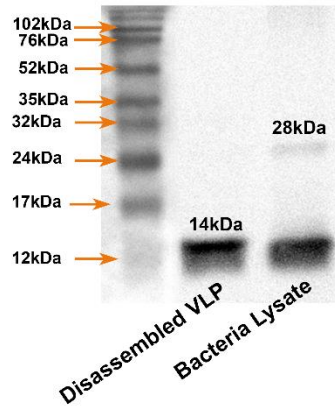
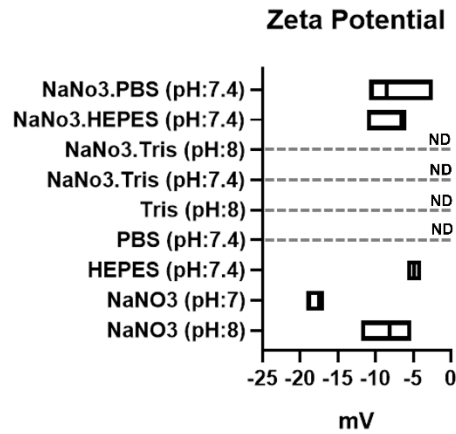


**Figure S1**



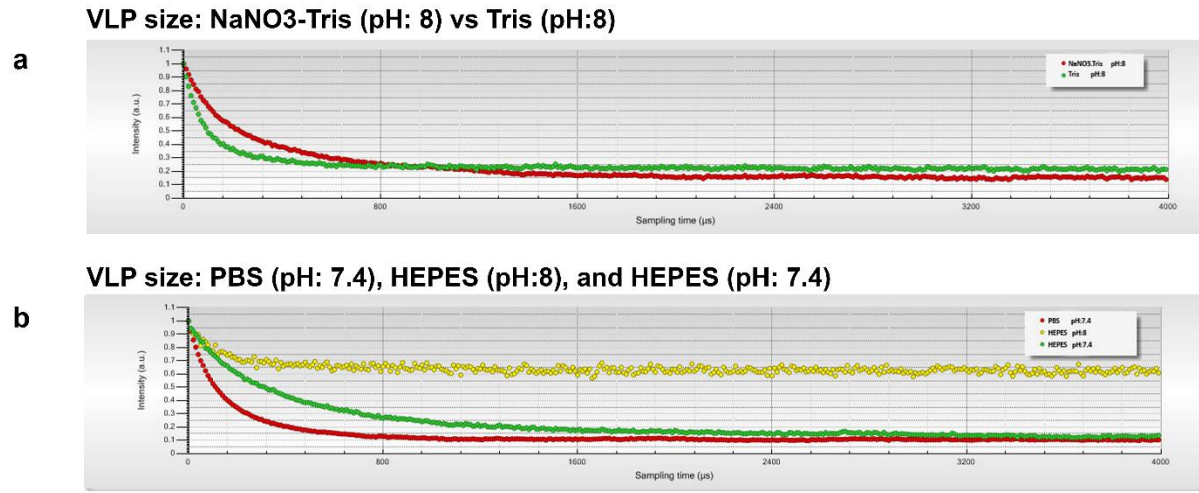
**Supplementary Figure 1. Confirmation of coat protein synthesis.** For Western blot detection of MS2 coat protein, a ~14kDa band was detected after disassembly of MS2 VLPs, while the lysate of the BL21 (DE3) strain of *E. coli* bacteria confirmed the presence of 14 and 28kDa bands indicating monomers and dimers of the MS2 coat protein.

**Figure S2**



**Supplementary Figure 2. Zeta potential of VLPs generated in different solutions.** Evaluation of each sample was repeated at least three times and results were shown as zeta potential line plot and median (mV). Because of the nature of buffers, zeta potential could not be estimated for VLP samples in buffers.

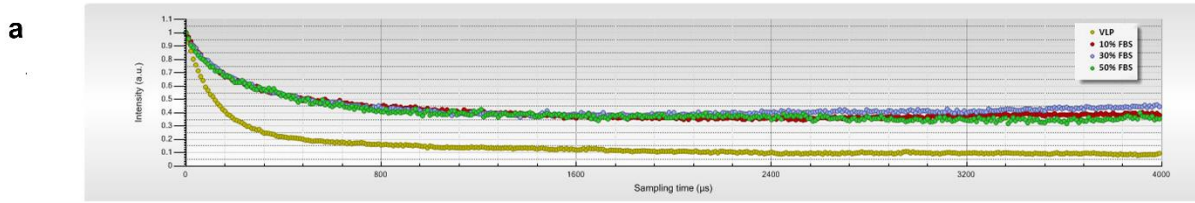
**Figure S3**



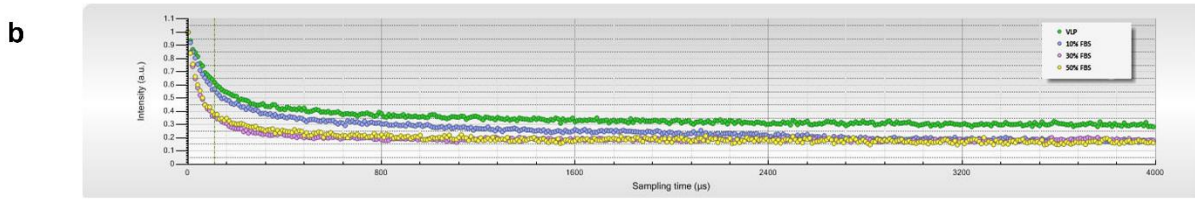
**Supplementary Figure 3. Particle size graphs were acquired from VLPs in different buffers. The slope curve bezel of each graph shows the size and homogeneity of particles. The deeper curve protraction and the directed line trail show the small particles and homogenous suspension a) NaNO<sub>3</sub>-Tris pH:8 vs. Tris pH:8. b) PBS pH:7.4, HEPES pH:8, and HEPES pH:7.4.**

**Figure S4**

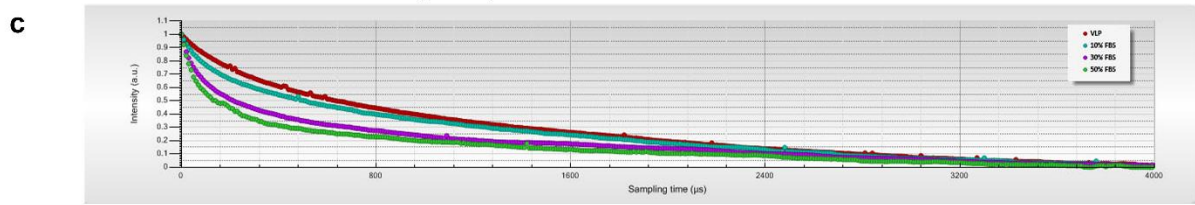
**VLP size: NaNO<sub>3</sub>-Tris (pH: 8) in serum**



**VLP size: NaNO<sub>3</sub> solution (pH: 8) in serum**



**VLP size: NaNO<sub>3</sub> solution (pH: 7) in serum**



**Supplementary Figure 4. The effect of serum concentration on particle size.** Serum was added to samples with increasing concentrations (0%, 10%, 30% and 50%) **a)** VLPs in NaNO<sub>3</sub>-Tris, pH:8 **b)** VLPs in NaNO<sub>3</sub> solution, pH:8 **c)** VLPs in NaNO<sub>3</sub> solution, pH:7.

**Figure S4: Graphical Abstract**

