

COST Action FA 1104 “Sustainable Production of High-Quality Cherries for the European Market”.

Training School - Sensory evaluation

12th to 17th May 2014

CHEESE SENSORY EVALUATION



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Cheese Sensory Evaluation



Cheese Sensory Evaluation

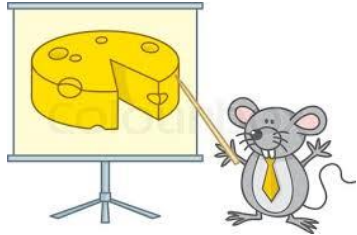
SENSORY EVALUATION

Scientific discipline used to evoke, measure, analyze, and interpret reactions to characteristics of food as they are perceived by the senses

Institute of Food Technologists, 1981.



Cheese Sensory Evaluation



Goals and objectives

PLANNING

Attributes to evaluate

Cheese samples



ORGANIZATION

Test Methods
Scorecard/scale

Panel selection and training

Design of experiments

IMPLEMENTATION

Statistical analysis of Ranking Test

Panelists rank the sample according to the attribute

A diagram showing five cheese samples labeled A, B, C, D, and E. Sample A is a small wedge, B is a larger wedge, C is a small wedge, D is a larger wedge, and E is a small wedge.

Taster #1 1 st sample: D (less salty) 6 th sample: A (strongly salty)	Taster #2 1 st sample: B (less salty) 6 th sample: A (strongly salty)	Taster #3 And so on...
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Rank sums are calculated and evaluated by Friedman's test

