

- ELECTRONIC SUPPORTING INFORMATION -

Successful batch and continuous lyophilization of mRNA LNP formulations depends on cryoprotectant and ionizable lipids

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Table S1. LNP composition

	S-Ac7-DOg mRNA-LNP	S-Ac7-DHDa mRNA-LNP	S-Ac7-DOg mRNA-LNP Cy5 labelled	S-Ac7-DHDa mRNA-LNP Cy5 labelled
N/P ratio*	10:1	10:1	10:1	10:1
Target flow rate ratio**	2:1	2:1	2:1	2:1
Total formulation volume (mL)	2	2	2	2
Amount mRNA (eGFP or Fluc) (µg)	200	200	200	200
S-Ac7-DOg (mol%)	50	-	50	-
S-Ac7-DHDa (mol%)	-	50	-	50
DSPC (mol%)	10	10	9.9	9.9
DSPE-Cy5 (mol%)	-	-	0.1	0.1
Cholesterol (mol%)	38.5	38.5	38.5	38.5
DMG-PEG₂₀₀₀ (mol%)	1.5	1.5	1.5	1.5

*Target molar charge ratio (mol ionizable lipid: mol RNA)

**aqueous phase volume : organic phase volume