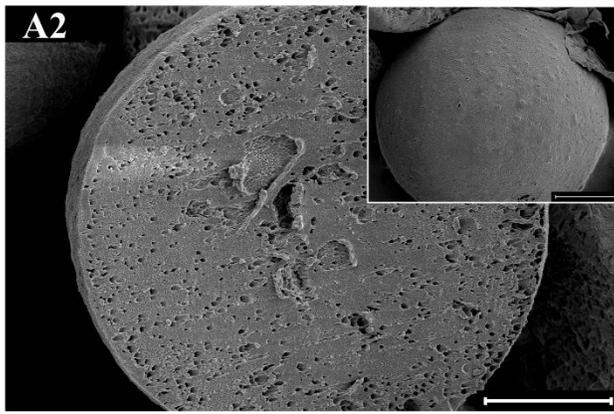
50P40 MS

50P20 MS

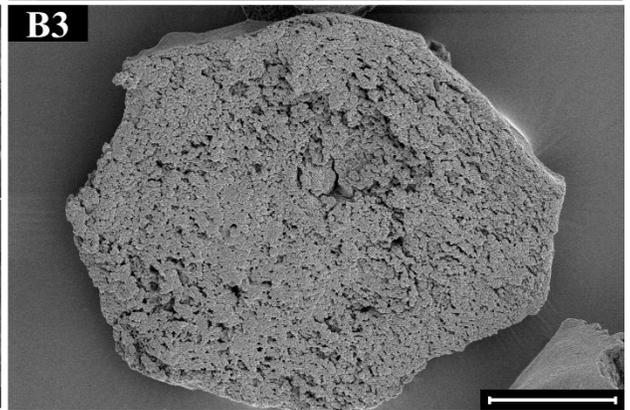
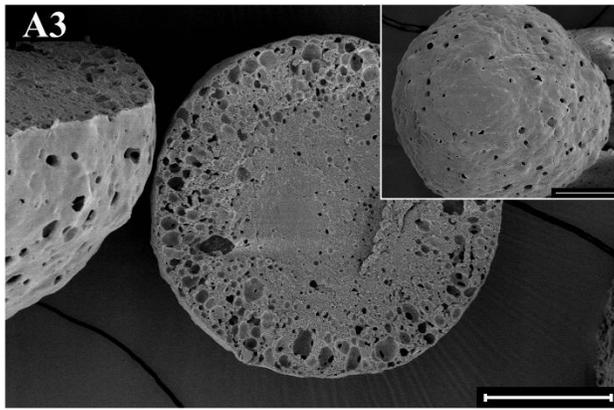
DAY 0



DAY 2



DAY 10



DAY 28

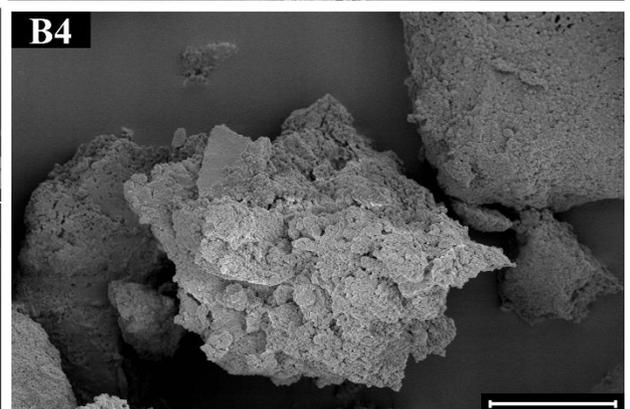
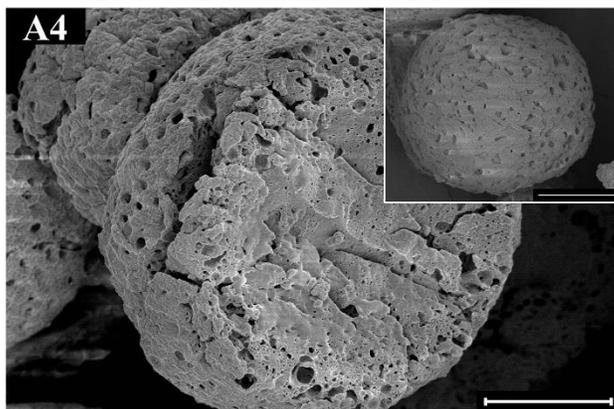


Figure 4. Morphological changes of 50P40-MS (left column) and 50P20-MS (right column) during the release test (white scale bars represent 10 μm). After Day 28 the MS cannot be observed by SEM.

