

Application of several alternative Projective Mapping acquisition methodologies to evaluate algae-enriched tinned mackerel

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Introduction

Descriptive sensory analysis is key for product characterization, but the demand for expedited time-to-market has driven the development of fast-profiling methods. Among these, Projective Mapping (PM), often combined with Ultra Flash Profiling (UFP), offers a flexible approach to rapidly compare products based on perceived similarities, using spatial positioning. This study used Projective Mapping (PM) to rapidly evaluate six innovative samples of tinned mackerel fortified with macroalgae, addressing the need for faster product innovation.

METHODOLOGY AND RESULTS

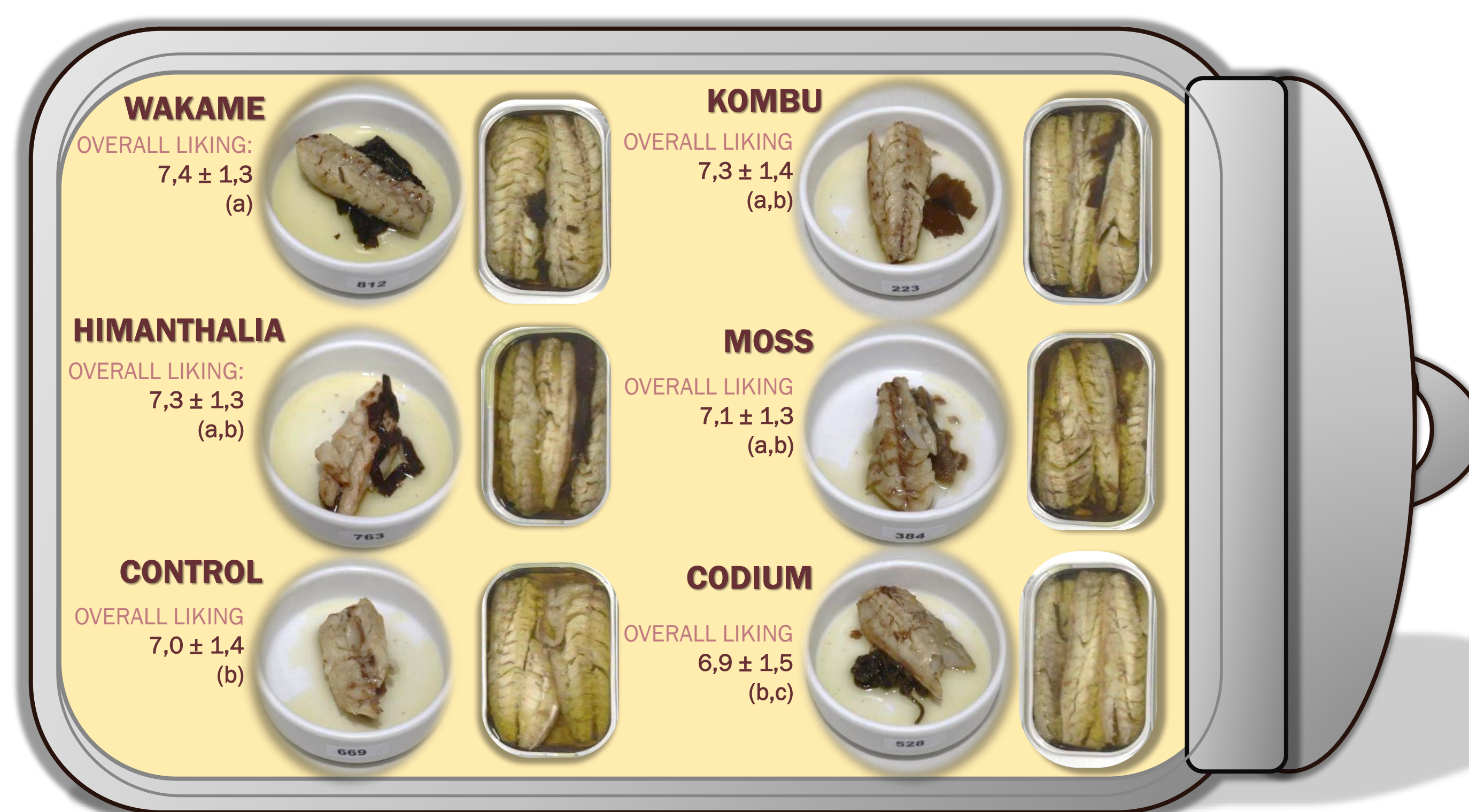
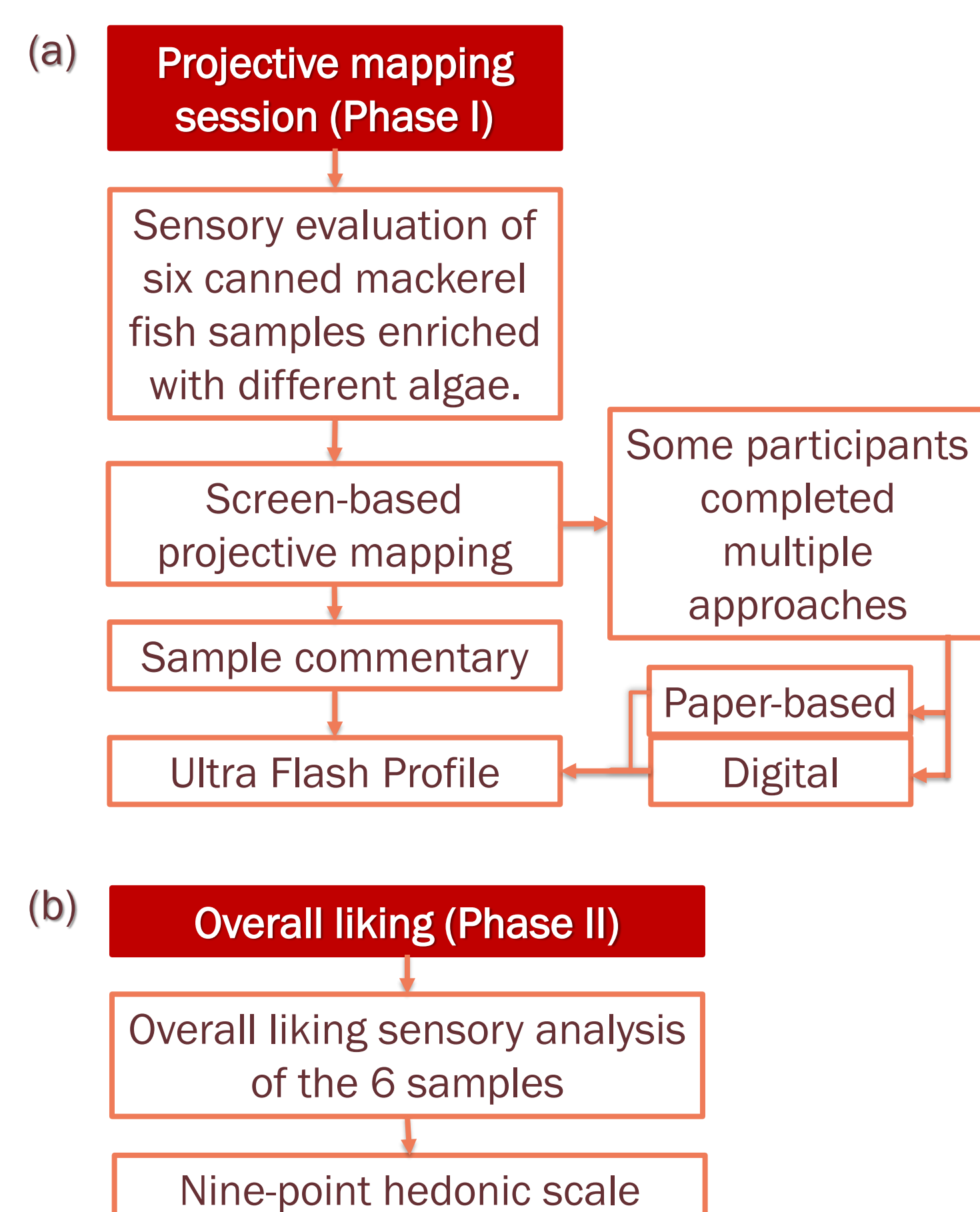


Figure 2. Overall liking of tinned mackerel samples fortified with macroalgae.
(a,b,c) - homogeneous groups according to the Wilcoxon test, with a significance level of 95%.

