

Experiment Protocols

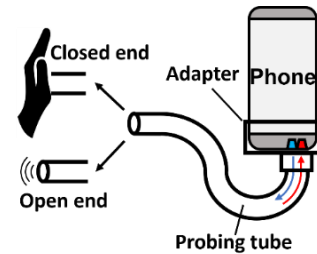
Calibration - *needs to be done for every new set of adapter & tube*

1) Close-end calibration

Use hand to block the tube outlet. Collect data for 5s.

Notes:

- Can use thumb to block the tube, but **do not insert finger into the tube.**
- Make sure the tube is completely sealed.



2) Open-end calibration

Connect the smartphone to the probing tube using the adapter. **Keep the tube outlet to be open** and **hold the tube in an open and quiet space.** Collect data for 5s.

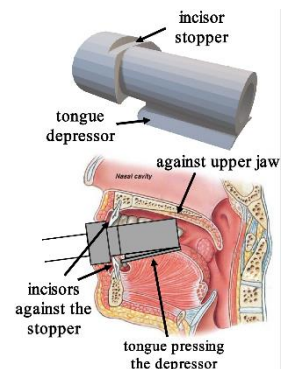
Notes

- Do not just place the tube on table.** Hold the tube outlet in the air and make sure there is nothing around the outlet.

Testing

0) Preparation

Insert the tube outlet into the mouthpiece. Bite on the mouthpiece, **incisors against the stopper, tongue up against the tongue depressor.** The mouthpiece **outlet should touch upper jaw and fit well.**

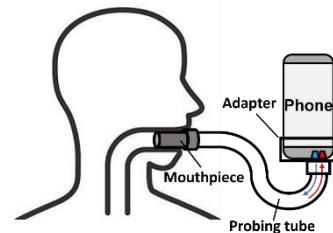


1) Nasal breathing

Do normal tidal breathing through nose. Collect data for 10s.

2) Oral breathing

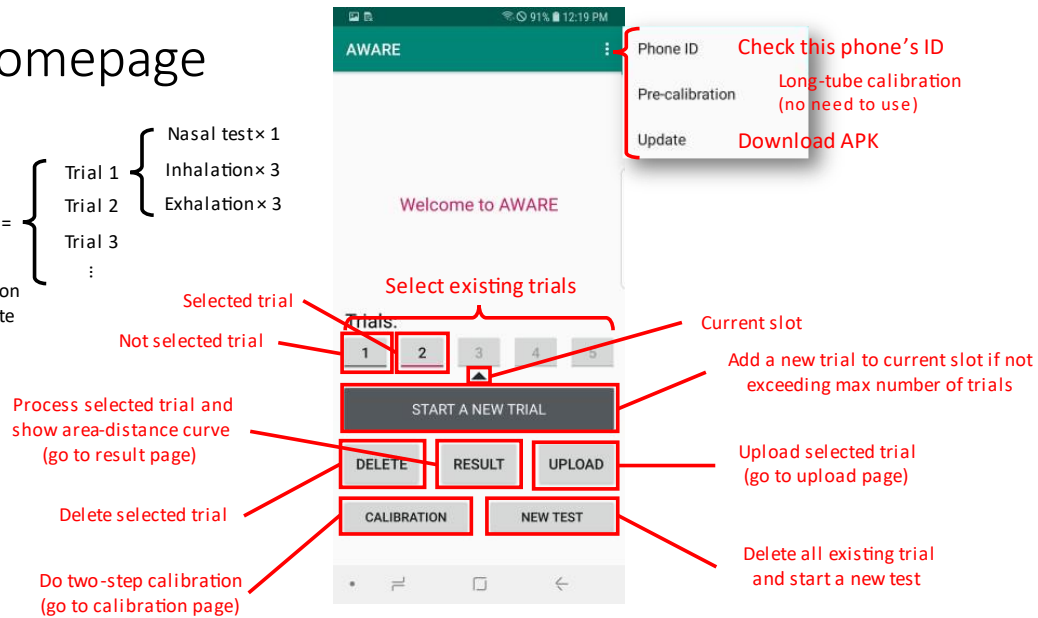
Do slowly breath-in and breath-out through mouth. When heard instruction: "breathe in", slowly breathe in for 5s. When heard "breath out", slowly breathe out for 5s. Repeat the cycle for 3 times. Collect data during the process.