DATA PROCESSING AND STATISTICAL MEASURES

RESULTS AND RECOMMENDATION

Report

Panel Discussion



Type of Cheese Sensory Panel

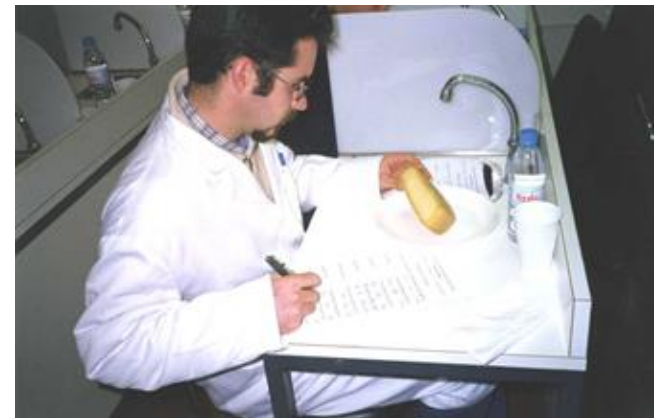
Hedonic taste panel



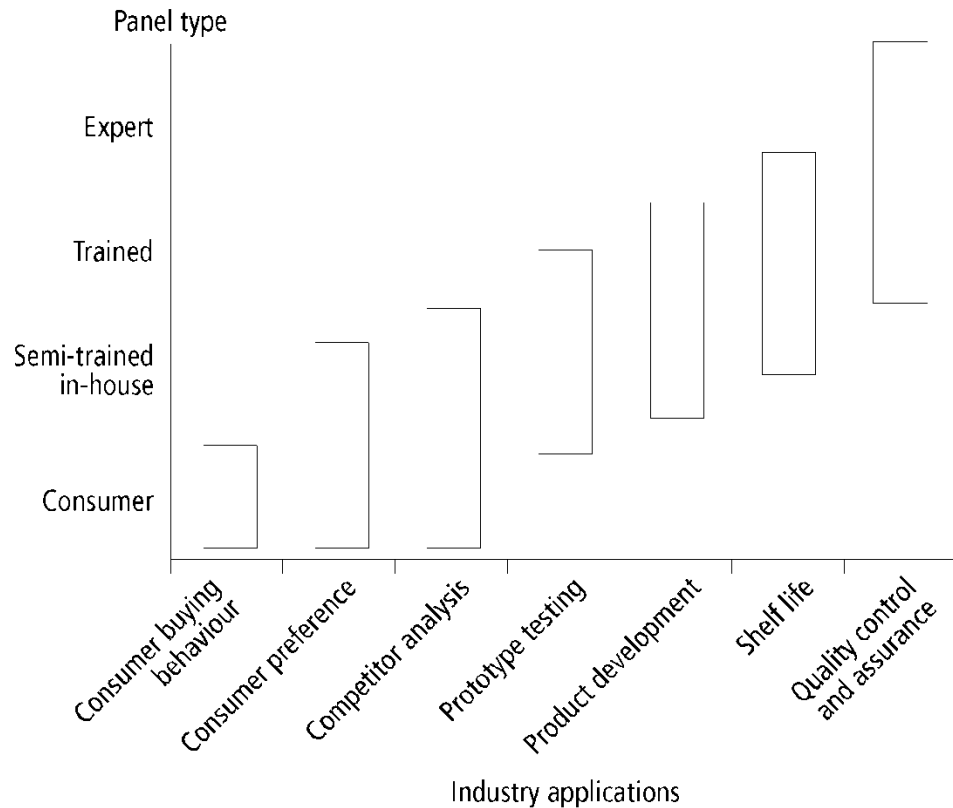
“ Ronaldo thinks Serra cheese taste better in
ክፍላጭረቱ.... ”



Analytical taste panel



Type of Cheese Sensory Panel/Application



Cheese Sensory Evaluation



Sensory facility dedicated to testing...



Cheese Sensory Evaluation



TEXTURE

Firmness/Hardness
Cohesiveness
Elasticity
Adhesiveness
Viscosity

**SENSORY
CHARACTERISTICS**

FLAVOUR

APPEARANCE

Shape
Size
Color
Eyes/Holes

Odor
Taste
Flavour



Cheese Sensory Evaluation

APPEARANCE

A classification of cheese based upon its **shape, size and packaging**.



Cheese Sensory Evaluation

APPEARANCE

Ball



Wheel/Round

A circular style or form that is usually flat on the top and bottom.



Cylinder/Log

a round face approximately with X cm in diameter and XXXXX cm in length



Cheese Sensory Evaluation

APPEARANCE

Rind

The outer surface of cheese. A rind varies in texture, thickness and color.

Cheeses may be **rindless**, display natural rinds or

possess rinds that are produced by **harmless mold**.

The color of the rind

is an indication of its variety, condition and quality. In all cases, the color should be characteristic of the cheese type.



Cheese Sensory Evaluation

APPEARANCE

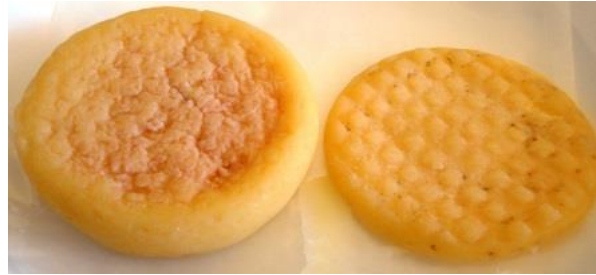
Surface Roughness

Wedge



sharp edges

rounded edges



Cheese Sensory Evaluation

APPEARANCE

Surface Roughness

Wedge



sharp edges

rounded edges



Cheese Sensory Evaluation

INTERNAL APPEARANCE



This deformity can be caused by *Clostridium tyrobutyricum* spores found in raw milk, which produce gas late in the cheese aging process. The gas bubbles cause the cheese to rupture.



Cheese Sensory Evaluation

INTERNAL APPEARANCE



SenseVista.com



Cheese Sensory Evaluation

APPERANCE

Phase 1 is characterized by the surface humidity evolution of cheese (drying process). At the beginning, the surface of cheese is very wet and evolves until it presents a rather dry aspect. The cheese is white with an odor of fresh cheese.

Phase 2 begins with the apparition of a *P. camemberti* coat (i.e the white-coat at the surface of cheese), it is characterized by a first change of color and a "mushroom" odor development.