Figure 1. Methodology diagrams: (a) Projective mapping (b) Overall liking.

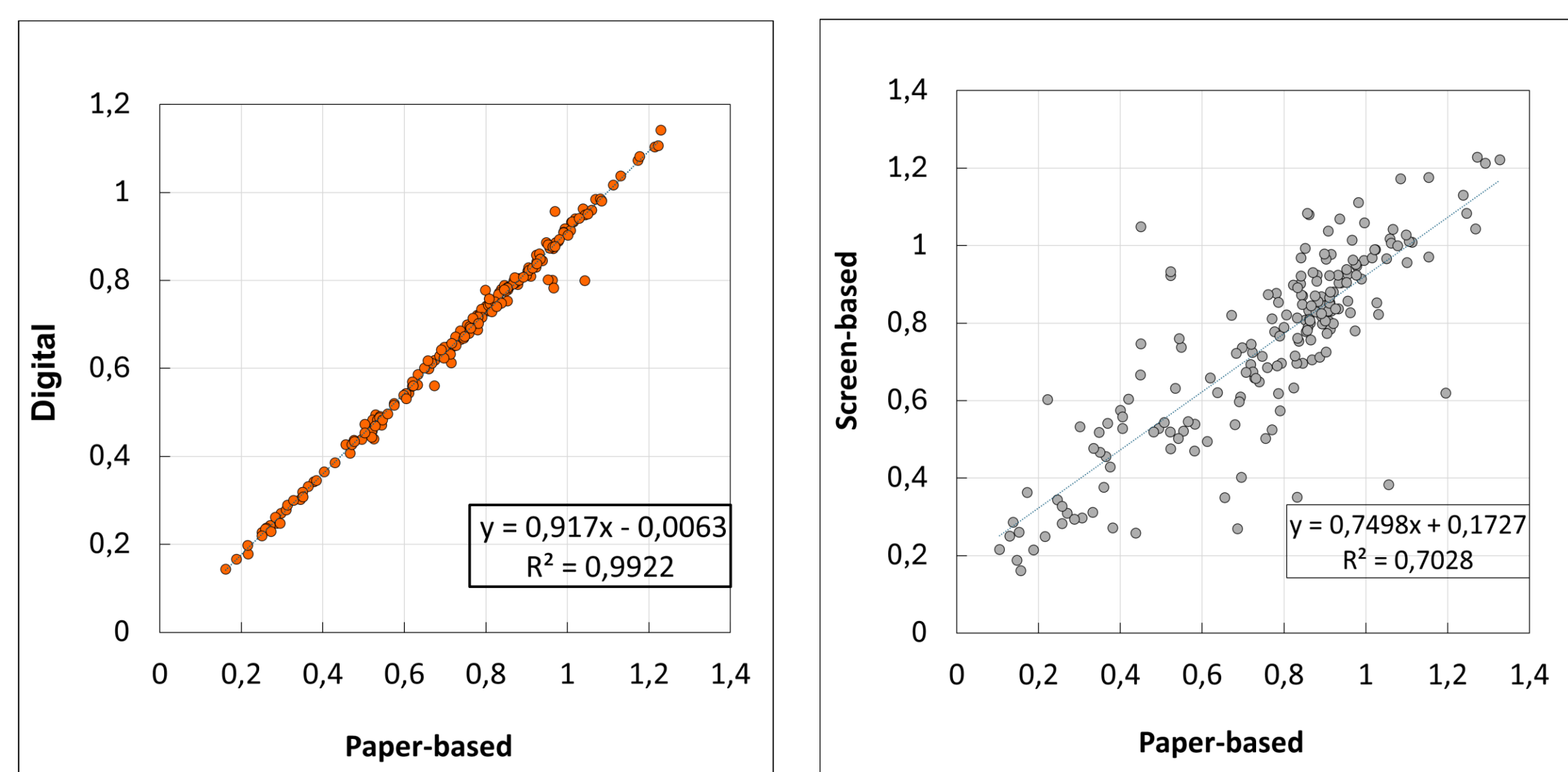


Figure 3. Projective mapping method comparison:
(a) Digital vs Paper-based (b) Screen-based vs Paper-based

