Sensory Evaluation & Brewing

Tony Aiken/Gary Spedding and the American Brewers Guild

TRAINING & SELECTION OF SENSORY EVALUATION PANELISTS
Training and Selection of Sensory Evaluation Panelists
Sensory analysis is a specialized measurement science that involves eliciting complex information from specially trained assessors.

The qualifications and training necessary for a sensory assessor to become an effective measuring instrument are quite considerable.
Training and Selection of Sensory Evaluation Panelists

A sensory panel can be a cost effective tool for quality control

Sensory programs can represent a significant investment

Often seen as a luxury of well established breweries

In terms of safeguarding the brand and retaining customers even a modest program can deliver significant returns
A reliable sensory program requires commitments of management:

- budget of sufficient money and time
- understanding of the complex nature of establishing, maintaining an ongoing program
- conviction that people stopping work in the middle of the day to taste beer is a good idea, vital to the success of a panel

Management backing does not guarantee success but lack of support may well assure failure
Sensory Evaluation Panel Leader Successful Characteristics

- Active interest in people and the ability to earn their respect
- Ability to lead w/o being dictatorial
- Active interest in product range and awareness of key technical issues
- Active interest in sensory work and a clear grasp of its role, relevance, and limitations
- Ability to analyze and report sensory work
- Ability to organize work, time, and resources
Training and Selection of Sensory Evaluation Panelists

Consumer Panels may

- number of panelists in the hundreds
- not experts
- chosen at random
- required to disclose
  - Religious, Moral, political beliefs
  - Marital, income status
  - Educational level
  - TV viewing habits
  - Health status
Training and Selection of Sensory Evaluation Panelists

- Consumer Panels
  Usually conducted by professional groups, using expertise of:
  - Psychologists
  - Nutritionists
  - Medical professionals
  - Home economists
  - Statisticians
Training and Selection of Sensory Evaluation Panelists

- **Consumer Panels**
  - Ways to recruit potential panelists
    - contact various groups organizations
    - brewpub patrons and tour groups members
    - friends
    - use newspaper advertisements only if necessary

Explain the program’s intent, time commitments and compensation fully explained to participants
Training and Selection of Sensory Evaluation Panelists

Consumer Panels

Positives

- good attitude
- interested in work
- consider work important
- have the time
- great source preference information
Training and Selection of Sensory Evaluation Panelists

Consumer Panels

Negatives

- not enough training
- use preference in evaluations
- not available at short notice
- participants may want to impress and please
- will often be overly positive in assessment of your brands
- money / product compensation
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Consumer Panels

Take care to not influence panelist’s responses
- do not display brands information
- do not give verbal clues as to desired results or competitive brands

Treat panelists as your guest
- be considerate of time
- amounts of alcohol consumed
- make panelists feel appreciated
Training and Selection of Sensory Evaluation Panelists

In House Panel

Panelist require extensive training
Provide descriptive data
May be used in product development
Function of Quality Control
Once trained, no longer considered average consumer
Training and Selection of Sensory Evaluation Panelists

In House Panel

Positives
  close at hand
  technically trained
  no money / product compensation

Negatives
  requires strong management support
  takes people away from regular job
  not primary job interest
  availability limited by work schedule, travel, meetings
Training and Selection of Sensory Evaluation Panelists

In House Panels

Ways to recruit potential panelists

- company memo to recruit volunteers for a series of screening tests
- indicate time commitment
- recruit specific personnel based on screening test results for further testing
- select required number of panelists (do not deplete an entire department)
- send thank you memo to all involved
- announce panelists selected

Sensory Evaluation Panelist Screening

- Ability to discriminate & describe product differences
- Ability to discriminate & scale attribute intensity
- Healthy, no allergies etc.
- Availability and promptness
- Curiosity
Sensory Evaluation Panelist

Initial Screening

- Test each candidate’s perception and recognition of the primary tastes: sweet, sour, salty, bitter
- Test the recognition and description of odors utilizing odor bottles: citrus, eugenol, banana
- Candidates should be asked to identify each odor by name, offer a general description, or to report any recognized associations
Check the performance in descriptive tests by presenting each assessor with a number of products that are known to differ. Ask them to describe, in writing, the sensory characteristics of each.

Performance indicators considered:
- the number of descriptors written down
- range of terms - did they involve all 5 senses?
- type of descriptors used - objective vs subjective
- individual’s willingness to contribute to group discussion
- individual’s ability to verbalize
- individual’s willingness to listen
Assessors should be given training on how to use their senses.

They should receive lectures and formal instruction about the sense organs because this will help them to understand the complexity of the task that they will be expected to undertake.
Sensory Evaluation Panelist

**Training Mission**

- Increase assessors’ ability and self-confidence
- Generate an increased awareness of what is expected of them
- Build up their product knowledge
- Increase their motivation
Sensory Evaluation Panelist Training Goals

- Develop familiarity with the product and its characteristics (attributes)
- Develop a common language to express these characteristics
- Improve individual’s and groups ability to provide consistent judgment
- Eliminate judgment based on personal preferences
- Provide organized practice sessions
Sensory Evaluation Panelist Training

- Teach new panelists test procedures and methodology
- Introduce attributes, descriptor terminology, and scale intensity methods
- Introduce commercially available products representing the flavor attributes that would likely be encountered in the product category
- Establish scope of product attributes and build confidence through repetition
Sensory Evaluation Panelist Training

- Establish odor and flavor memory
  - identify matching aromas
  - choose correct descriptor
  - samples with easily perceived differences
  - samples with lower concentrations
  - repeat until full confidence is achieved

- Validity and reproducibility
Sensory Evaluation Panelist Selection Criterion

Skills fundamental to every test situation

Ability to concentrate on the task at hand

Follow the detailed instructions of a typical sensory evaluation procedure

Record the data or report the findings in an appropriate fashion
Successful candidates should score:

- Discrimination tests (predetermined number) 60% or greater
- Basic tastes 100%
- Odorants 70%
- Rank order 75%
- Product description 5 or more descriptors
- Interview subjective
Sensory Evaluation Panelist
Factors Affecting Performance

- Availability and willingness to participate
  essential that assessors arrive on time
  enthusiastic and prepared

- Health and personal habits
  allergies, illness, mood (life change)
  odorous cosmetics

- Personality and seniority of assessors
  dominant individuals excluded

- Ability to perform task
  sensory acuity
Sensory Evaluation Panelist Orientation

- The test organization and format
  - how sensory lab works
  - familiarization with booths / equipment
  - presentation of samples

- The sensory process
  - is retasting allowed?

- The test form or questionnaire
  - how to follow the form
Final Point to Ponder

“Keep in mind we make beer – its supposed to be fun.”

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for the
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