Phase 3 is characterized by the thickening of the creamy under-rind. *P. camemberti* cover all the surface of cheeses and the color is light brown

Phase 4 is defined by strong ammonia odor perception and the dark brown aspect of the rind of cheese.



Cheese Sensory Evaluation

ODOR AROMA FLAVOR

Flavor

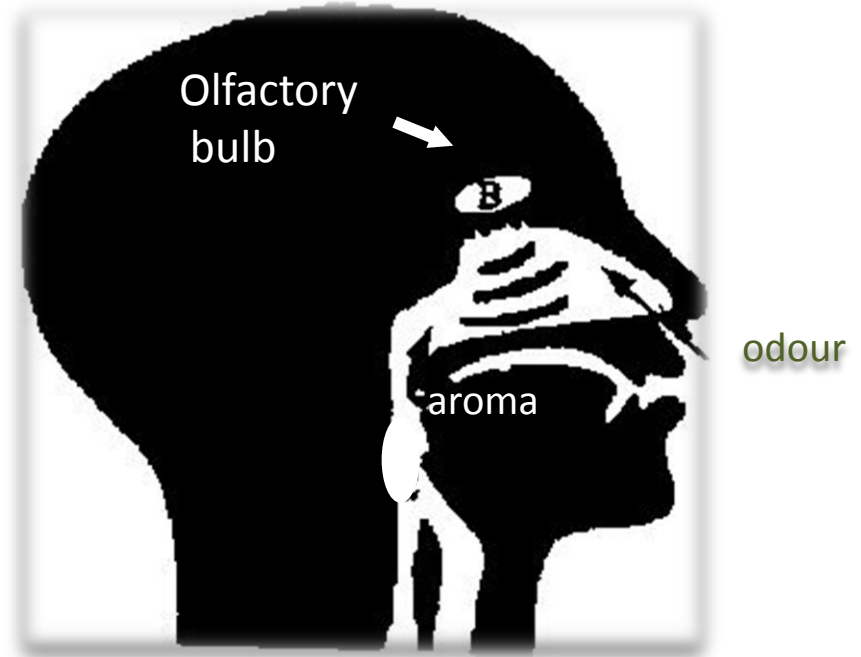
A general term for the taste cheese presents as it is eaten.

Flavor is detected in the mouth and also by the nose.