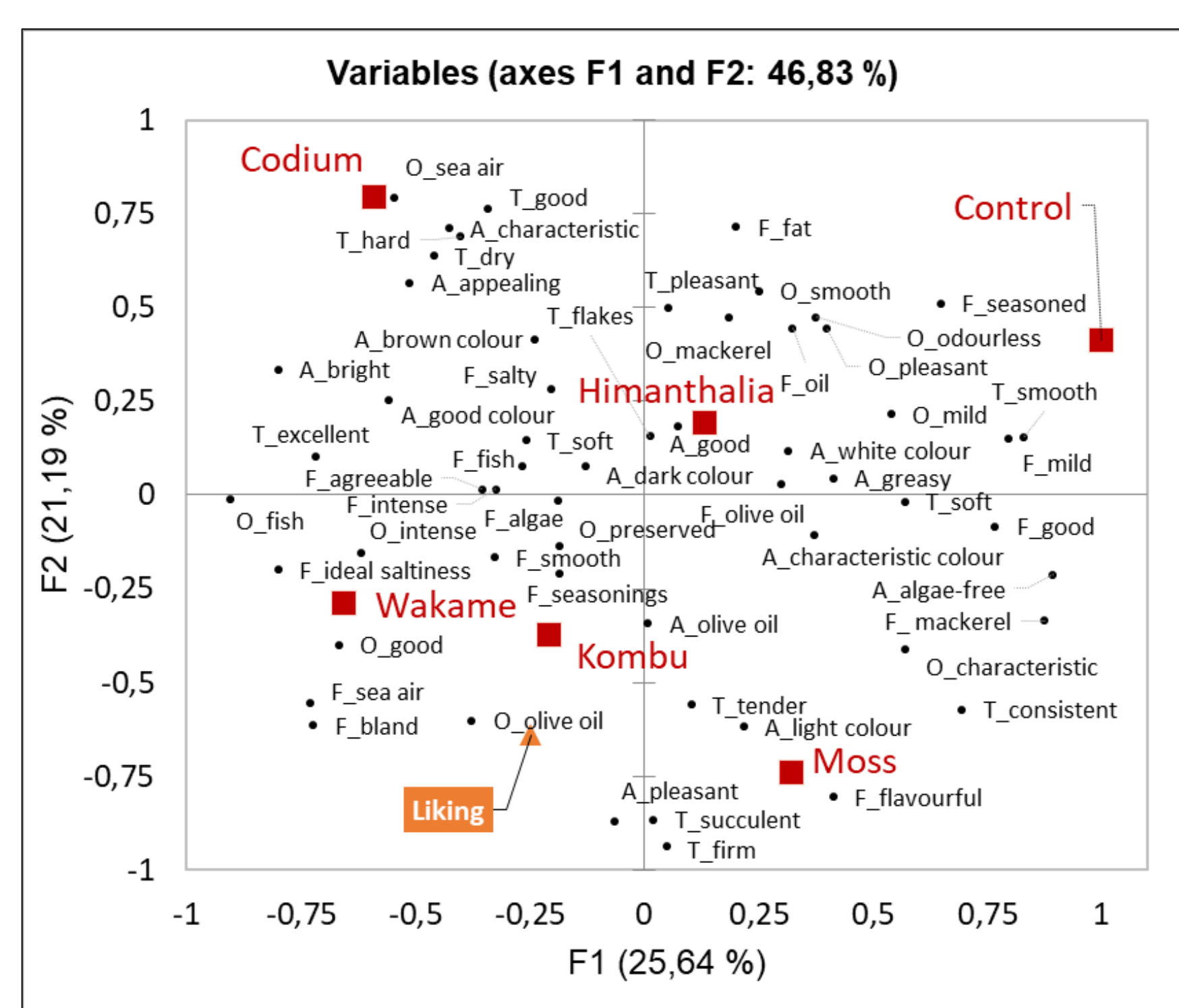


Figure 4. Projective mapping consensus map (N=35)

