



sensorydimensions

Integrating Sensory & Consumer Science into NPD



sensory**dimensions**

Content

- Introduction
- Making a Sandwich
- Innovation in Snacking
- Designing an Energy Drink
- New flavours for Fresh Juice
- Benchmarking Cheese
- Concept Testing Bone Health
- Drivers of Liking in Cereal Bars
- Chocolate Brand, Pack and Product





sensorydimensions



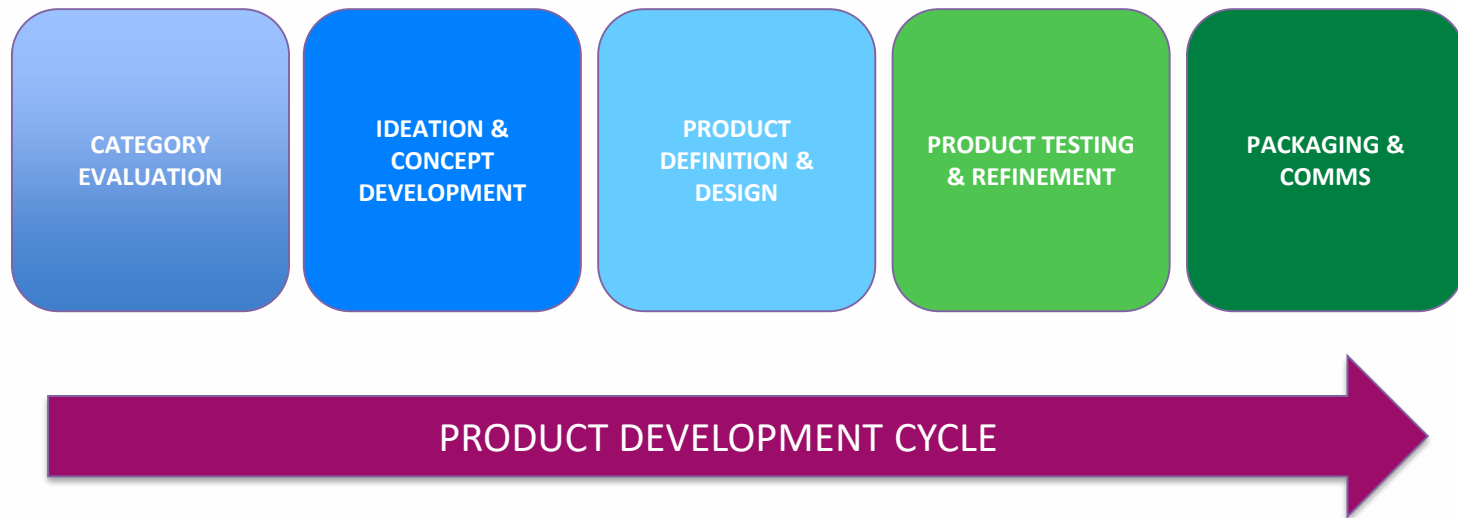


sensorydimensions



sensorydimensions

Product Development Cycle



Category Evaluation



sensorydimensions

CATEGORY
EVALUATION

What's there?

What's missing?

What is the unmet need?

- ✓ Category mapping – white space
- ✓ Ethnography – what do people do?





sensorydimensions

Ideation & Concept Development

IDEATION &
CONCEPT
DEVELOPMENT

What could this product be?

How would consumers define a product that meets this need?

✓ Co-creation groups

Case Study 1 Snacking

Case Study 2 Desserts (available to take away)



Ideation & Concept Development



sensorydimensions

....looking for inspiration to develop new products in the grain afternoon snack category; in particular for the 'life optimisers': mature women who are more health aware and managing a hectic lifestyle.