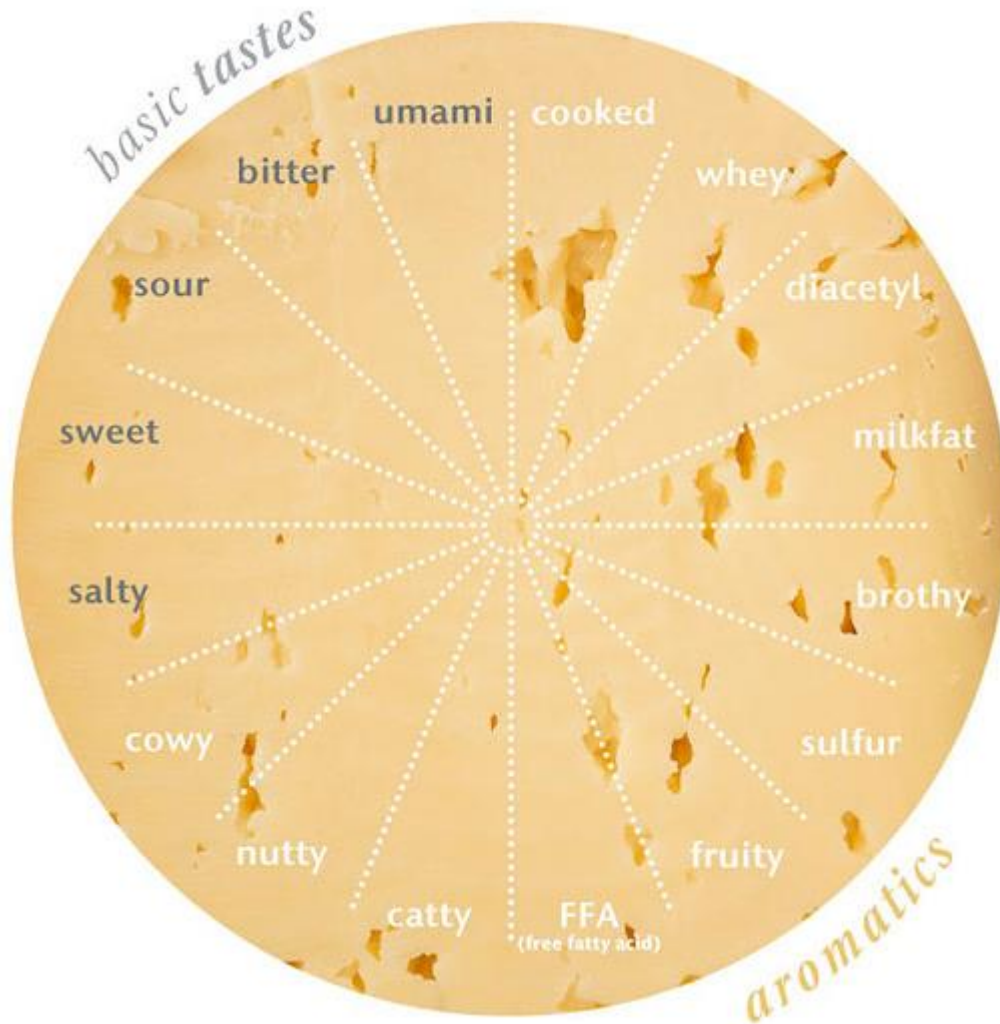
Flavors, in order of ascending aggressiveness, are described as faint (fleeting), mild (light or bland), pronounced (distinct) or strong (intense).

Flavors may also be described by the sensations they resemble, such as nutty, salty, buttery, fruity and peppery.

Flavor is categorized by initial **tastes** as well as by aftertastes.



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BASIC TASTES AND ...



Cheese Sensory Evaluation

FLAVOUR

- **Ammonia smell in young cheese.**

Causes & Remedies

- Cheese is past "A Point" and is overripe before correct age, **causes are ripening/aging temperature is too high**, reduce to slow down ripening schedule, **or moisture content of cheese is too high**, stir curds slightly longer to expel slightly more whey before lading into hoops.

- Excessive growth of *Penicillium candidum* from either excessive amount of *Penicillium candidum* used or cheese not wrapped as soon as white mould had completely covered the cheese



