# Supporting Information for: Influence of External NaCl Salt on Membrane Rigidity of Neutral DOPC Vesicles


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## Vesicle Preparation

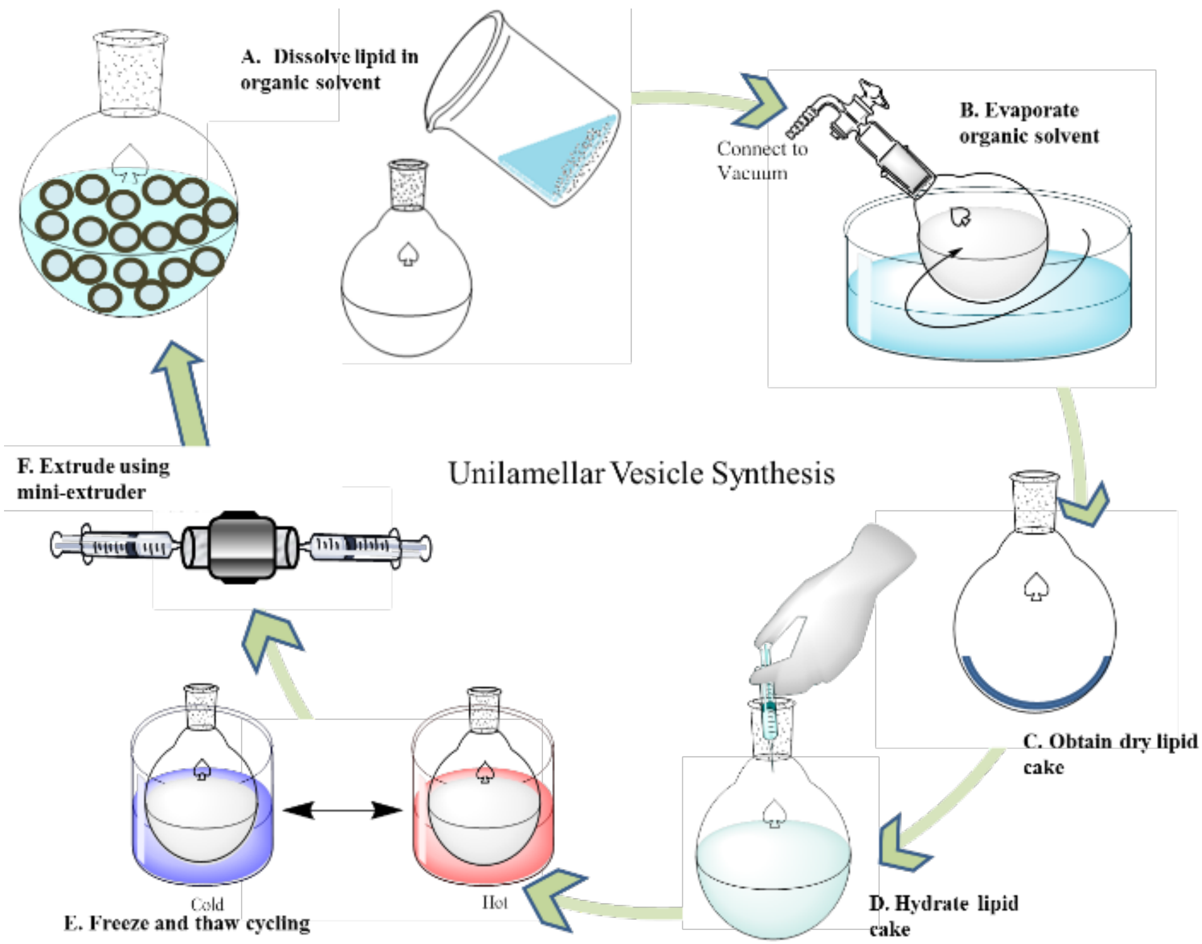


*Figure S1. Schematic diagram depicting the steps for vesicle preparation*

## Macroscopic viscosity

**Viscosity data of DOPC vesicles in $D_2O$ with concentration and temperature variation**

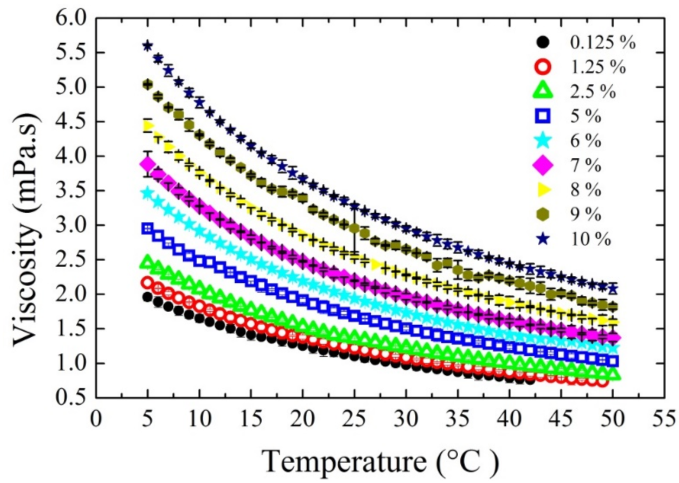


*Figure S2. Viscosity of different DOPC vesicles in $D_2O$ solutions as a function of temperature (DOPC concentrations are expressed in wt%)*

The dynamic viscosities of the solutions were measured using a microviscometer (Anton Paar, Lovis 2000M) which employs the Höppler principle. $H_2O$ was used as a reference standard. It can be observed that the viscosity of the DOPC vesicle solutions in $D_2O$ increases with the concentration and decreases with temperature systematically.

