

## Press Release

## Study on a Third-Party Perspective Hair Evaluation Method Utilizing Eye-Tracking Technology—A Hair Care Industry First

FineToday Co., Ltd. (Head Office: Minato-ku, Tokyo; Representative Director, President and CEO: Tetsuo Komori) has concluded a study on the eye movements of subjects viewing human hair using eye tracking technology, marking the first application of this technology in the hair care industry\*, with the goal of developing a new hair evaluation method.

The findings of this study were presented at the 26th Japan Society of Kansei Engineering Conference (September 12 to 14, 2024, Tokyo, Japan).

### ■Background

Conventionally, hair care products have been evaluated using rating terms (such as lustrous, smooth, dry, moist, etc.) that require experts to subjectively assess the textures of portions of wigs or their own hair. However, this presents a variety of issues, as different evaluators may apply different ratings, evaluation requires specialized skills, and consumer perspectives are not taken into consideration.

### ■Study details

We made use of eye tracking technology as a means of objectively evaluating hairstyles overall, while also incorporating a more consumer-oriented perspective, with the goal of developing a new hair evaluation method. Eye tracking technology, which records the movements of the human eye, is widely used in advertising, marketing, and a broad range of other fields. We felt that this technology would be of great benefit in this study because, instead of relying on verbal judgements, it makes use of an individual's gaze to track their interest, enabling us to acquire data from consumers' points of view, eliminate the need for specialized skills in making judgements, and track the entire observation process.

In this study, 40 Japanese women from the general public were shown different hairstyles to measure their eye movements. As an example, evaluators were shown an image (Figure 1), and it was found that their gazes concentrated on the right side, along the specific area of the repeatedly bleached hair where the strands could be clearly differentiated, as indicated by color (Figure 2). After evaluating several other photographs of hair in the same manner, it was found that evaluator gazes also concentrated on areas where changes had been made, such as adding waves or glitter. The evaluators were also asked about their preferences of the hair styles in each image, which revealed a correlation between their preferences and the speed and focal points of their gaze. This suggests that eye tracking can be used to objectively assess whether people will potentially like or dislike a particular hairstyle. Eye tracking also shows promise as a means of identifying a person's latent hair concerns.



Figure 1. Left: Healthy hair /  
Right: Repeatedly bleached hair



Figure 2. Areas where evaluator gazes were concentrated;  
Red indicates a longer gaze, and green a briefer gaze

## ■Future prospects

Through this study, we wish to establish an objective method of evaluating hairstyles overall in order to determine the latent needs of our target customers, which conventional questionnaires have been unable to reveal, and apply the information in product development.

Based on our Purpose (our reason for existence) to “enrich the lives of everyone today and for generations to come, one fine day at a time,” the FineToday Group is committed to providing new value in a way that addresses the needs of our customers through R&D and product development projects firmly rooted in our sense of aesthetics.

## The FineToday Beauty Innovation Center

The research was conducted at the FineToday Beauty Innovation Center (BIC), our research and development facility. The Center was established in July 2023 in Toyosu, Tokyo, to serve as an urban R&D site easily accessible from both the Head Office (Minato-ku, Tokyo) and Fine Today Industries Co., Ltd. (Kuki City, Saitama), our production site.

The purpose of the Center is to swiftly engage in innovative research and development projects inspired and driven through interaction and collaboration with a broad range of companies and research institutes, taking full advantage of its convenient location in metro Tokyo where cutting-edge technologies and trends come together.

\*As of September 9, 2024 (Investigated by FineToday)

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