IDEATION &
CONCEPT
DEVELOPMENT

Research focused on two key afternoon snacking behaviours 'revive' and 'sustain':

- **Sustain:** Something to fill you up or maintain your energy levels
- **Revive:** Something to provide distraction, mental stimulation or something to inspire you



Ideation & Concept Development



sensorydimensions

WORKSHOP 1: CATEGORY EXPLORATION AND FIRST STAGE IDEA GENERATION



INDIVIDUAL CONCEPT DEVELOPMENT



WORKSHOP 2: COLLABORATIVE CONCEPT DEVELOPMENT

- Introductory workshops to test market hypotheses, understand category drivers, barriers and opportunities.
- Initial group ideation
- Briefing for **ideation competition**

IDEATION &
CONCEPT
DEVELOPMENT

- Participants completed a diary task evaluating their snacking behaviours, and generated a new grain snack for afternoon consumption

- Interactive creative sessions evaluating and developing consumer ideas
- NPD / Insights teams assisted in digging deeper into what the parameters were for different sensory attributes in a potential new product through Senstation evaluation
- Group voted for best ideas – there was a prize for the winner of the best individual task



The Power of Projection



sensorydimensions

Respondents articulated how they perceived different emotional territories could be expressed through the attributes of a grain snack:



Sarah Jessica Parker

Perceived as: Health conscious, small sized, social, glamorous

Grain snack attributes: small nibble sized, put in your handbag, not smelly, square shape, not messy



Angelina Jolie

Perceived as: Ethical, posh, elegant, healthy

Grain snack attributes: Boring, dry rice cakes, ethically sourced exotic ingredients, natural, visible grains and seed



Judi Dench

Perceived as: Elegant, traditional, quality, polite

Grain snack attributes: Crown shape, traditional Ritz biscuit base, delicate, crunchy, clean, refined grain, tomato flavour



Beyoncé

Perceived as: Energetic, attractive, healthy

Grain snack attributes: diet friendly, low fat, variety of nuts and grains, colour variation (seeds), strong flavour, slow release energy



The Power of Projection



sensory**dimensions**

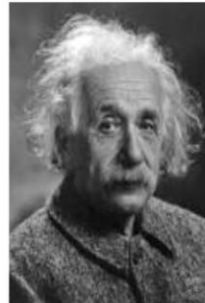
Respondents articulated how they perceived different emotional territories could be expressed through the attributes of a grain snack:



Whoopie Goldberg

Perceived as: Fun, social

Grain snack attributes: Thin, crispy, flavoursome, cheese, pumpkin seeds, bite sized, oven baked, chilli



Einstein

Perceived as: Brainy, clever

Grain snack attributes: Brain food; single grain with high boosting nutritious oil, small square shape, revive snack



Moira Stewart

Perceived as: Everyday, formal

Grain snack attributes: Large wholegrain, circular shape, thick and sustaining, with strong flavour. Sustain snack



Ideation & Concept Development



sensorydimensions

WORKSHOP 1: CATEGORY EXPLORATION AND FIRST STAGE IDEA GENERATION



INDIVIDUAL CONCEPT DEVELOPMENT



WORKSHOP 2: COLLABORATIVE CONCEPT DEVELOPMENT

- Introductory workshops to test market hypotheses, understand category drivers, barriers and opportunities.
- Initial group ideation
- Briefing for **ideation competition**

IDEATION &
CONCEPT
DEVELOPMENT

- Participants completed a diary task evaluating their snacking behaviours, and generated a new grain snack for afternoon consumption

- Interactive creative sessions evaluating and developing consumer ideas
- NPD / Insights teams assisted in digging deeper into what the parameters were for different sensory attributes in a potential new product through Senstation evaluation
- Group voted for best ideas – there was a prize for the winner of the best individual task



Case Study: Consumer led innovation



sensorydimensions

Challenge

- Our client had identified an unmet snacking occasion but needed feedback as to how to fill this gap.
- Our task was explore the snacking needs of the target group (health aware, mature women) and to develop a product design concept(s) to meet this snacking occasion.



Solution

- Co-creation approach using 'creative thinkers' from the target market
- A combination of focus groups; a diary study; a creative 'homework' task and an in-depth workshop with client input.
- 'Sense Stations' to explore sensory stretch and define parameters for product flavour and texture and appearance.



Outcome

- A diverse range of concepts around health aware snacking.
- Definition of how existing snacks failed to meet the requirements and new ideas for products that would fill the gap.
- Definition of sensory parameters and ingredient gos and no-gos for the product.



