NANOPORE
SETUP GUIDE

To prepare a nanopore for Tunable Resistive Pulse Sensing (TRPS) analysis, establish a stable baseline current by following the on-screen instructions in the Exoid Control Suite software. If manual nanopore setup is required, follow the steps below.

Reminder: a stable baseline current is one that is 100-140 nA, drifts by less than 0.5 nA in 60 seconds and has an RMS noise of <15 pA. An unstable baseline current will produce unreliable measurements and should not be used under any circumstances.

1

Prepare the Fluid Cell

Pipette 75 µL of Measurement Electrolyte (ME), if already made up, or 70% EtOH onto the lower fluid cell. This process will reduce the formation of bubbles. After 15 minutes, remove the applied solution.

2

Prepare the Solutions

Prepare the ME, Wetting Solution, and Coating Solution, as well as calibration and sample particles.

3

Load the Nanopore

Fit the arms of the nanopore onto the stretcher jaws (with the serial number of the nanopore facing upwards) and apply a stretch of 47 mm.

4

Wetting Protocol

Load 75 µL of Wetting Solution onto the lower fluid cell and 35 µL into the upper fluid cell. Insert the pressure nozzle and apply 2500 Pa pressure for 2 minutes. Ensure a stable baseline is established before removing the Wetting Solution.

5

Coating Protocol (Biologicals Only)

Load filtered Coating Solution in the upper (35 µL) and lower (75 µL) fluid cells. Note that the current will decrease to approximately 2/3 of what was established in the wetting step. Apply 2500 Pa pressure for 10 minutes. Remove the Coating Solution.

6

Equilibrate Baseline

Load ME into the lower and upper fluid cell and establish a stable baseline. Once stable, proceed with measurements.