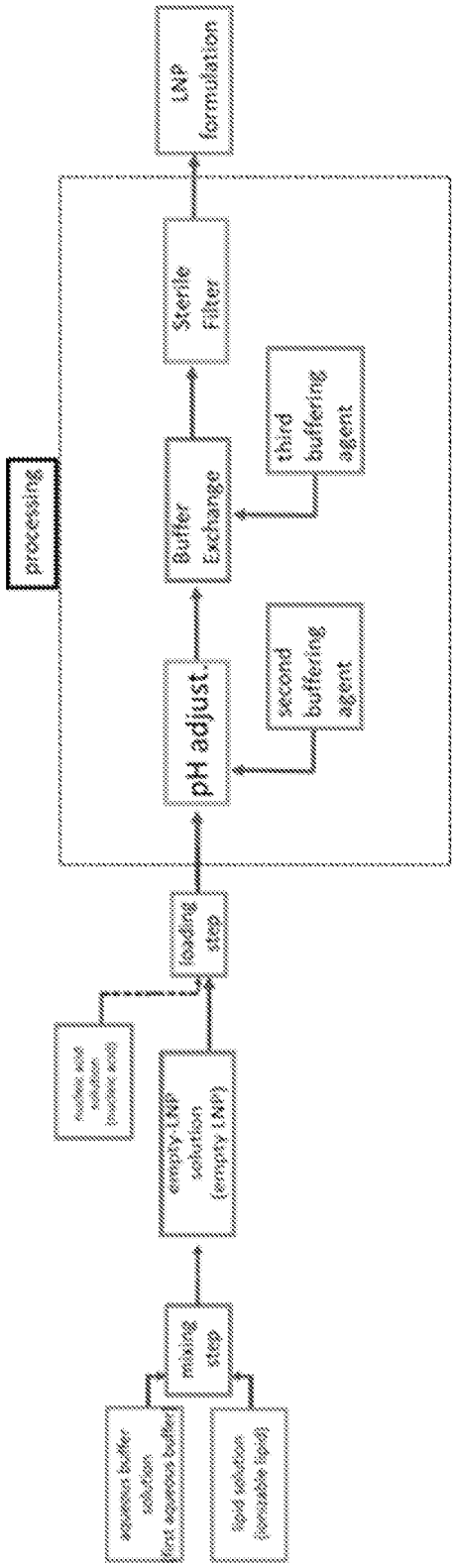
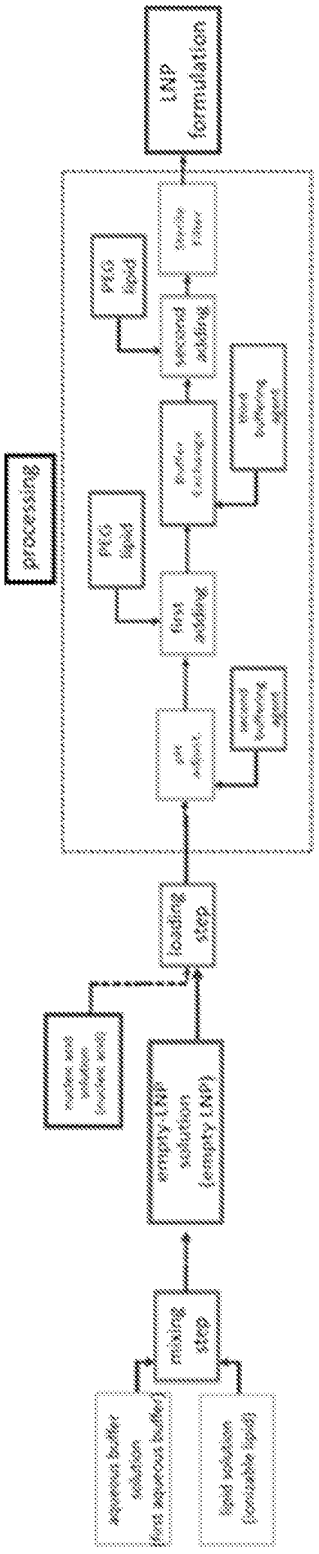