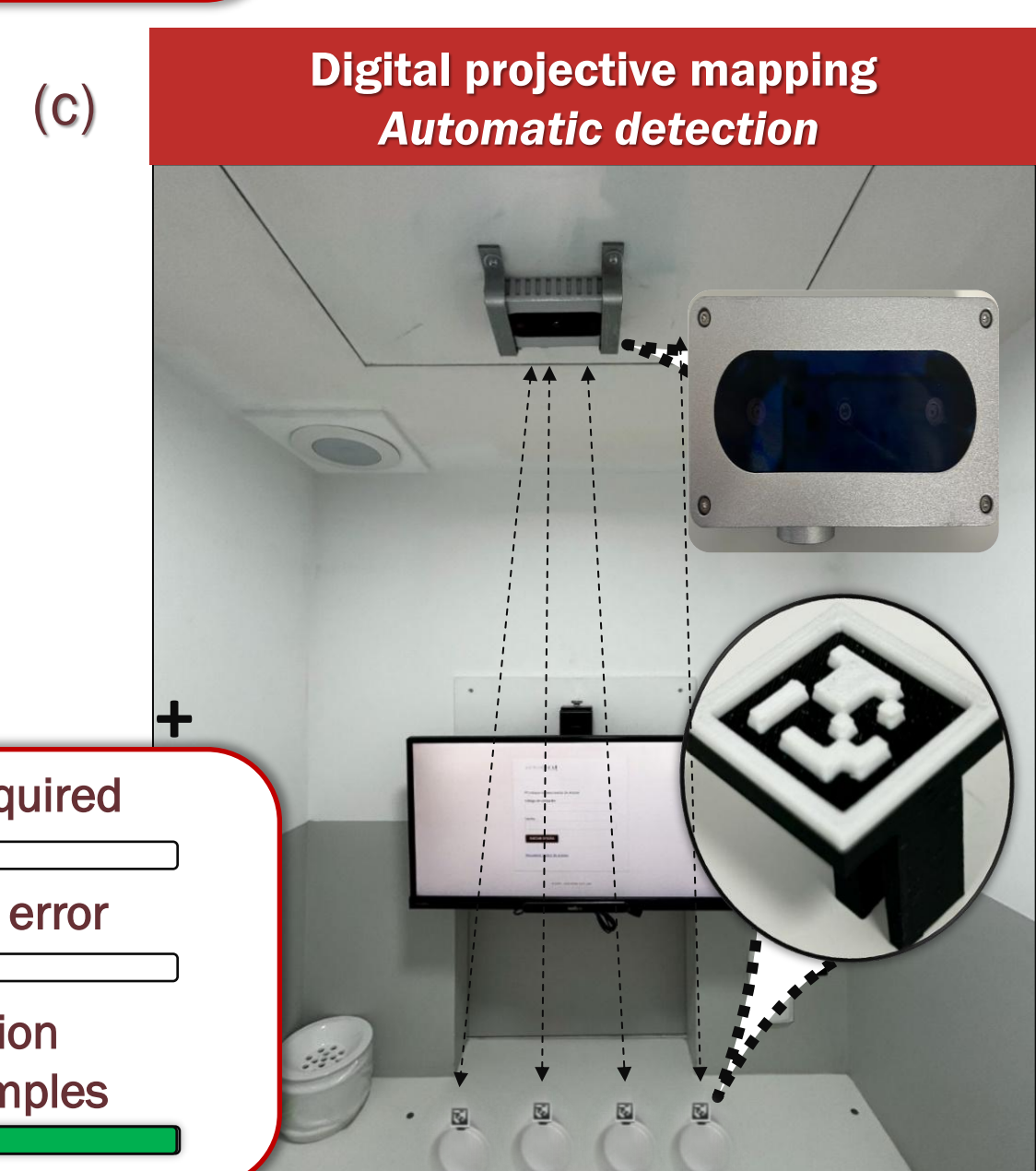
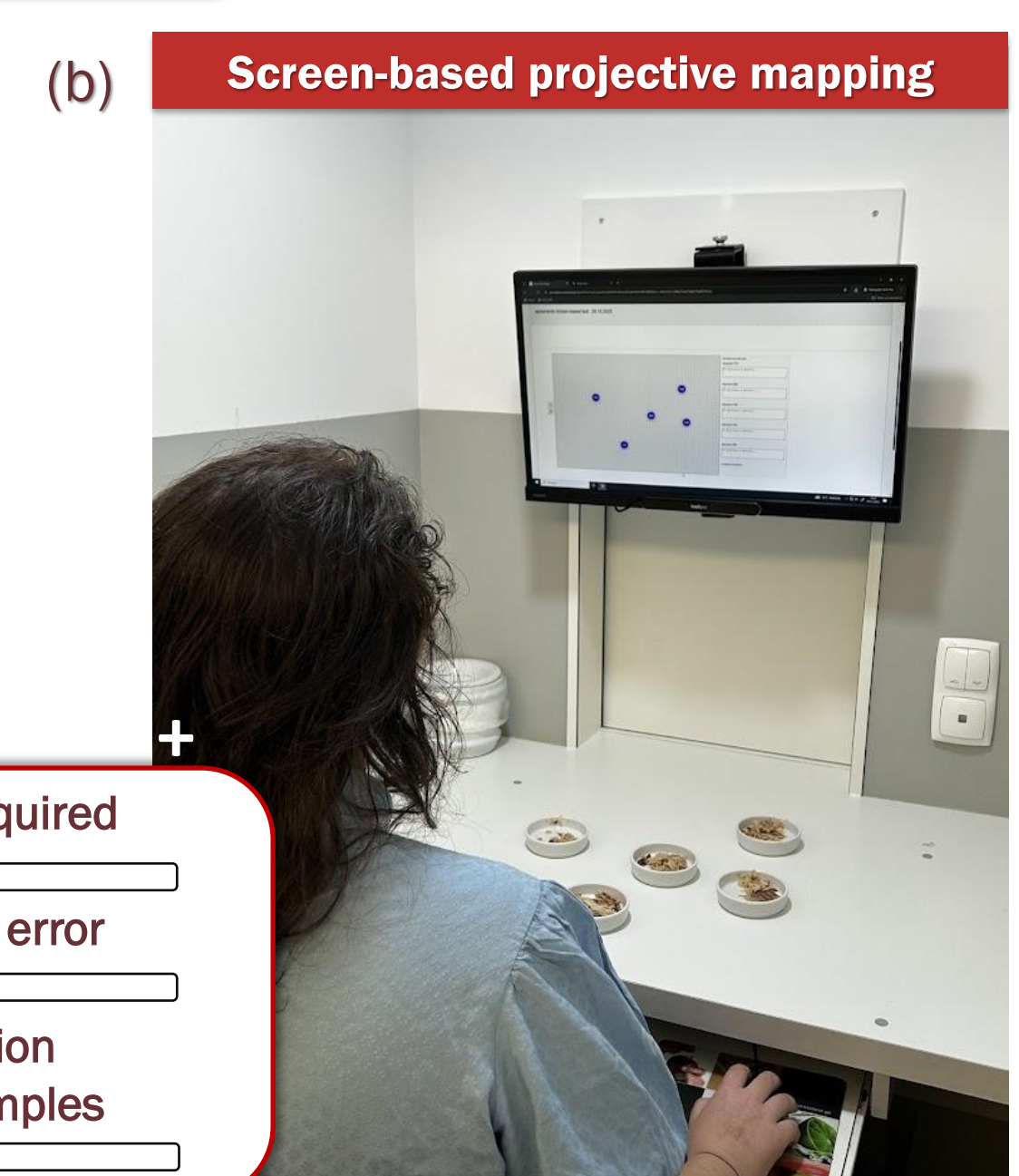
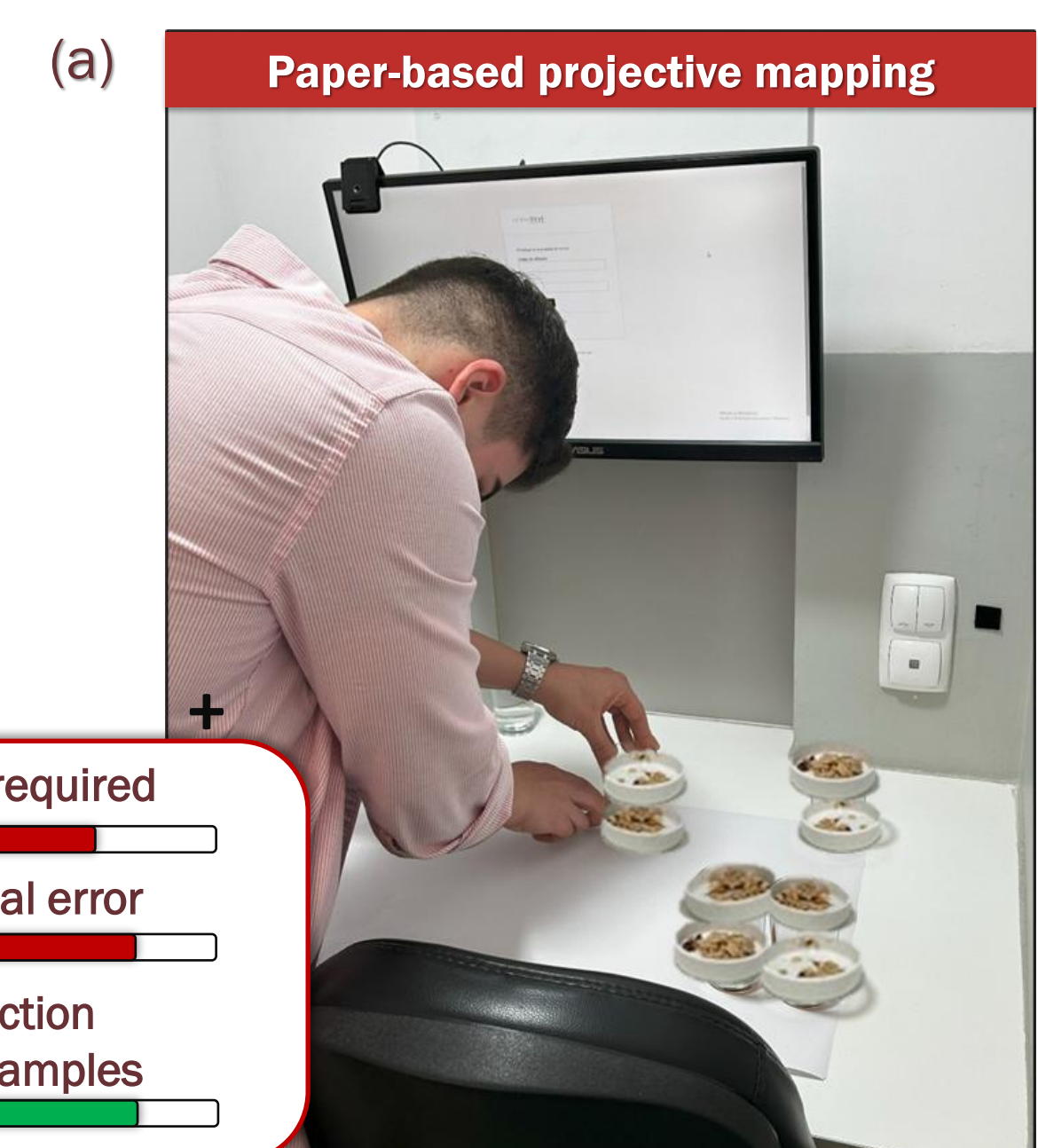


Figure 5. Projective mapping methods:
(a) Paper-based (b) Screen-based (c) Digital

CONCLUSIONS

- There were significant differences between the level of liking of the mackerel samples, with the fillets with Wakame, Kombu and Himanthalia being favoured over the others.
- In contrast, the sample of mackerel fillets with Codium showed the lowest level of acceptability.
- The use of canned macroalgae to improve the sensory profile of thinned mackerel, as well as of other thinned fish, is promising and has the potential to be successful among consumers.

AFFILIATIONS

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ACKNOWLEDGEMENTS

Author Bruna Barbosa acknowledges Non-Academic Doctoral grant No. 2023.03467.BDANA, funded by the Foundation for Science and Technology (FCT) and supported by Sense Test, Lda. Authors Barbosa, Rocha and Cunha acknowledge additional support from FCT through UID 05748: GreenUPorto - Centro de Investigação em Produção Agroalimentar Sustentável.