**Viscosity of DOPC vesicles in $D_2O$ and NaCl**

Dynamic viscosity was measured for a concentration series of DOPC vesicle and salt suspensions in $D_2O$ by a microviscometer (Anton Paar, Lovis 2000M).

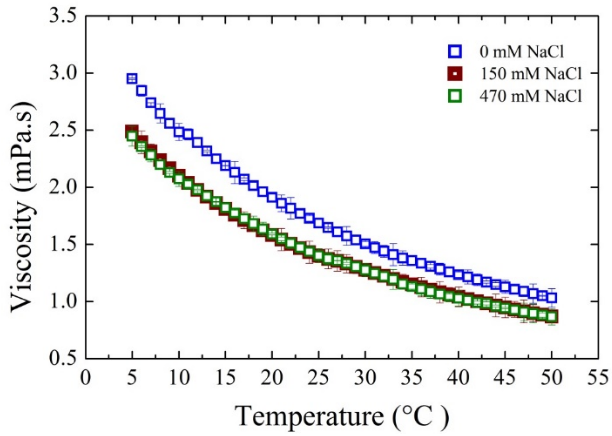


*Figure S3. Viscosity of 5 wt% DOPC vesicles in $D_2O$ (blue), in 150 mM NaCl (brown) and in 470 mM NaCl (green) as a function of temperature*

Viscosity of the DOPC vesicle solution reduces in the presence of NaCl in comparison to pure $D_2O$. Viscosity decreases with temperature systematically.

## Cryo-TEM images

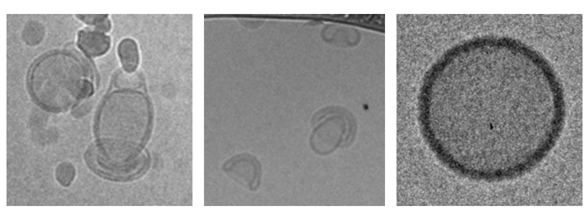

*Figure S4. Cryo-TEM images for 470 mM NaCl in DOPC*

The cryo-TEM images for 470 mM depict mixed or fused vesicle structures.

