

## Supplementary information

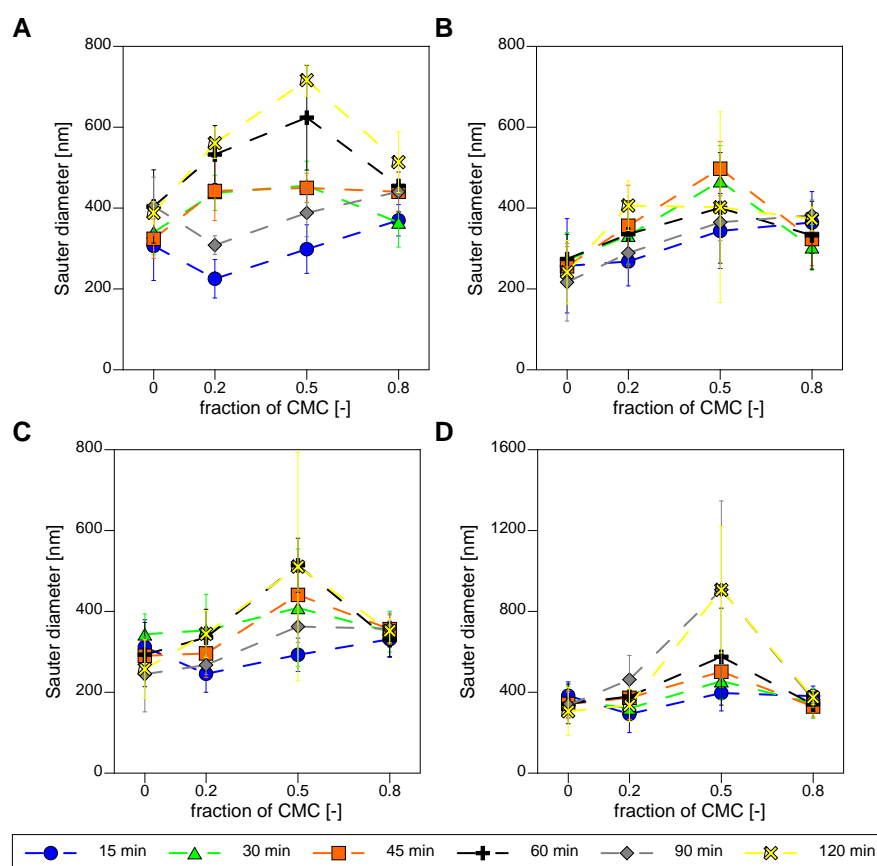


Figure S1. The Sauter diameter of carbon dioxide nanobubbles generated (900 rpm) in dispersions with different concentrations of Pluronic P123 surfactant during storage. The time of storage differs between plots (A) directly after generation (0 days after generation), (B) 7 days after generation, (C) 14 days after generation, (D) 21 days after generation

