

Supplementary Table 1. Model HIV-1 SLB fit parameters and confidence intervals from NR measurements

Parameter	Fit parameters and Uncertainties
<b>Layer-by-layer thickness (Å)</b>	
SiOx	6.5 <sup>+1.1</sup> <sub>-1.1</sub>
Hydration Layer	4.3 <sup>+1.2</sup> <sub>-1.0</sub>
Inner Headgroup	12.3 <sup>+0.9</sup> <sub>-0.8</sub>
Hydrocarbon Leaflet	14.8 <sup>+1.0</sup> <sub>-0.8</sub>
Outer Headgroup	8.0 <sup>+0.8</sup> <sub>-0.5</sub>
Peptide	Not Resolved
<b>Volume filling, nSLD, and bilayer completeness</b>	
nSLD SiOx	3.58 <sup>+0.21</sup> <sub>-0.17</sub>
Roughness of SiOx (sigma)	1.8 <sup>+2.4</sup> <sub>-0.8</sub>
nSLD headgroup	2.05 <sup>+0.26</sup> <sub>-0.25</sub>
nSLD hydrocarbons	-0.41 <sup>+0.07</sup> <sub>-0.07</sub>
Inner headgroup volume filling	0.73 <sup>+0.12</sup> <sub>-0.21</sub>
Outer headgroup volume filling	0.78 <sup>+0.11</sup> <sub>-0.30</sub>
Peptide volume filling	0.00 <sup>+0.05</sup> <sub>-0.00</sub>
SLB completeness	1.00 <sup>+0.00</sup> <sub>-0.01</sub>