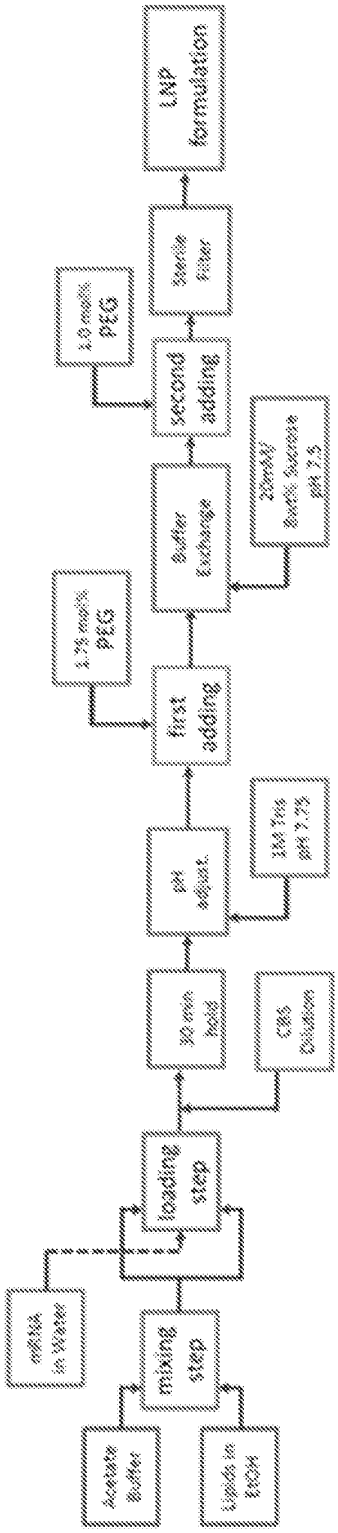
Exemplary first generation PHL diagram

Fig. 1



Exemplary second generation PHL diagram (generic)

Fig. 2



Exemplary second generation PHL diagram (specific)

Fig. 3

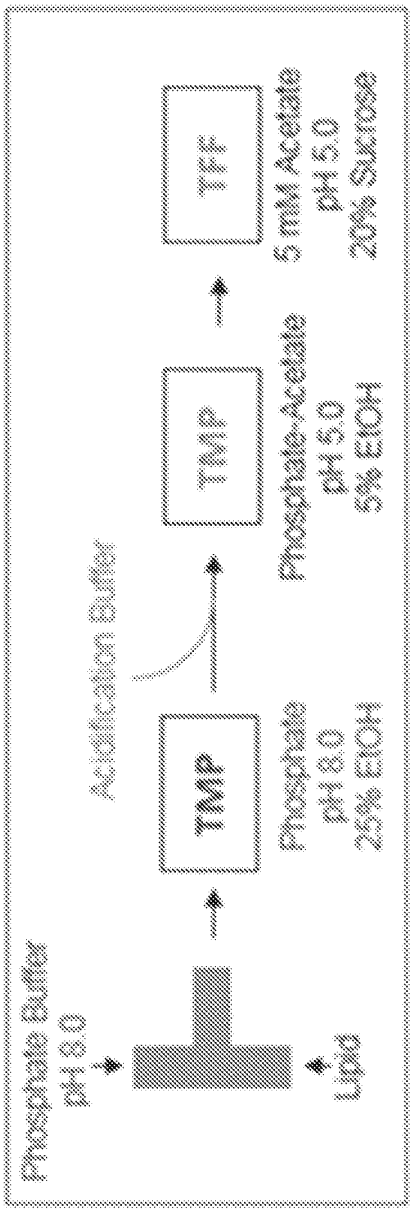

Phosphate Buffer
pH 8.0
Lipid
TMP
Phosphate
pH 8.0
25% EtOH
Acidification Buffer
TMP
Phosphate-Acetate
pH 5.0
5% EtOH
TFF
5 mM Acetate
pH 5.0
20% Sucrose

