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Application of eye-tracking technology for the evaluation of different packaging designs for premium organic herbal teas

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Introduction: Eye tracking (ET) technology provides a way to measure visual saliency, generating information about the type of labels that are most easily seen and understood. This technology allows to assess whether, and for how long, each image element is focused relative to the rest, including the focus sequence[1, 2]. The main goal of this study was to assess the impact four graphic designs (figure 1) on the perception of different extrinsic characteristics (premium and organic denomination, infusion name and brand).

Figure 1: Presentation of the four graphic designs
From left to right: control, metal, newline, and artistic - used to label the packages of loose leaf premium organic infusions.

Methods: A panel of 50 consumers evaluated, simultaneously, four packaging designs for four different loose leaf herbal teas: lemon verbena, lemongrass, lemon thyme and peppermint. The images of the packages were evaluated in a Tobii T60 eye tracker. For each herbal tea, after visualization of the packages, each participant was asked to indicate the preferred design, picking one out of four. Different metrics from eye-tracker were analysed: time to first fixation, first fixation duration, total fixation duration, and fixation count.

Results and Discussion: The results showed that for lemongrass and peppermint the metal package design was the preferred one. However, for lemon verbena the control design was preferred and for lemon thyme the artistic design was the elected one. Results from the two-way ANOVA applied to eye-tracking metrics showed significant differences between the herbal teas, designs and interaction herbal tea vs design. For the full array of herbal teas, the metal design was the most preferred and the newline was the least preferred ($p < 0.05$).

Conclusion: This exploratory study allowed researchers to select the visual design that enhanced relevant attributes on the packaging and which are the drivers for increase consumers' visual attention.

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