

## Basic Examination of Easily Distinguishable Tactile Symbols Attached to Containers and Packaging

**Authors :** T. Nishimura, K. Doi, H. Fujimoto, Y. Hoshikawa, T. Wada

**Abstract :** In Japan, it is expected that reasonable accommodation for persons with disabilities will progress further. In particular, there is an urgent need to enhance information support for visually impaired persons who have difficulty accessing information. Recently, tactile symbols have been attached to various surfaces, such as the content labels of containers and packaging of various everyday products. The advantage of tactile symbols is that they are useful for visually impaired persons who cannot read Braille. The method of displaying tactile symbols is prescribed by the International Organization for Standardization (ISO). However, the quantitative data on the shapes and dimensions of tactile symbols is insufficient. In this study, through an evaluation experiments, we examine the easy-to-distinguish shapes and dimensions of tactile symbols used for various applications, including the content labels on containers and packaging. Visually impaired persons participated in the experiments. They used tactile symbols on a daily basis. The details and processes of the experiments were orally explained to the participants prior to the experiments, and the informed consent of the participants was obtained. They were instructed to touch the test pieces of tactile symbols freely with both hands. These tactile symbols were selected because they were likely to be easily distinguishable symbols on the content labels of top surfaces of containers and packaging based on a hearing survey that involved employees of an organization of visually impaired and a social welfare corporation, as well as academic experts of support technology for visually impaired. The participants then answered questions related to ease of distinguishing of tactile symbols on a scale of 5 (where 1 corresponded to 'difficult to distinguish' and 5 corresponded to 'easy to distinguish'). Hearing surveys were also performed in an oral free answer manner with the participants after the experiments. This study revealed the shapes and dimensions regarding easily distinguishable tactile symbols attached to containers and packaging. We expect that this knowledge contributes to improvement of the quality of life of visually impaired persons.

**Keywords :** visual impairment, accessible design, tactile symbol, containers and packaging

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