

Appendix S2

SUPPLEMENTARY RESULTS

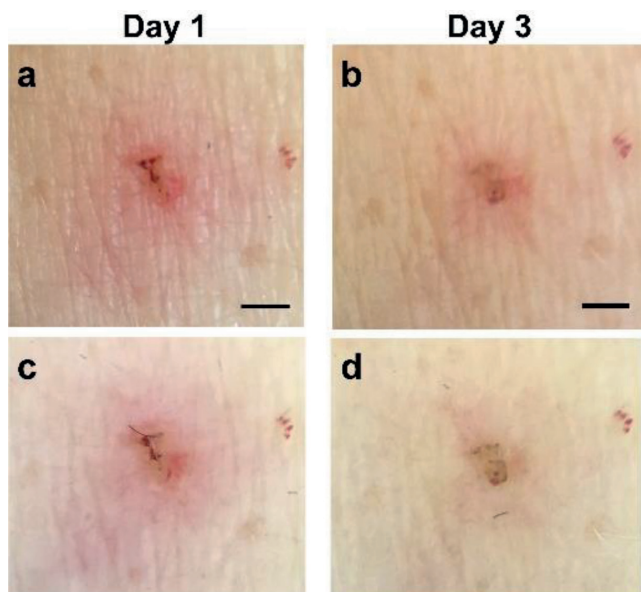
Validation of the erythema measurements

One concern was that the pressure from the glass covering the photo chamber of the handyscope reduced erythema. Therefore, erythema measurements of images acquired with handyscope were compared with the results of using an open chamber (Ollclip®, Ollclip, Foothill Ranch, CA, USA) macro lens (21×) attached to the same iPhone (Apple, Cupertino, CA, USA) (SFig. 1).



SFig. 1. Handyscope (left) and macro lens (right).

Duplicate lancet wounds were made in each axilla of 3 healthy volunteers (1 female and 2 males) according to the standard procedure. On postwounding days 1 and 3, images were acquired; first with the macro lens attached to the iPhone and then with the handyscope attached to the iPhone (SFig. 2).



SFig. 2. Images taken with an open macro lens (a, b) or handyscope (c, d) mounted on an iPhone 5SE on postwounding days 1 (a, c) and 3 (b, d). Scale bar, 1 mm.

The erythematous areas (mm²) were quantified using ImageJ software. The mean of the erythema areas of the anterior and posterior wounds was used for statistical analyses (two-way repeated measures ANOVA with $p < 0.05$ chosen as statistical significance). The results are shown in **STable I**. There was a significant effect of time on the erythema development ($p = 0.008$) but not of method of image acquirement ($p = 0.130$).

STable I. Erythema measurements in mm² performed by analysis of images taken by macro lens or handyscope attached to an iPhone 5SE

Day	Macro lens Mean ± SD	Handyscope Mean ± SD
1	14.0 ± 7.9	13.6 ± 7.0
3	2.56 ± 1.08	2.17 ± 1.25

In conclusion, images taken by the handyscope appear to be valid for erythema measurements.