

# ICAM assistance in production of prosthesis

## Objective

The production of silicone skin for upper limb prosthesis is a very difficult task. One hurdle is to match coloured silicone samples with the patient's skin, nails, veins and other particular features. This sample match is used as colour reference for personalized and detailed colouring of silicones for the prosthesis.

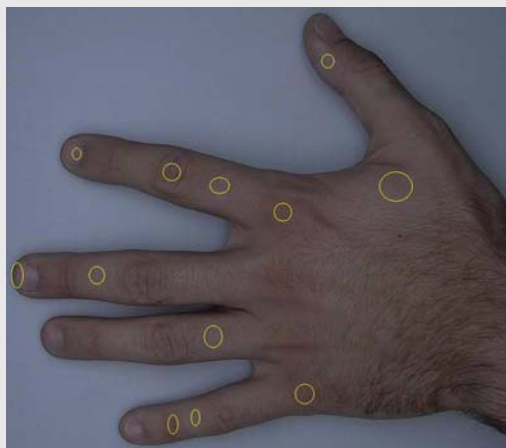


Fig. 3. Particular points on hand.

## Work done

The silicone and nail samples were measured with ICAM and a database was compiled. Special search and matching tools were developed. Now an ICAM image of the patient's skin is recorded within a few seconds and a semi-automatic match to the silicone samples is made within split seconds. The ICAM measurements are very precise and the images assure that the results given are from the assumed areas on the hand.

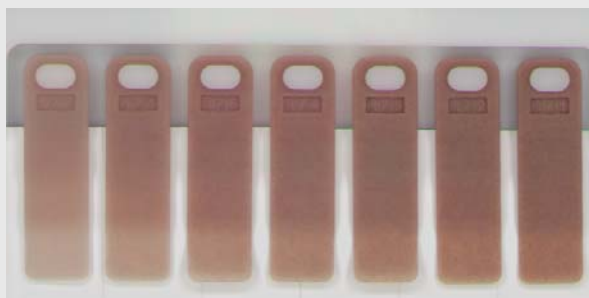


Fig.1. Silicone samples.



Fig. 2. Nails samples.

## Results and further development

The matching process is very fast, and the personalized colouring of silicone is assisted by ICAM. In the future the silicone samples can be replaced by ICAM images. Now distant recording of the patient skin colours with ICAM is possible and hence the patient's time spent on the Prosthesis Centre is reduced.

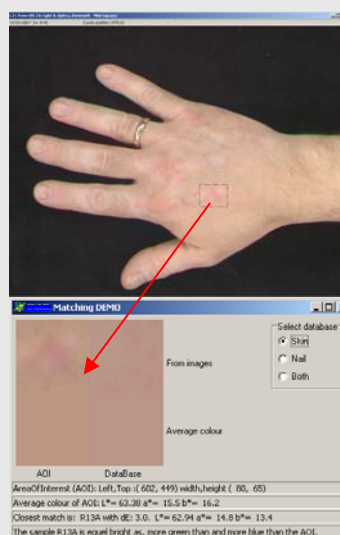


Fig. 4. Matching tool.

Other areas, where diagnosis or other expert evaluation, is based on visual information, can benefit from the ICAM technology. The fields of medicine, determination of fungus species, print proofing, advertising, etc. are naturally areas for exploiting ICAM for remote diagnose or evaluation.