## Supporting Information

## Complementary Effects of Porosigen and Stabiliser on the Structure of Hollow Porous Poly(lactic-coglycolic acid) Microparticles

Authors: Xiaoqian Su,<sup>†</sup> Ipshita Gupta,<sup>†</sup> Umesh Sai Jonnalagadda,<sup>†</sup> and James J. Kwan <sup>‡,\*</sup>

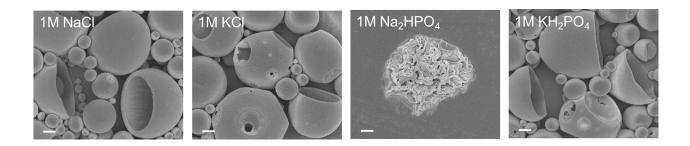
<sup>†</sup> School of Chemical and Biomedical Engineering, Nanyang Technological University,

Singapore, 637459.

<sup>‡</sup>Department of Engineering Science, University of Oxford, Oxford OX3 7DQ, United

Kingdom.

Corresponding Author\* james.kwan@eng.ox.ac.uk



**Figure S1.** SEM images of PLGA microparticles manufactured with different salts. Increasing the salt concentration to 1 M across all salt types ensured pore formation. For disodium phosphate, the particles collapsed, and no stable structure was present.The scale bars represent 1 μm.

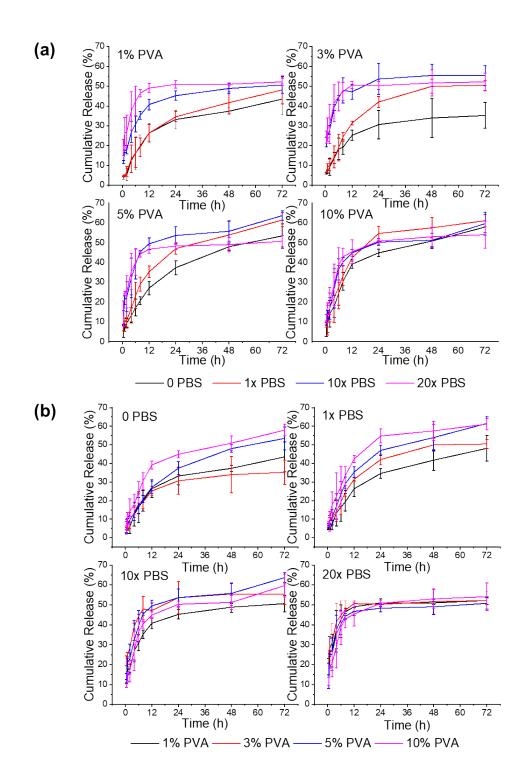
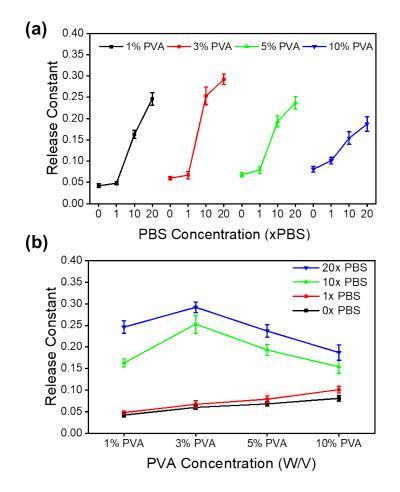


Figure S2. Comparing the effect of concentrations of PBS and PVA in the particle formulations on the rates of RhB release. The release of RhB for all formulations tested followed a rapid rate of release within the first 24 hours, after which there was a

stagnation of release. (a) Increasing PBS shows increasing release at fixed PVA concentrations. (b) With lower PBS concentrations, increasing PVA shows increase in release, however with increasing PBS, this effect was less pronounced. Data represented as mean  $\pm$  SD (n=3).



**Figure S3.** Release rate of RhB for the different formulations of PLGA microparticles. (a) Increasing PBS shows increasing release rate at fixed PVA concentrations as an increasing porosity of particles. (b) With 0x and 1x PBS, increasing PVA shows an increase in release as size of particles decreases. However, at higher PBS concentrations (10x and 20x), the release rate increased and then decreased as an interplay between porosity and size of particles. Data represented as mean  $\pm$  SD (n=3).