Product Definition & Design



sensory**dimensions**

PRODUCT
DEFINITION &
DESIGN

Creation of Design Guidelines

Identification of areas for New Development & Optimisation

Identification of Drivers for Optimisation

- ✓ Qualitative Product Labs (with product stimulus)
- ✓ Quantitative Consumer research
- ✓ Sensory Profiling



Creating Design Guidelines



sensorydimensions

PRODUCT
DEFINITION
& DESIGN

How sweet? How bitter? How thick? Which ingredients?

Challenge

- How to move into the energy drink market with a juice led concept.
- How to translate the concept into a workable brief for NPD: what type and intensity of flavours; mouthfeel and ingredients did consumers expect the concept to deliver



Solution

- Series of Creative and Interactive Product Labs with target consumers
- Each product attribute is investigated as a triad.
- Pack size and ingredient labels also investigated



Outcome

- Clear definition of the minimum and maximum intensities of a range of flavour and mouthfeel characteristics to suit the concept.





sensorydimensions

Examples of Product Triads



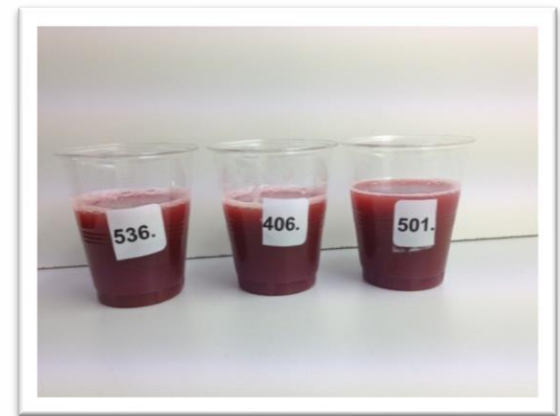
Bitterness Flight 1

*No guarana;
new Guarana;
regular Guarana*



Botanicals:

*vermouth;
lemon ginger;
ginger & anise*



Mouthfeel

*homogenised;
non-homogenised;
with banana*



Product Definition & Design

For Beers, Sensory Design Guidelines to be explored



sensory**dimensions**

Package

- Size, material, colour, grade (thickness)
- Handling during pour
- Labelling

PRODUCT
DEFINITION &
DESIGN

Appearance

- Liquid colour and opacity (light to dark : transparent to opaque)
- Level of visible carbonation (low to high; small to large bubbles)
- What should the head look like?

Mouthfeel

- Level of carbonation
- Body (thick/thin)

Desirable Flavour and aftertaste

- Level of bitterness, sweetness, hop profile, flavour style.
- What needs to be present in the aftertaste for the promise of the concept to be credibly delivered? e.g. Bitterness, Astringency, Sweetness, Acidity, mouth-coating



Quantitative Consumer Research

PRODUCT
DEFINITION &
DESIGN



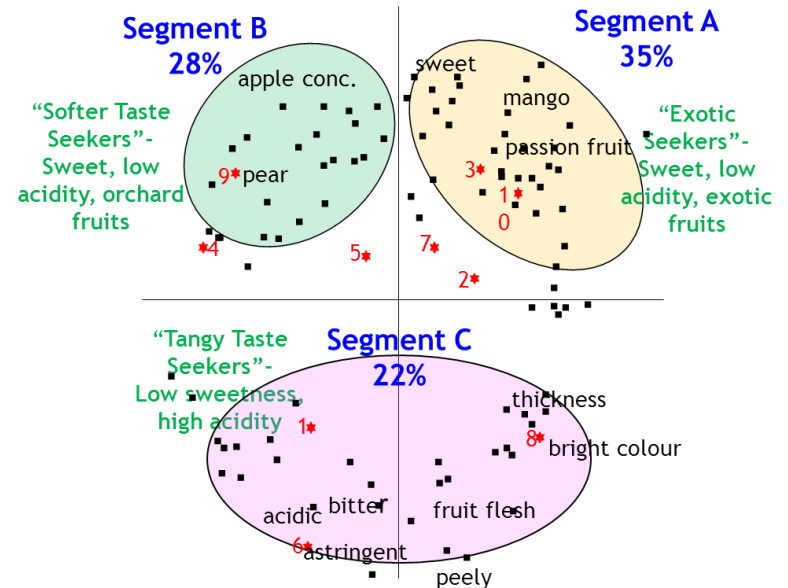
sensorydimensions

Identifying new Flavours for Juice

The Challenge:

Identify the 'best' flavours to launch for a new chilled range to ensure maximum appeal. Ten samples were evaluated by sensory testing and consumer research.

