

< **Supplementary materials** >

**Portable Skin analyzers with Simultaneous Measurements of
Transepidermal Water Loss, Skin Conductance, and Skin Hardness**

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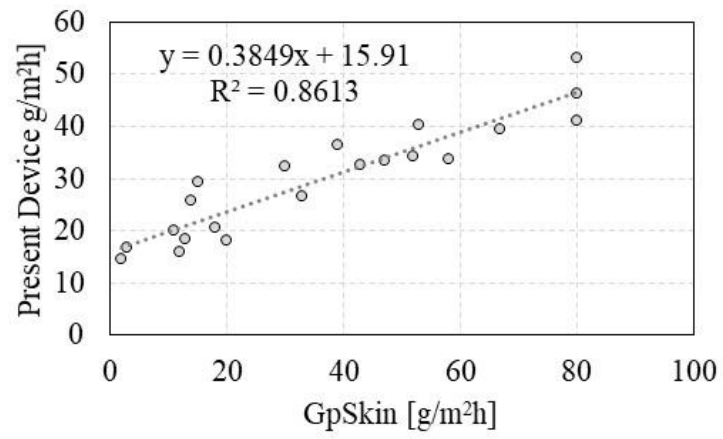


Figure S1. TEWL measurement comparison between the commercial GpSkin device and the present multimodal device.

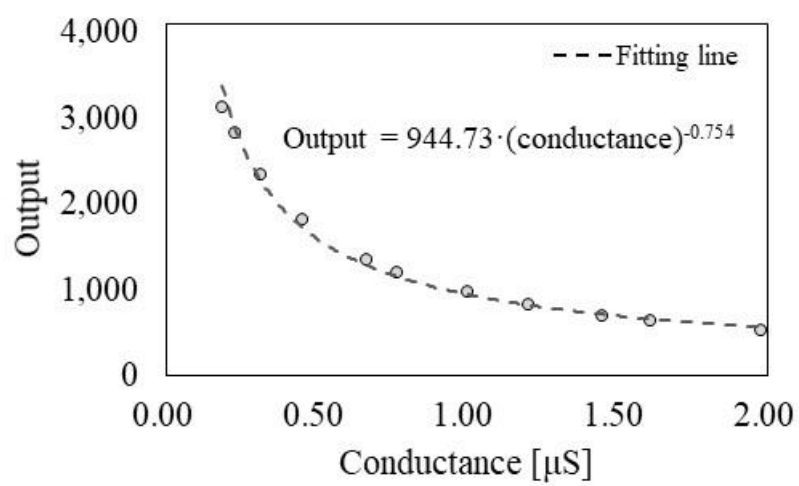


Figure S2. Conductance law data reading from the present pen-type device.

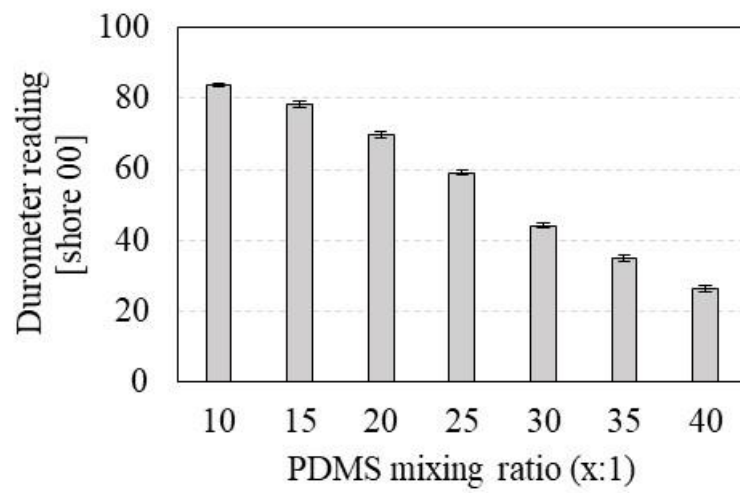


Figure S3. PDMS cylindrical blocks' hardness measurement by the conventional durometer type 00 where PDMS's mixing ratio of the base and the curing agent varies from 40:1 to 10:1.

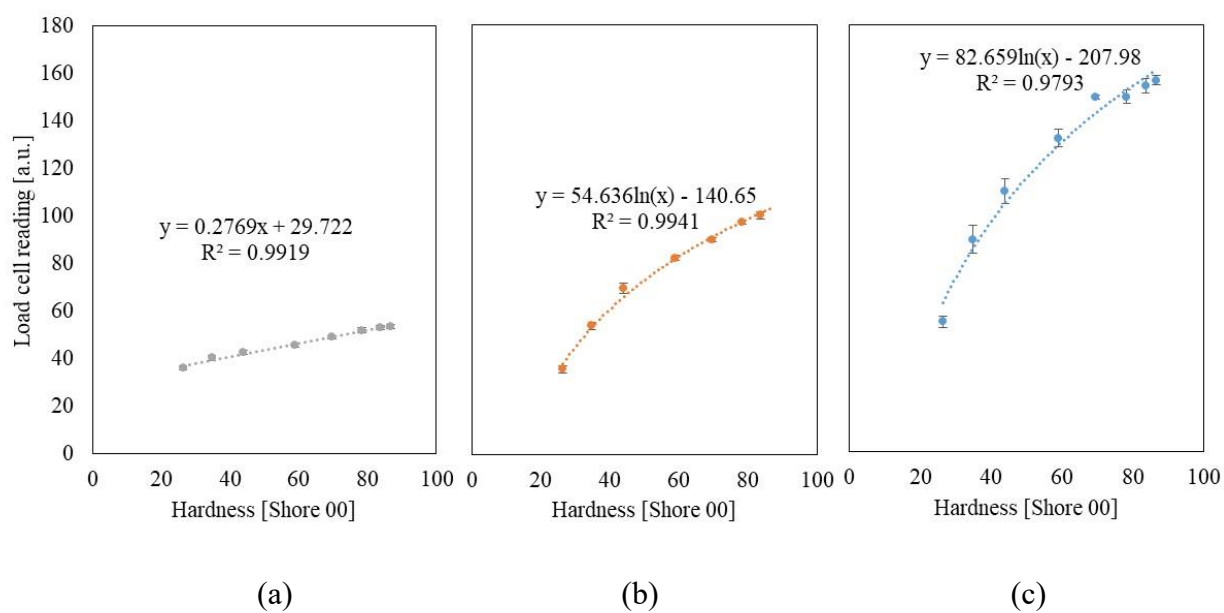


Figure S4. Load cell reading depending on the hardness for the three different spring wire diameters of: (a) 1.6 mm; (b) 1.7 mm; and (c) 1.8 mm.