## Caille analysis

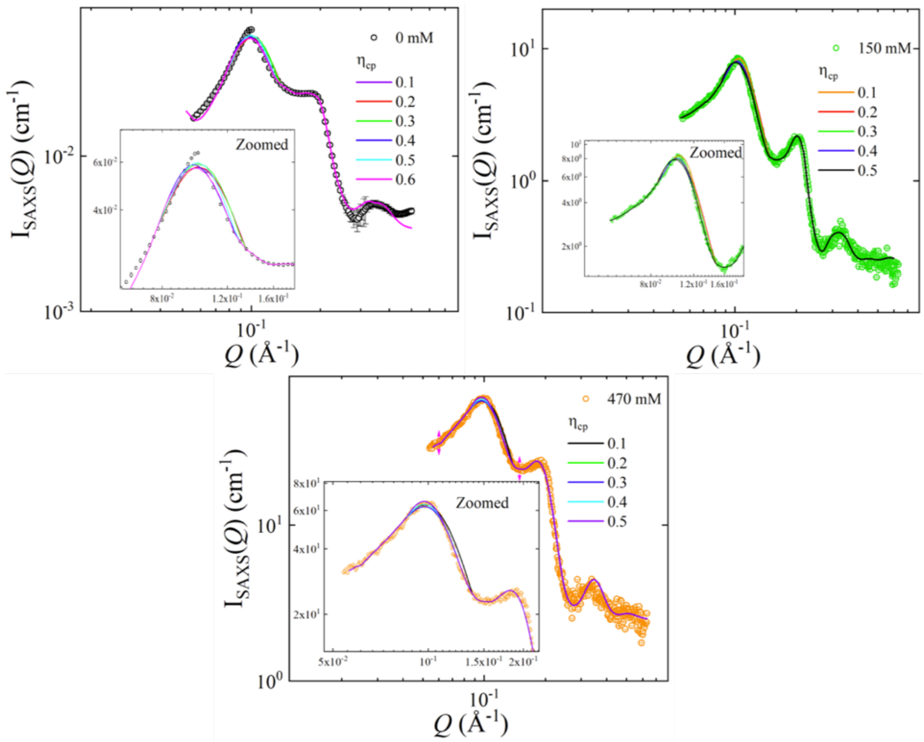


*Figure S5. SAXS data for 0, 150, and 470 mM NaCl samples modeled with different Caille parameters as shown in the legends.*

## NSE analysis

The Zilman-Granek (ZG) decay rate as a function of momentum transfer, $Q$, is presented in Figure S6.

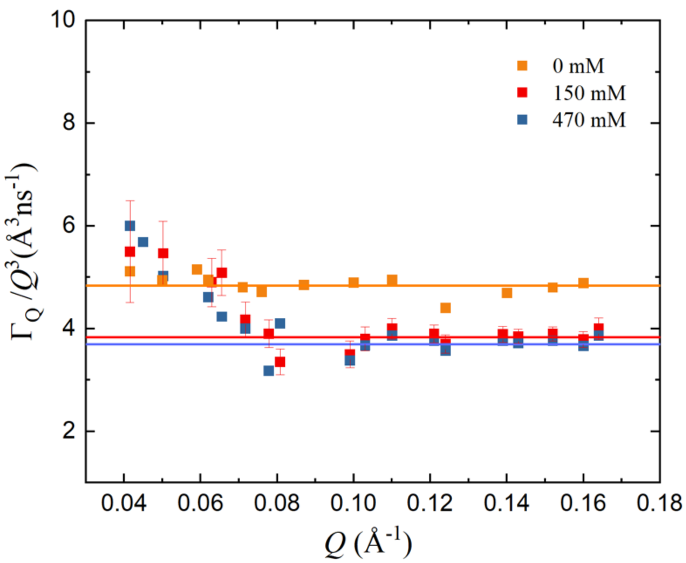


*Figure S6. Variation of ZG decay rate, $\Gamma_Q$, as function of Q for different NaCl concentration. In presence of salt, $\Gamma_Q / Q^3$ is constant, for $Q \geq 0.1$ Å$^{-1}$.*