Data analysis was by Preference Mapping.



- Preference mapping revealed three groups of consumers
- Sensory data told us what characteristics were the drivers of liking for each group
- Modelling predicted the optimum sensory profile for each group
- Three juices were developed to target each consumer segment and were successfully launched to the market

Product Testing and Refinement

PRODUCT
TESTING &
REFINEMENT



sensorydimensions

Benchmarking versus competitors (or current)

Testing against Concept

Understanding your Product

Identifying how to Improve and monitoring improvements

- ✓ Sensory Profiling
- ✓ Quantitative Consumer research

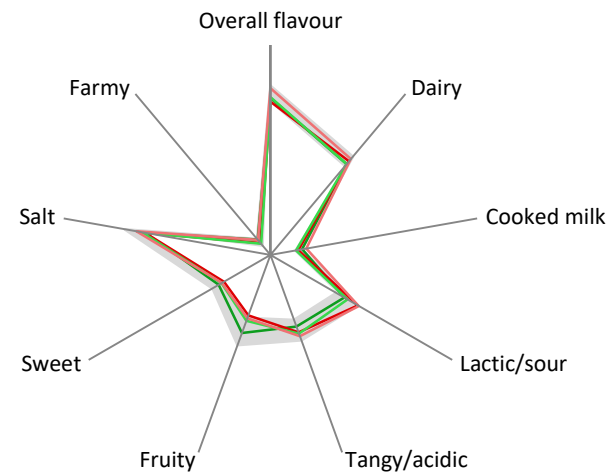


Sensory Profiling for Product Benchmarking



sensorydimensions

Attribute	Definition
Instructions: Take a few more bites of the sample and assess the following flavours	
Overall flavour	Intensity of all the flavours perceived
Dairy	Degree to which the flavour of the sample is perceived as dairy which includes cream/milk and butter <input type="checkbox"/> Cream/milk <input type="checkbox"/> Butter <input type="checkbox"/> Not sure
Cooked milk	Degree to which the flavour of the sample is reminiscent of steamed or boiled milk
Lactic/sour	Degree to which the sample has a lactic flavour - reminiscent of sour natural yogurt
Tangy/acidic	Degree to which the sample has a sharp or tangy flavour
Fruity	Degree to which the flavour of the sample is perceived as fruity - reminiscent of a sharp fruit such as pineapple
Sweet	Degree of basic sweet taste
Salt	Degree of basic salt taste
Farmy	Degree to which the flavour of the sample is reminiscent of a farmyard



Sensory Profiling



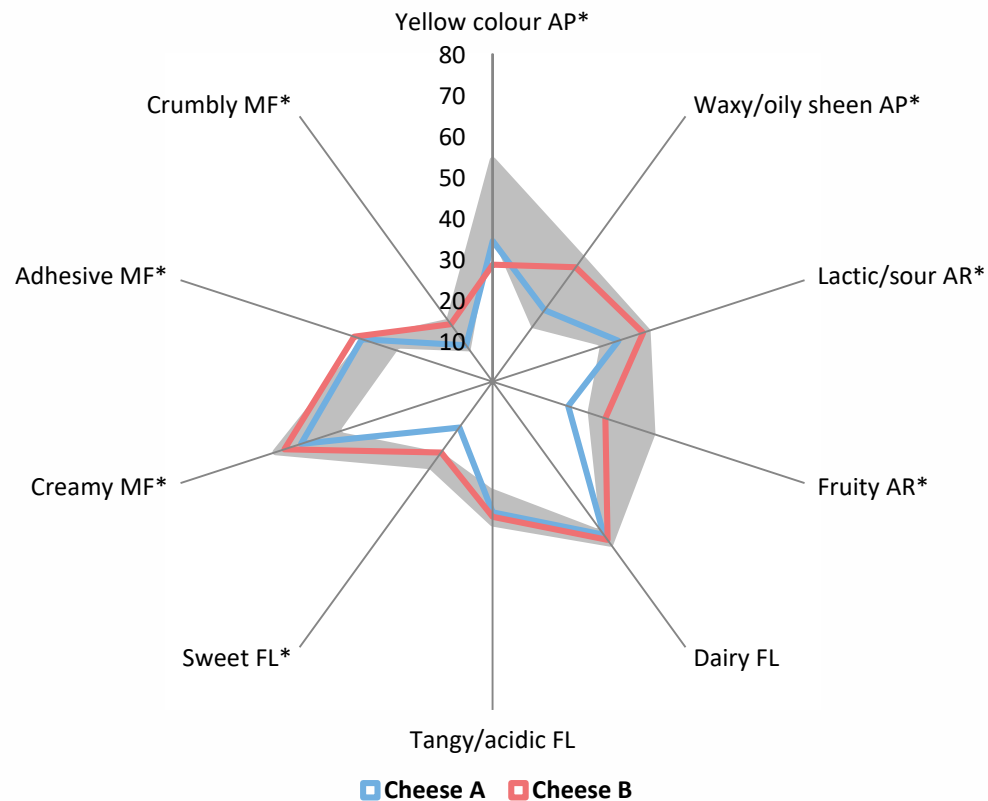
Sensory Profiling addresses the majority of questions our clients ask us about their products.