Fig. 4

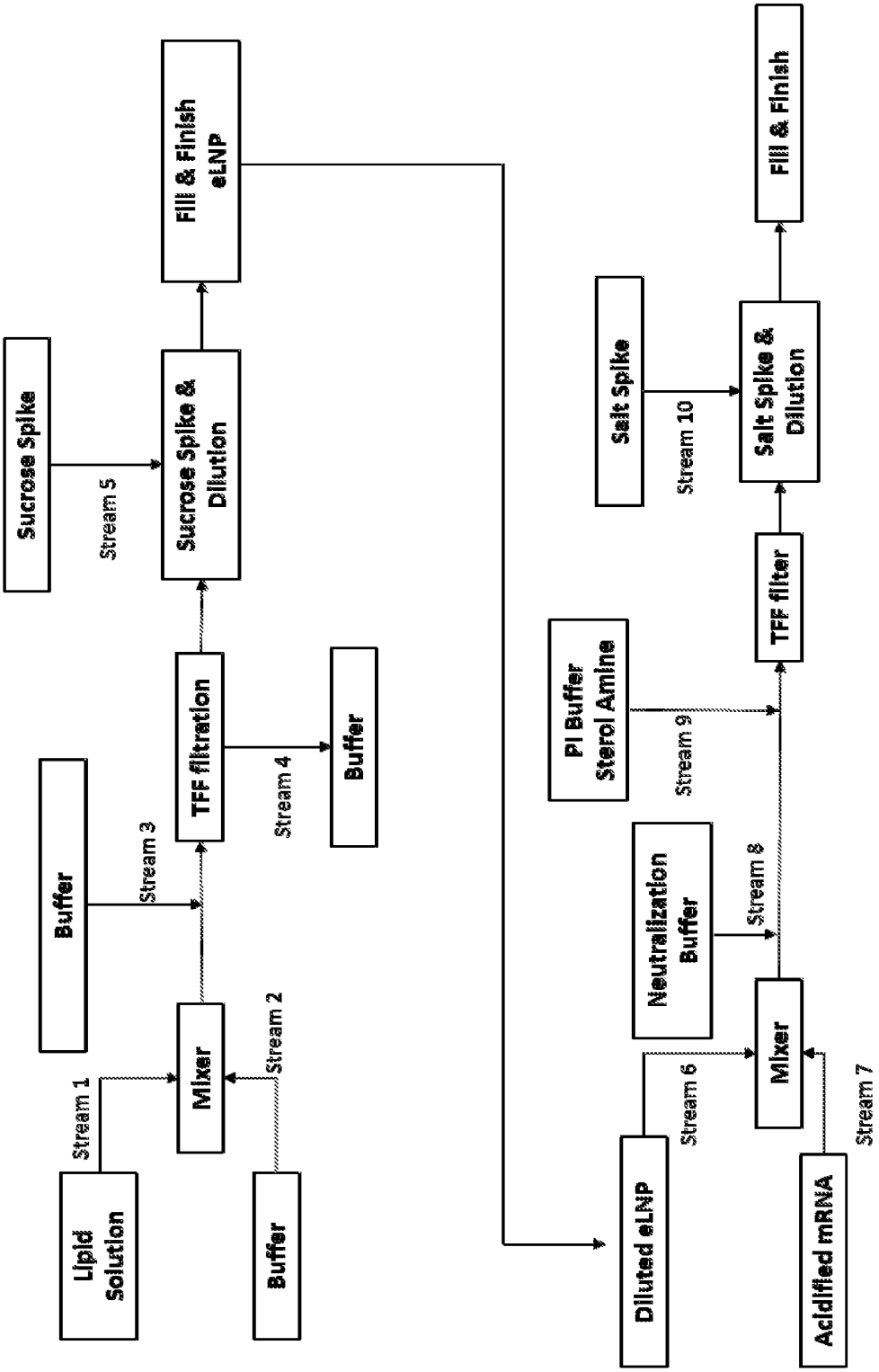

Lipid Solution
Stream 1
Buffer
Stream 2
Mixer
Buffer
Stream 3
TFF filtration
Stream 4
Buffer
Sucrose Spike
Stream 5
Sucrose Spike & Dilution
Fill & Finish eLNP
Diluted eLNP
Stream 6
Acidified mRNA
Stream 7
Mixer
Neutralization Buffer
Stream 8
PI Buffer Sterol Amine
Stream 9
TFF filter
Salt Spike
Stream 10
Salt Spike & Dilution
Fill & Finish