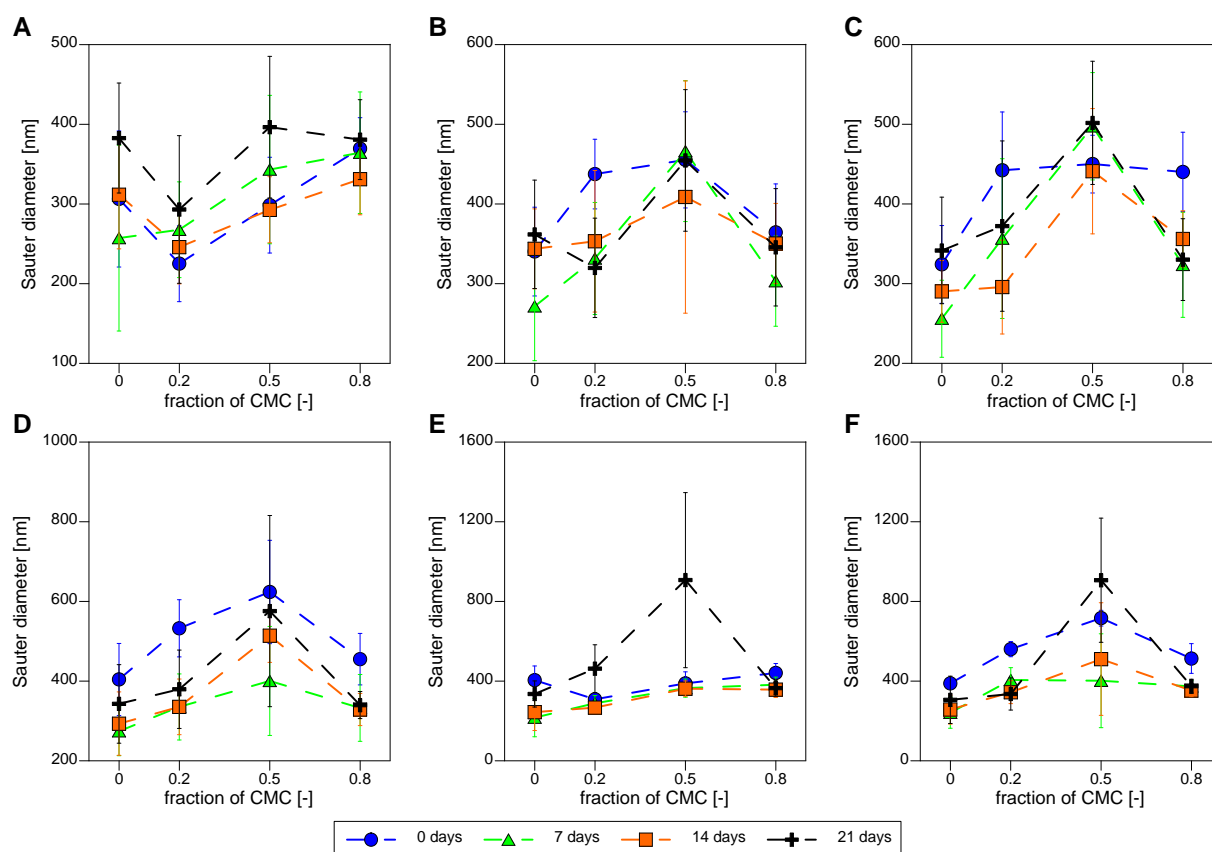


Figure S2. The Sauter diameter of carbon dioxide nanobubbles generated (900 rpm) in dispersions with different concentrations of Pluronic P123 surfactant during storage. The time of generation differs between plots. (A)  $t=15$  min, (B)  $t=30$  min, (C)  $t=45$  min, (D)  $t=60$  min, (E)  $t=90$  min, (F)  $t=120$  min.

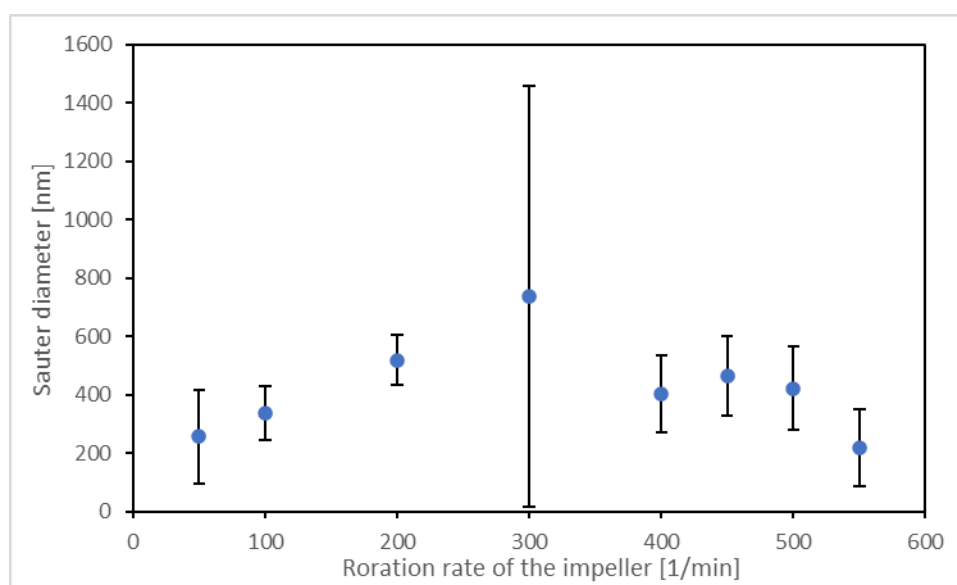


Figure S3. The Sauter diameter of nitrogen nanobubbles generated in pure water for different rotation rates of the stirrer and 30 minutes of generation