- ✓ Its unique sensory profile (*signature*)
- ✓ How it compares to the competition
- ✓ The impact of cost reduction – what will change?
- ✓ The effect of process change or switching production site
- ✓ How does reducing fat and/or sugar influence flavour and mouthfeel?
- ✓ How can I improve it?
- ✓ What is the impact of variation in ingredients?



Benchmarking the Competition

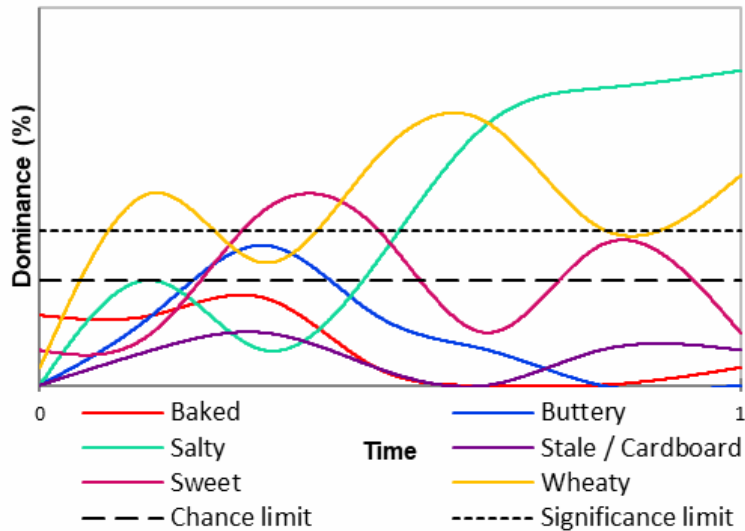
Sensory Benchmarking of Cheese



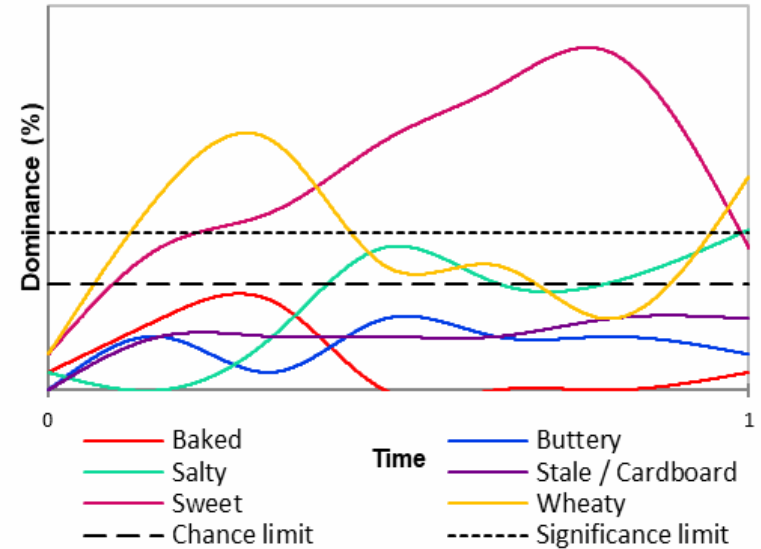
The sensory range shows the typical range of variation of the client's cheese



Diving deeper into differences.... (TDS)



Biscuit A



Biscuit B



Testing your Product against the Concept



sensorydimensions

NEW!

