Cell Lysis

Example protocols and results are based on customer feedback.

Sonicator Model: Q700MPX system with Chiller

Protocol:

Sample Type: *Bacterial cell suspension in 8M urea 4% SDS*
Sample Volume: *100µl*
Sonicator Amplitude Setting: *50%*
Sonication Pulse Rate: *10 seconds ON, 10 seconds OFF*
Total Sonication ON Time: *5-10 minutes*
Sample Process Temperature: *8C - controlled by Chiller*

Customer Notes:

Bacterial cell samples can be fully lysed in 300 µl 96-well PCR plates as well as processed in 200µl volumes in 1.7 ml EP tubes. We had no difference between samples processed using the Microplate Horn when compared to using a Q125 sonicator with single probe.

We recommend rotating the microplate a few times during the procedure to ensure all wells are processed evenly.

Note: The Microplate Horn was also applicable to resuspend proteins during metaproteomic sample processing. This replaces pipettes that work manually. 10% amplitude for approximately 5 seconds was sufficient. 1 ml acetone was used to resuspend around 500 µg purified proteins. We also use 100-150 µl 6M urea buffer to resuspend the 500 µg proteins.