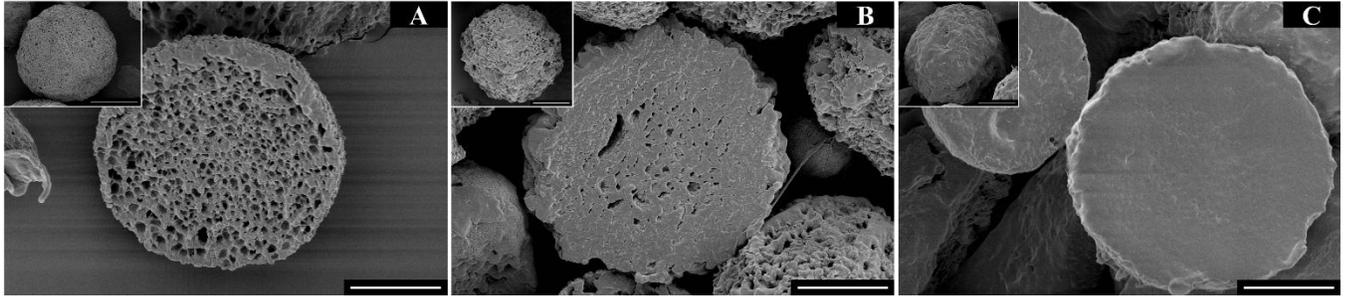


Figure 5. Internal structure at day 2 of 50P20-MS incubated into the release medium at different temperature : (A): 3°C; (B): 22°C; (C): 37°C. White scale bars represent 10 μm .

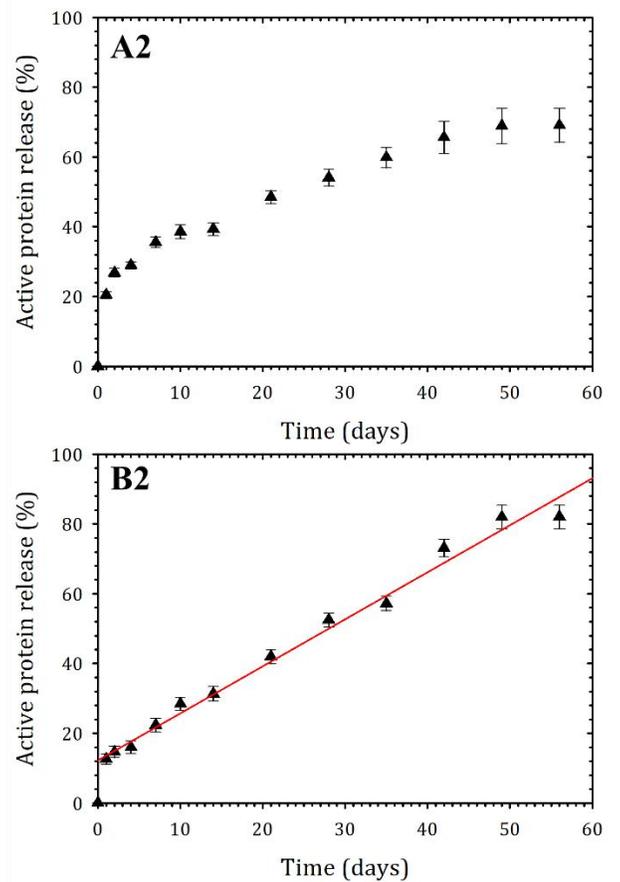
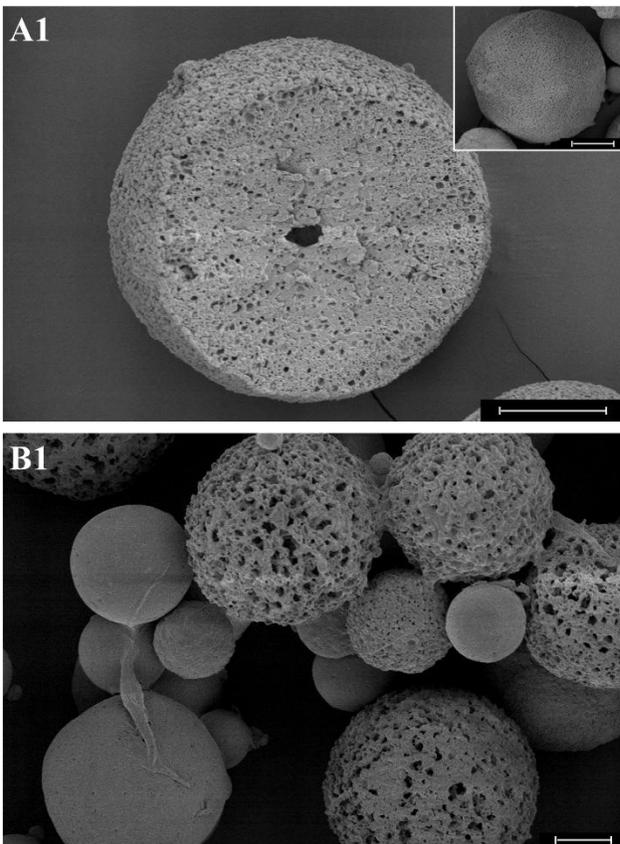


Figure 6. (A1) Initial morphology of blend-MS (white scale bars represent 10 μm); (A2) average protein release profile from microspheres of a copolymer blend 50P20 and 50P40 (see text for details). Error bars represent 95% confident intervals of mean values ($n=13$); (B1) Initial morphology of mix-MS, porous particles represent 50P20-MS while non-porous surface particles correspond to 50P40-MS (white scale bar represents 10 μm); (B2) Average protein release

profile from a mixture of microspheres of copolymer 50P20 and 50P40 (see text for details). Error bars represent 95% confident intervals of mean values ($n=8$). The red straight line represents a linear fit to the data ($r^2=0.9795$) from Day 1 to Day 56.