Benecol Yogurt Drink *PLUS* Bone Health

Introducing new Benecol PLUS Bone Health, the only yogurt drink that actively lowers cholesterol and is rich in calcium to help keep your bones in good health, so you can stay fit & active!

- ✓ With unique plant extracts which are **clinically proven to lower cholesterol by up to 10% in just 3 weeks**
- ✓ With added calcium (20% RDA) and 50% of your daily vitamin D
- ✓ **Just 1-a-day** is enough to lower your cholesterol

PRODUCT
TESTING &
REFINEMENT

- In delicious **Strawberry**
- In store with the other Benecol yogurt drinks

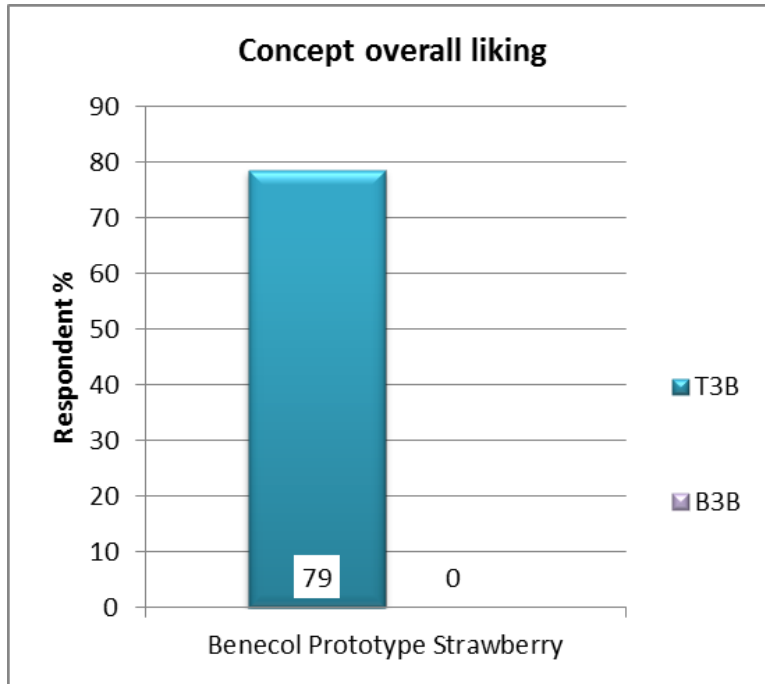


Concept only



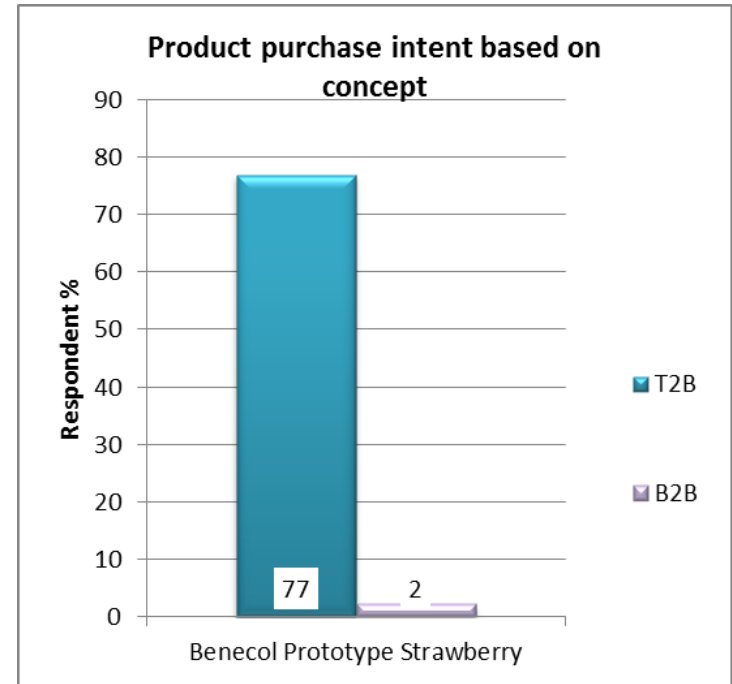
sensorydimensions

Pre-Trial Overall Liking and Purchase Intent
Top and Bottom Boxes (n=103)



