**Tests done in 3 locations (A B C) at 3 frequencies (10kHz, 50kHz, 100kHz), returning rms & phase, for 1679 electrode combinations, and 2 samples (flat membrane & hemisphere membrane, ecoflex 00-20 underneath).**

**A close up of a circular object

Description automatically generated**

A white and black object with a yellow dome

Description automatically generated**A close-up of a device

Description automatically generated**

**\*\*\***

Electrodes variable contains order of electrodes for each in sequence source, sink, Vp, Vn.

**\*\*\***

**touchsingle** (human touch on surface)

1 min -> touch A 1 min -> release 1 min -> touch B 1 min -> release 1 min -> touch C 1 min -> release 1 min

**touch** (human touch on surface)

1 min -> on A 1 min -> release 1 min -> on B 1 min -> release 1 min -> on C 1 min -> release 1 min\* -> on A & B 1 min -> release 1 min -> on A & C 1 min -> release 1 min -> on B & C 1 min -> release 1 min -> on A & B & C 1 min -> release 1 min

\*on hemisphere, this was accidentally 2 minutes

**presshuman** (surface pressed ~1cm with fingers)

same as above

**pressrobot** (surface pressed 8mm with 5mm probes on UR5)

same as above

**steelbolts** (steel bolts rested on surface)

same as above

**plasticcaps** (plastic test tube caps rested on surface)

1 min -> on A 1 min -> release 1 min -> on B 1 min -> release 1 min -> on C 1 min -> release 1 min

**melting** (rework station heat gun used to melt points)

1 min -> heat A 15 secs -> wait 4 ¾ mins -> heat B 15 secs -> wait 4 ¾ mins -> heat C 15 secs -> wait 4 ¾ mins

**damages** (cutting with scalpel, gloved hands)

1 min -> cut A & hold open 1 min -> close -> 1 min -> cut B & hold open 1 min -> close -> 1 min -> cut C & hold open 1 min -> close -> 1 min