Supplementary Materials: Saponin-Based Nanoemulsification Improves the Antioxidant Properties of Vitamin A and E in AML-12 Cells

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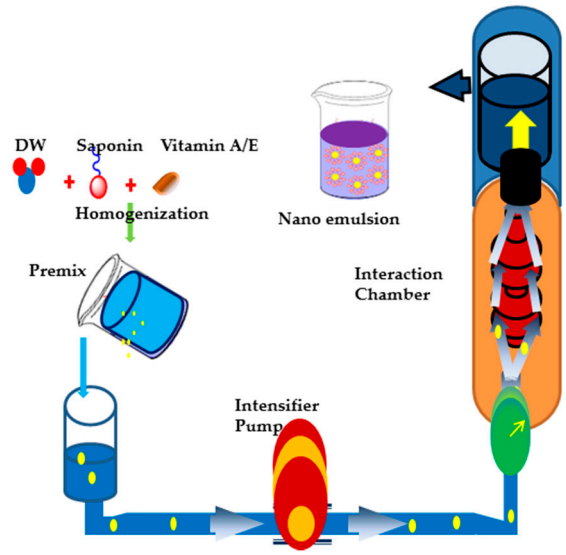

Figure S1. Schematic flow diagram representing the preparation method of o/w nanoemulsions of vitamin A and E using saponin as surfactant. 10% (*w*/*w*) of fat-soluble vitamins (VA or VE) and 1% (*w*/*w*) of natural surfactants (saponin) were blended in deionized water using a high-speed blender. Subsequently, the pre-emulsion mixture was passed through a high-pressure homogenizer (MN400BF, Micronox, Seongnam, Korea) at a pressure of 25 kpsi for seven cycles to produce nanoemulsions.

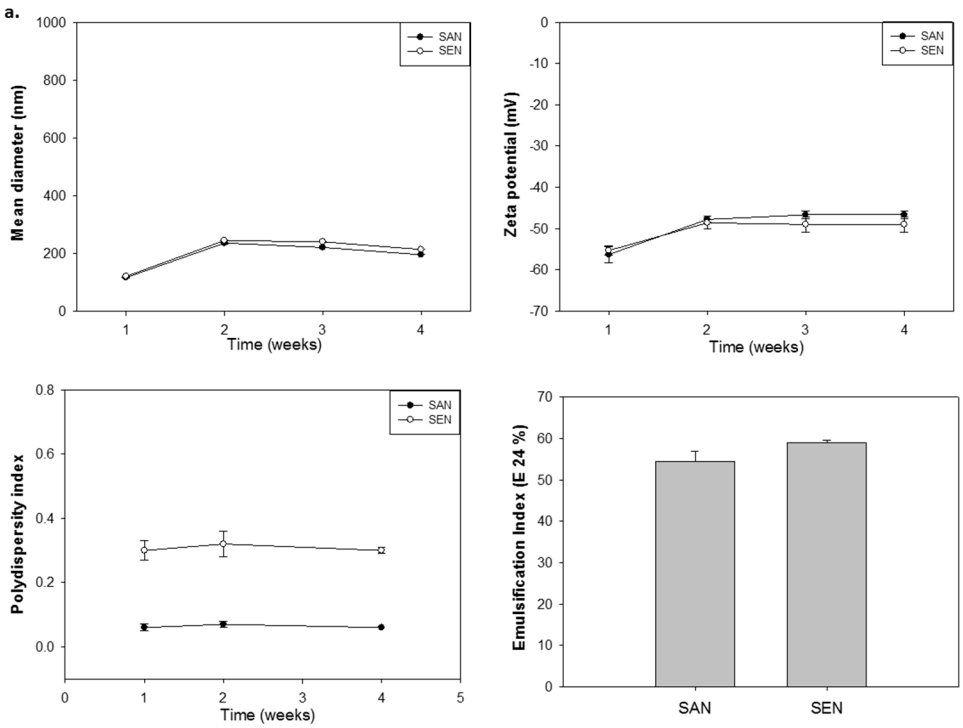

Figure S2. *Cont.*

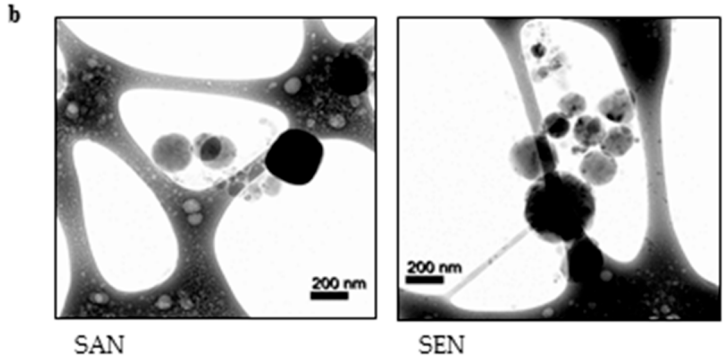

Figure S2. Nanoemulsion characterization. (**a**) Physiochemical properties of SAN and SEN; (**b**) Cryo-TEM images of SAN and SEN. SAN, saponin nanoemulsion of vitamin A; SEN, saponin nanoemulsion of vitamin E.

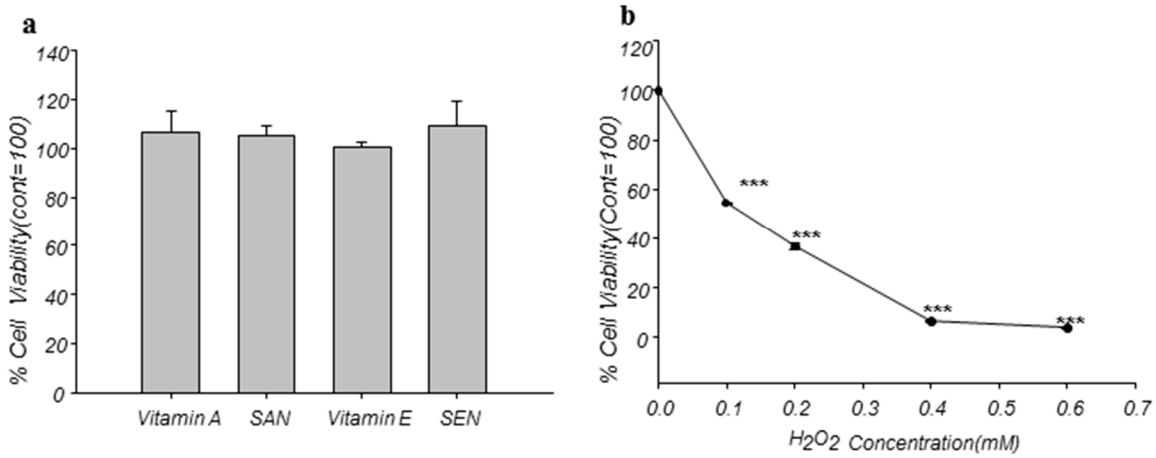

Figure S3. Cytotoxicity. (**a**) Cells were exposed to 200 μg/mL of Vitamin A, SAN, vitamin E, and SEN for 16 h. Cell viability was determined by MTT assay; (**b**) AML-12 cells were exposed to exogenous H_2O_2 at the indicated concentrations for 16 h. Cell viability was determined by MTT assay. SAN, saponin nanoemulsion of vitamin A; SEN, saponin nanoemulsion of vitamin E. *** $p < 0.001$.