Mean score = 7.4

9 point scale;
9=like extremely and 1=dislike extremely



Mean score = 4.0

5 point scale;
5=definitely would buy and 1 =definitely would not buy

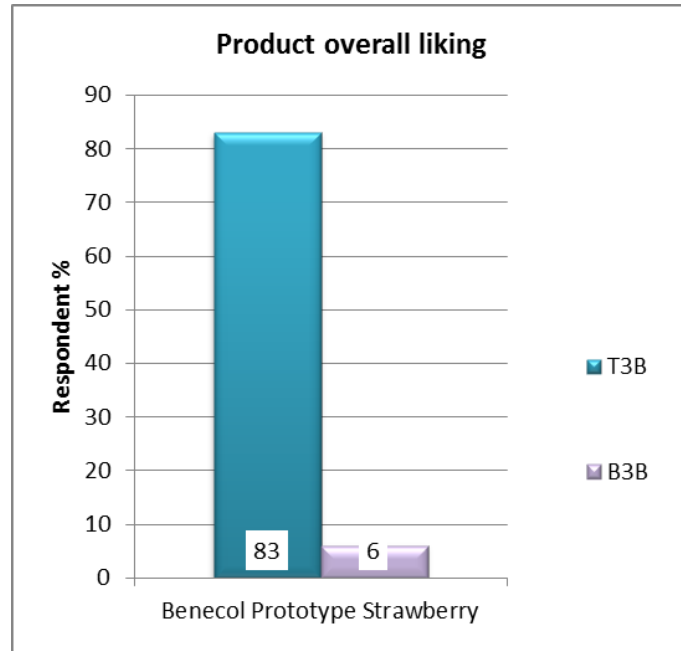
Reaction to the concept was very positive: Mean liking score was >7; 77% said they would buy pre-trial; only 2% said they would not buy.

Product Tasting against Concept:



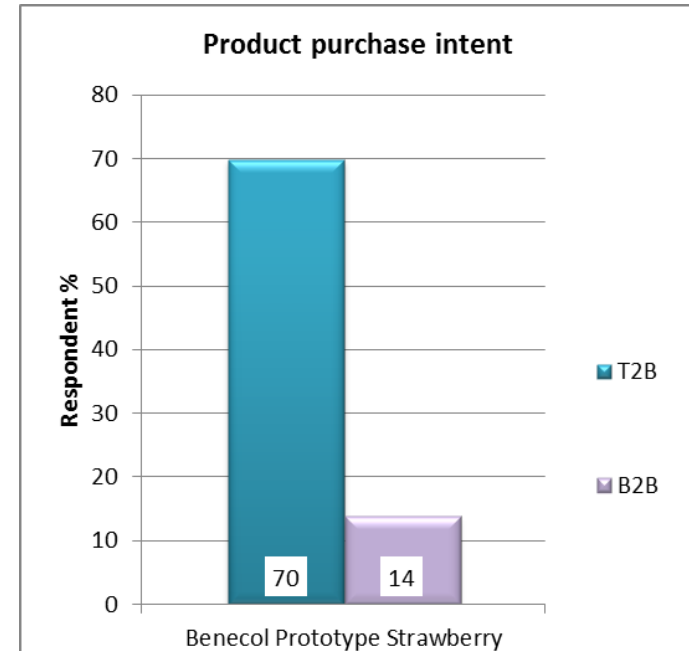
sensorydimensions

Post Trial Overall Liking and Purchase Intent
Top and Bottom Boxes (n=103)



Mean score = 7.3

9 point scale;
9=like extremely and 1=dislike extremely



Mean score = 3.8

5 point scale;
5=definitely would buy and 1 =definitely would not buy

Score of 7.3 for overall liking is a very positive result

Generally in food research a product overall liking score higher than 7 is likely to be a success in the market

70% consumers said they would buy the product post -trial, only 7% less than pre-trial, indicating that product performance was very strong.