Fig. 5

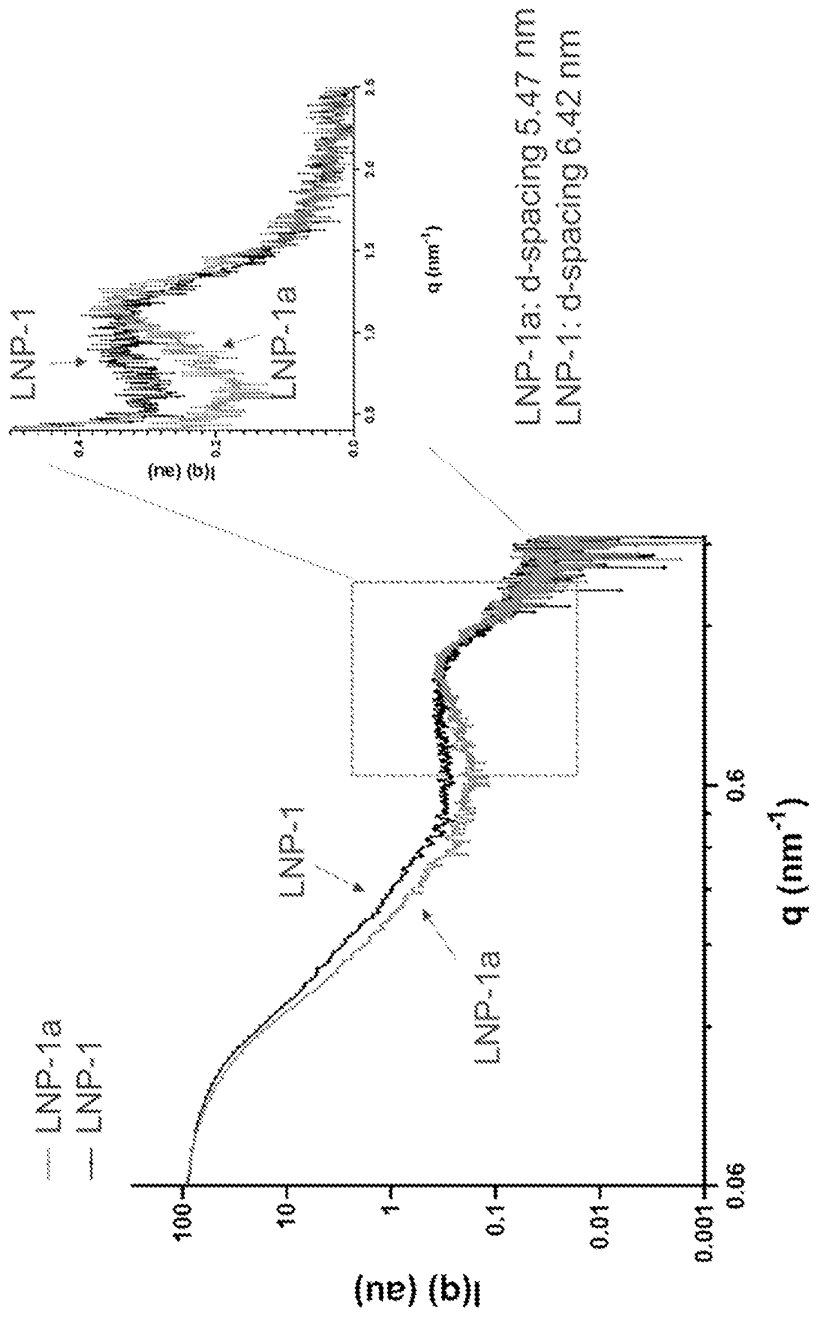

LNP-1a
LNP-1
LNP-1
LNP-1a
I(q) (au)
q (nm-1)
100
10
1
0.1
0.01
0.001
0.06
0.6
LNP-1a: d-spacing 5.47 nm
LNP-1: d-spacing 6.42 nm
LNP-1
LNP-1a
I(q) (au)
q (nm-1)

Fig. 6

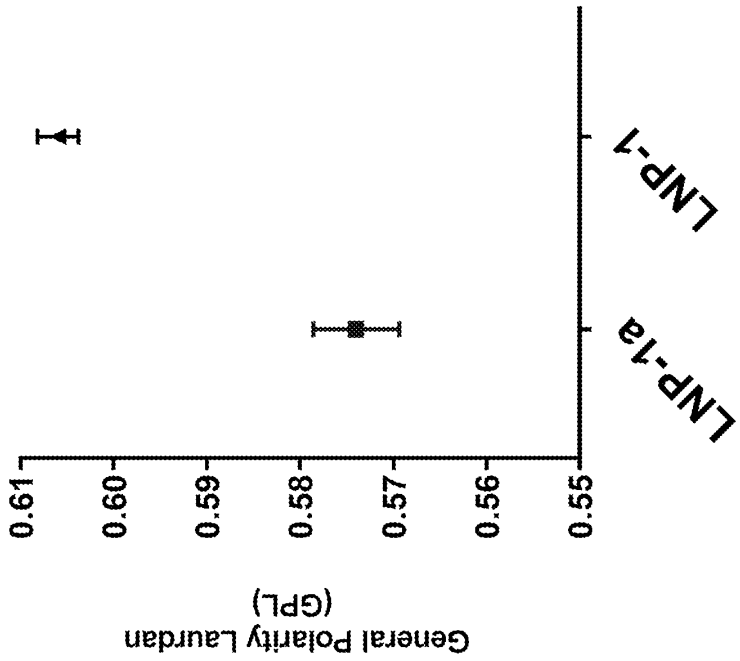

General Polarity Laurdan
(GPL)
0.61
0.60
0.59
0.58
0.57
0.56
0.55
LNP-1a
LNP-1

Fig. 7