

30 Using TCATA to Investigate Dynamic Perceptions of Sensory Attributes & Food-evoked Emotions during Yogurt Consumption

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Introduction and Approach

The eating experience is dynamic, and measuring emotional responses during consumption may facilitate better alignment of sensory attributes to product type or consumer demographic.

In this study, Temporal Check-All-That-Apply (TCATA) was used to investigate the dynamic characterization of four yogurt products with different vanilla profiles (Fig 1).

Sensory Methodology

- EsSense Profile® 39-item List [Nestrud *et al.*, Food Quality & Preference, Vol. 48, (2016) pp107–117] was reduced to 15 Emotions by a Trained Panel using TCATA over multiple sessions
- Four yogurt products evaluated by 59 untrained panelists:
 - Session 1: TCATA - tracked emotions from 15 emotion terms
 - Session 2: TCATA - tracked sensory perceptions from 15 sensory descriptors
 - Data Collection: TCATA – one spoon yogurt over 30-sec (Compusense)
 - Data Analysis: Correspondence Analysis, Multiple Factor Analysis (XLSTAT)

4 Vanilla Yogurt Products

Sensory Language from previous study

EsSense Profile® - 39 Emotion terms

TCATA Trained Panel:
development of relevant concise Emotions List

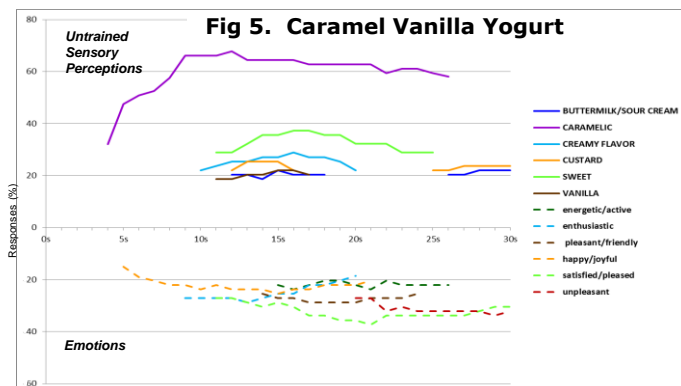
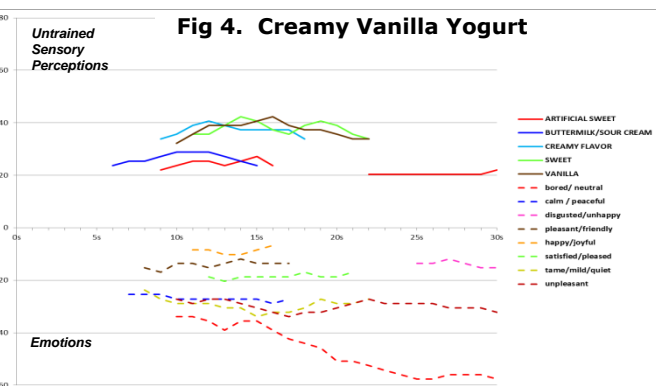
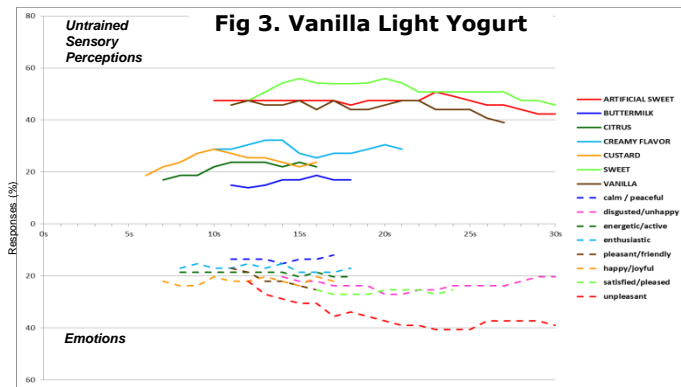
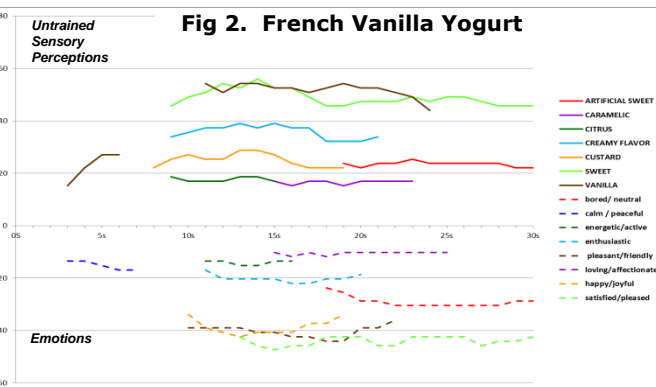
Untrained Panelists & TCATA:
dynamic sensory and emotional characterization of vanilla yogurt products

Fig 1. Approach to Temporal Characterization

Results and Insights

Dynamic Sensory and Emotional Characterization of Vanilla Yogurt Products

- Using TCATA, untrained panelists successfully differentiated between the four products, and illustrated the dynamic interplay between their emotions and sensory perceptions as the yogurt was eaten (Fig 2 to Fig 5)
- Trends on emotions evoked by certain sensory attributes were also observed



This study indicated TCATA's potential to reveal the dynamic and multidimensional nature of consumer perceptions