Table 1. Influence of the TROMS parameters on microparticle size.

Size (µm)		2nd Emulsion circulating time (seconds)					
		30	**60**	**90**	**120**	**150**	**180**
1st Emulsion circulating time (seconds)	**30**	-	12.75±9.39	5.79±4.26	20.7±20.7	4.14±1.94	14.89±13.45
	60	-	13.42±10.59	15.49±13.77	10.91±13.84	4.68±3.29	23.35±20.84
	90	13.56±1.61	3.72±1.99	1.56±0.15	1.04±0.12	1.12±0.34	0.69±0.02
	120	17.31±1.24	12.77±0.45	2.61±0.04	1.1±0.14	1.51±0.75	-

Table 2. TROMS selected paramenters for microparticle formulation

Inner size of the needles		Emulsion circulating times		Polymer % in the organic phase	PVA % in the external aqueous phase	Microparticle size (µm)
Needle 1	**Needle 2**	**1st emulsion**	**2nd emulsion**			
0.25 mm	0.25 mm	90 seconds	45 seconds	1.25 %	0.5 %	6.61 ± 0.35

Table 3. Final composition and characteristics of the selected microparticles

Polymer composition	Encapsulation efficiency (%)	Zeta potential (ζ) (mV)	Residual PVA (%)
50 mg PLGA (Resomer 503H)	92±7	-18.10 ± 0.71	1.57
25 mg PLGA (Resomer 503H) 25 mg PLGA-PEG (Resomer d 50105)	85±5	-8.79 ± 0.61	0.50