Generally we would want to see > 60% in top two boxes post trial for launch

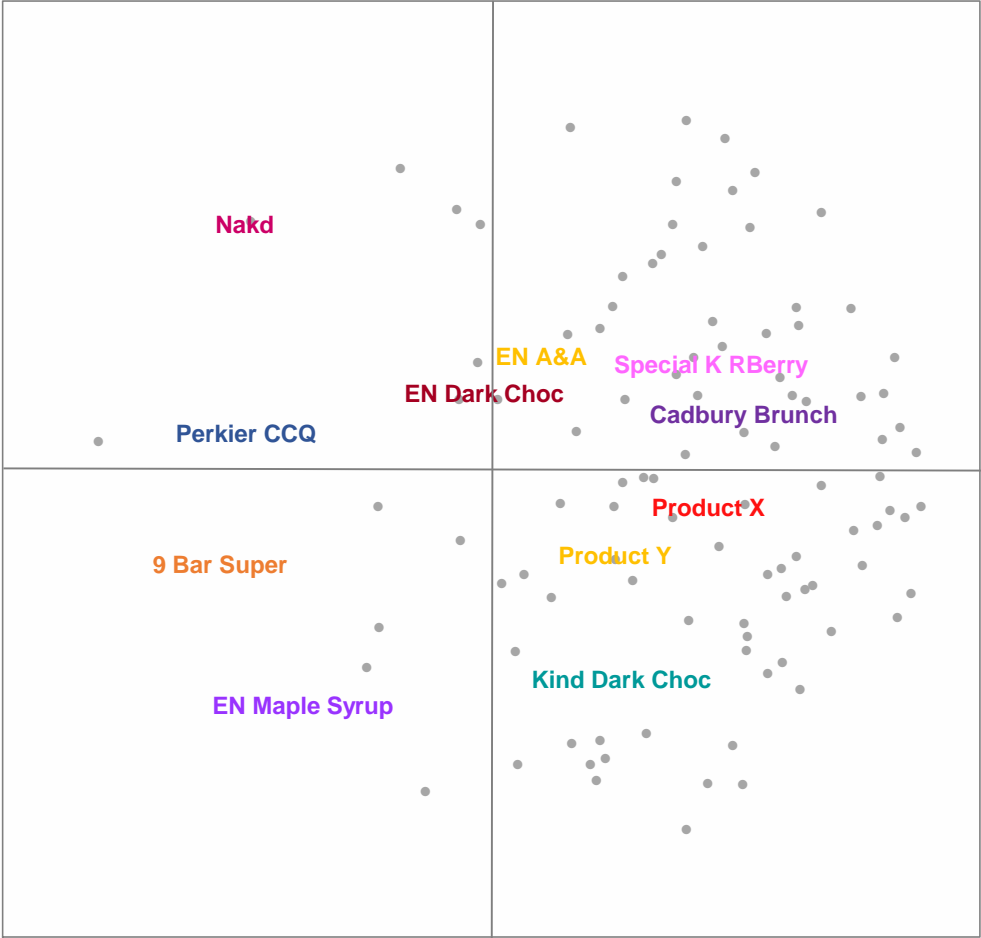
Product Testing & Refinement

How to improve: Preference Mapping of Cereal Bars



sensorydimensions

PRODUCT
TESTING &
REFINEMENT



Product Testing & Refinement

Toasted rice, oats and grains are driving liking



sensorydimensions



On the right hand side we can see that ingredients like grains, nuts, yogurt, caramel and chocolate are creating a popular sensory experience.

The attributes unique to Nakd, Perkier and 9 Bar are less liked, and so at a population level it may be advised to avoid flavours like molasses, seeds, pecan, bean and bitter.

Packaging and Comms

PACKAGING &
COMMS



sensorydimensions

Ensuring congruence between pack, product and brand
Understanding the messages





sensorydimensions

Maximise your chance of success.





To deliver
excellence in
Sensory and
Consumer
Research

We are a proud and
passionate team
committed to
making the
difference for our
clients.

We will use bespoke
methods and innovative
solutions to shape the
food, beverage and
personal care products for
tomorrow's consumer.

Our Vision



sensory**dimensions**

Thank you

tracey.sanderson@sensorydimensions.com
sensorydimensions.com