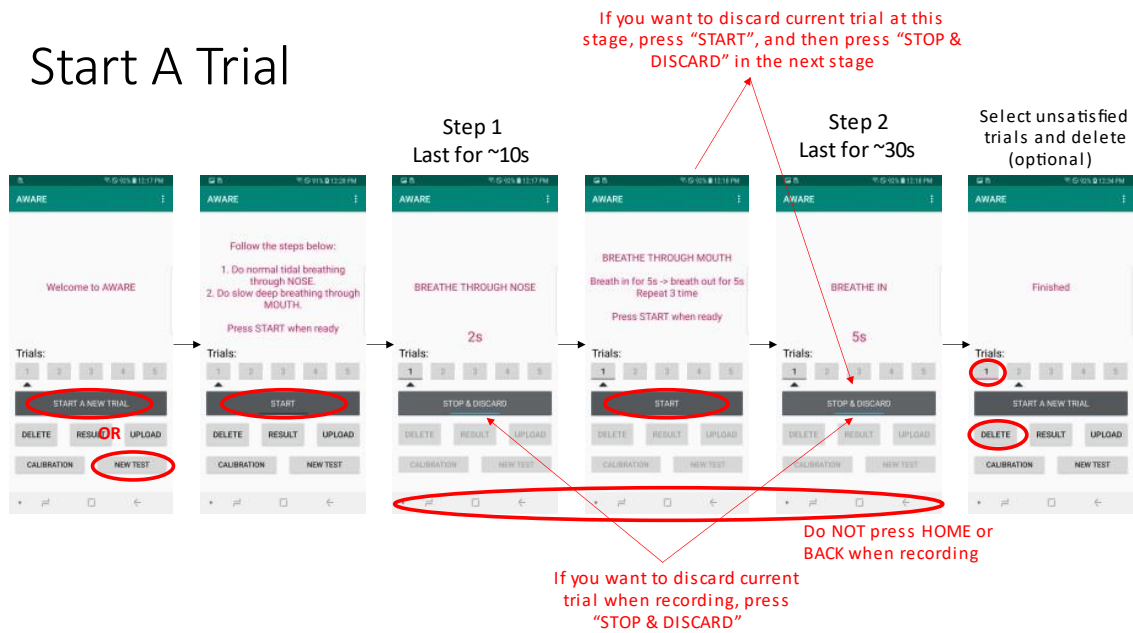
Introduction to AWARE App

Homepage

One test = {
 Trial 1 { Nasal test × 1
 Trial 2 { Inhalation × 3
 Trial 3 { Exhalation × 3
 :
 One entry on the website

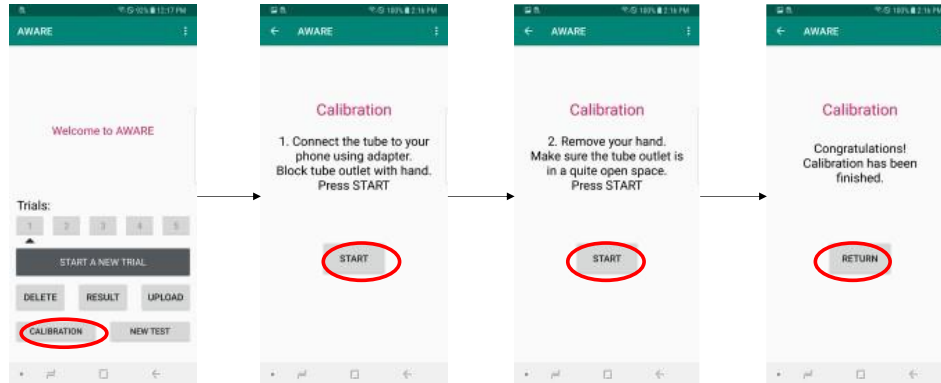


Start A Trial



Calibration

Remember to calibrate before test
(Need to be done every time the tube and adapter are replugged in)



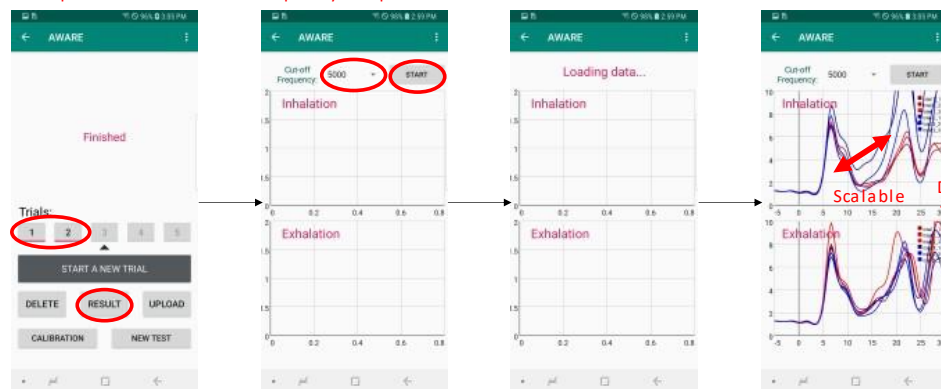
Result

Selected trials to process and press "RESULT"

Selected desired cutoff frequency and press "START"

Wait a few seconds

View results

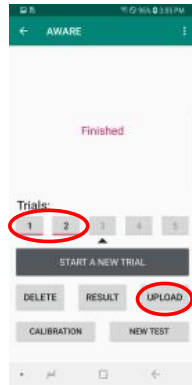


Different color for different trial

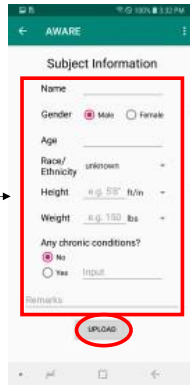
Different color depth for different repeat: in one trial

Upload

Selected trials to upload and press "UPLOAD"



Input information and press "UPLOAD"



Wait for progress bar to complete

