

Allergen.me – Development of a universal code for the assessment of allergens presence in food products

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Food allergies are a health problem that affects around 10% of the European population, mostly children. The prophylaxis of this disease depends mainly on searching, reading and understanding the labels present on food products. Factors such as the disparity between label formats, poor legibility or confusing textual information contribute to making labelling difficult to read for the general population, and completely inaccessible to the traditionally more excluded sectors of the population such as seniors or people with cognitive difficulties.

This research addresses the problem of communicating food information regarding the presence of allergens to a diverse population. A theoretical stance was taken as to consider that information as being situated and embodied, that is, in which the creation of meaning takes place through the interaction of a body with a world endowed with physical, social and cultural context. Based on this stance, allergen.me was developed: an allergen communication system centered on a visual code suitable for use by people with distinct bodily capabilities and different cultural backgrounds, accessible both through action with an analog code (specifically, a personalized card) and a digital app configured with the user's preferences. The influence of the physicality and spatiality of the card in the interpretation of the code and in the

context of social interaction induces the adoption of behaviors that facilitates embodied cognition, such as the metaphorical mapping of information, the expansion of social organization of action and the use of epistemic actions. Through a phenomenological research approach that involved the collaboration and evaluation by food allergy sufferers and relatives, it was observed that the proposed system presented a high level of subjective understanding, reduced cognitive effort in the process of identifying food allergens, and has been observed to be more accessible to people with visual and cognitive impairments than the commonly used allergen communication solutions.

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FIGURE 1

Example of a personal allergen identification card, together with a food product with the visual code of the allergen.me system.

FIGURE 2

App of the allergen.me system during an evaluation session.

