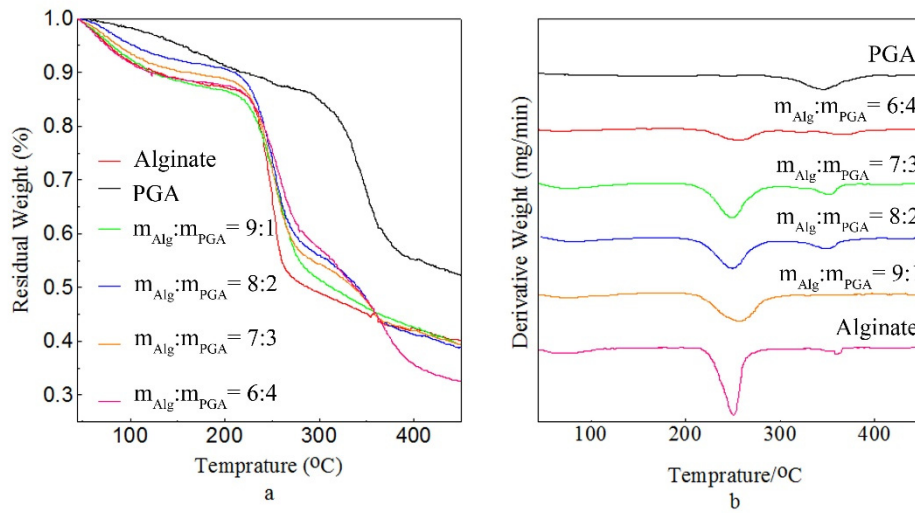


**Figure S1.** Particles size distribution of alginate microparticles and various composite microparticles (Alg/PGA91, Alg/PGA82, Alg/PGA73, Alg/PGA64 represent composite microparticles whose mass ratio is  $m_{\text{Alg}}: m_{\text{PGA}} = 9:1, 8:2, 7:3, 6:4$  respectively.)

**Table S1.** Size distribution statistic data of various microparticles

	Alginate	Alg/PGA91	Alg/PGA82	Alg/PGA73	Alg/PGA64
<b>Mean (<math>\mu\text{m}</math>)</b>	39.0	13.0	9.4	117.2	148.8
<b>Std. Deviation (<math>\mu\text{m}</math>)</b>	74.0	4.2	3.8	38.0	78.9
<b>Std. Error of Mean (<math>\mu\text{m}</math>)</b>	10.6	0.6	0.5	7.8	13.0
<b>25% Percentile (<math>\mu\text{m}</math>)</b>	12.2	10.0	6.7	83.6	89.6
<b>Median (<math>\mu\text{m}</math>)</b>	17.5	12.6	8.5	120.0	132.2
<b>75% Percentile (<math>\mu\text{m}</math>)</b>	22.9	15.4	11.2	139.8	204.3
<b>Maximum (<math>\mu\text{m}</math>)</b>	311.4	23.4	19.2	209.4	390.9
<b>Lower 95% CI of mean (<math>\mu\text{m}</math>)</b>	17.8	11.7	8.4	101.1	122.5
<b>Upper 95% CI of mean (<math>\mu\text{m}</math>)</b>	60.3	14.2	10.5	133.2	175.1



**Figure S2.** TG (a) and DTG (b) curves of Alginate, PGA and Alg/PGA microparticles prepared at different weight ratio.