

**Supplementary material for**

**Temperature-Responsive Polysaccharide Microparticles Containing Nanoparticles: Release of Multiple Cationic/Anionic Compounds**

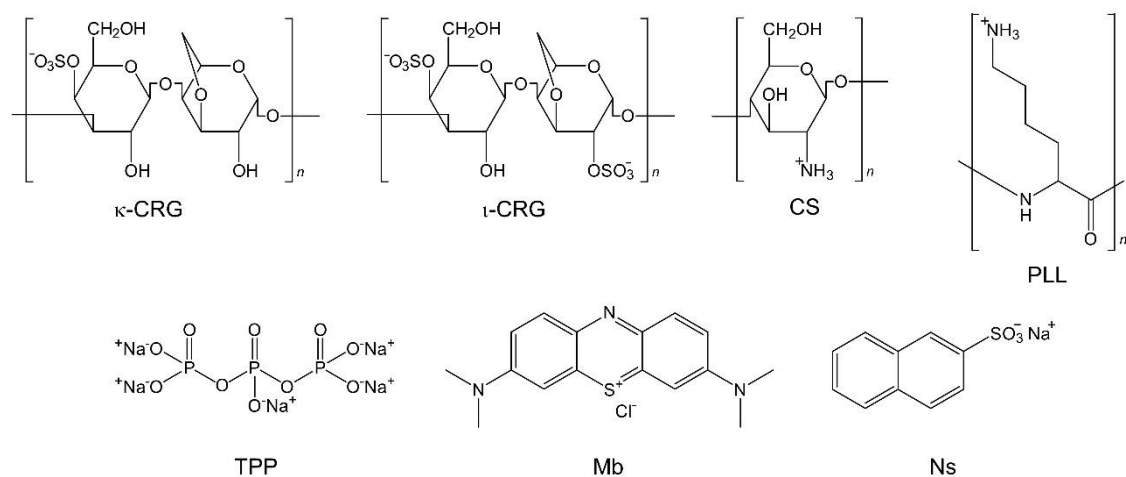
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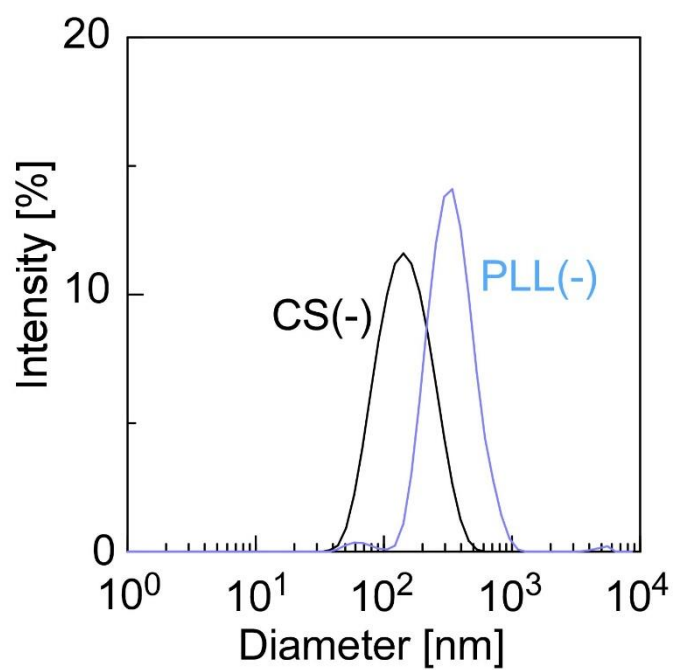
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**Figure S1.** Chemical structures of the polymers (CRGs, CS, and PLL) and compound (TPP) used to form particles, and their inclusions (Mb and Ns).



**Figure S2.** DLS-determined diameter distributions of CS(-) and PLL(-) nanoparticles.

**Table S1.** Encapsulation ratios and encapsulation efficiencies for Ns in CS(Ns) and PLL(Ns) nanoparticles.

Nanoparticle	Encapsulation ratio [%]	Encapsulation efficiency [%]
CS(Ns)	$19.6 \pm 4.8$	$33.3 \pm 8.1$
PLL(Ns)	$42.8 \pm 5.9$	$37.2 \pm 5.1$

**Table S2.** Retention ratios and retention efficiencies for CS(Ns) and PLL(Ns) nanoparticles inside CRG(CS(Ns), Mb) and CRG(PLL(Ns), Mb) microparticles

Microparticle	Nanoparticle	Retention ratio [%]	Retention efficiency [%]
CRG(CS(Ns), Mb)	CS(Ns)	$0.31 \pm 0.03$	$51.6 \pm 10.1$
CRG(PLL(Ns), Mb)	PLL(Ns)	$0.087 \pm 0.04$	$60.8 \pm 11.0$

**Table S3.** Encapsulation ratios and encapsulation efficiencies of the Mb inside CRG(CS(Ns), Mb) and CRG(PLL(Ns), Mb) microparticles

Microparticle	Encapsulation ratio [%]	Encapsulation efficiency [%]
CRG(CS(Ns), Mb)	$0.49 \pm 0.04$	$15.6 \pm 2.5$
CRG(PLL(Ns), Mb)	$0.44 \pm 0.01$	$13.7 \pm 0.69$