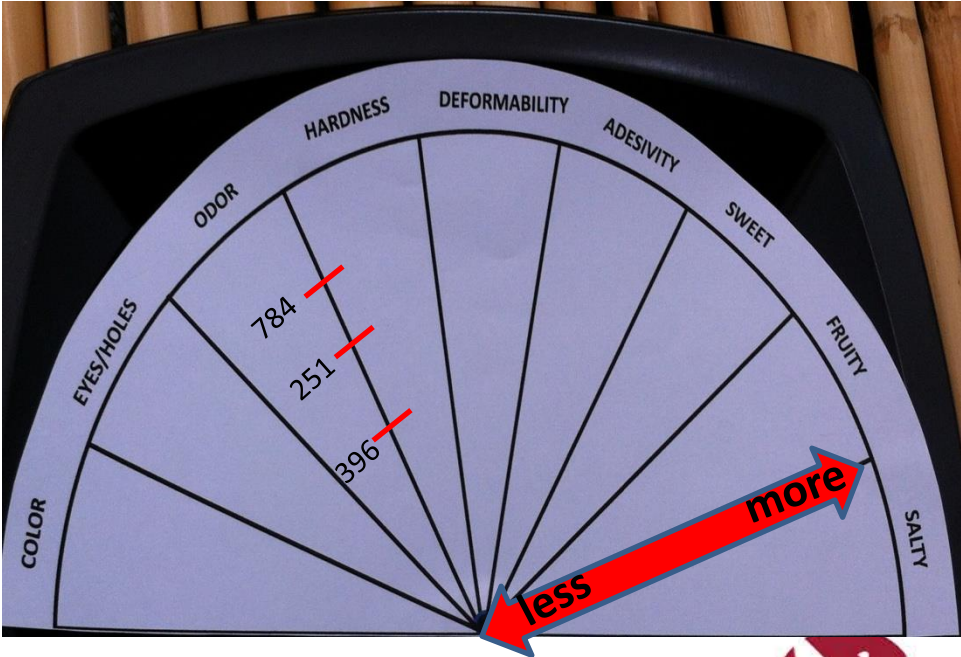
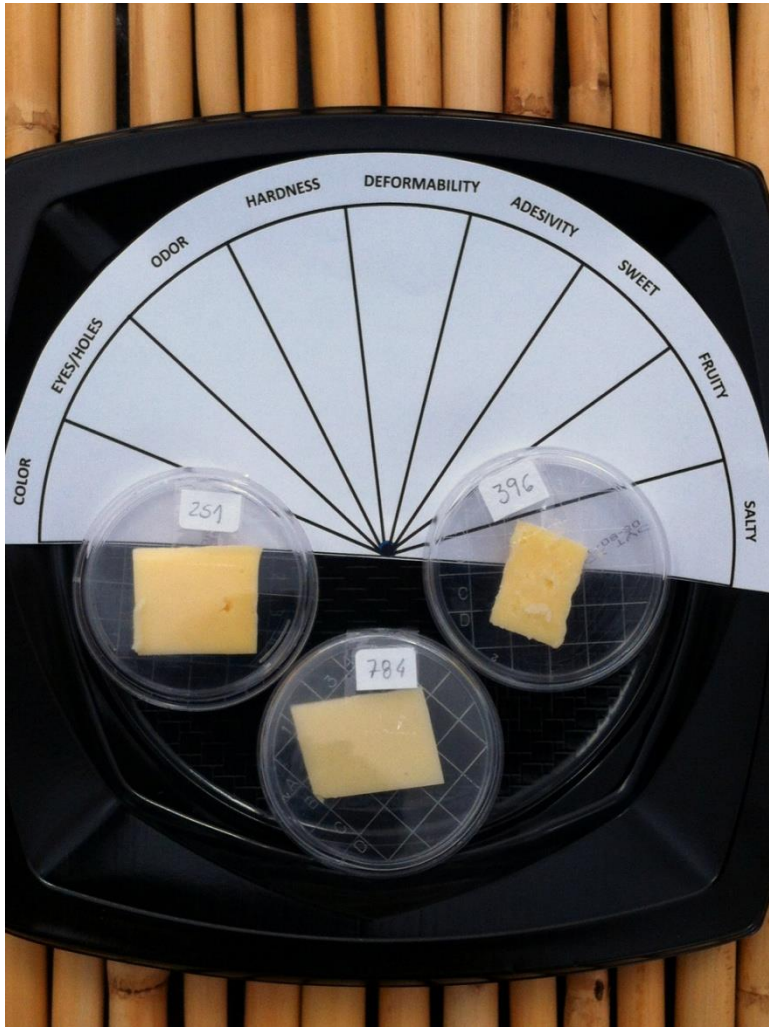
Cheese Sensory Evaluation

FLAVOUR



Cheese Sensory Evaluation

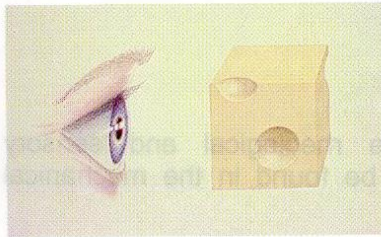
Let's go taste!



Cheese Sensory Evaluation

HOW TO TASTE A CHEESE?

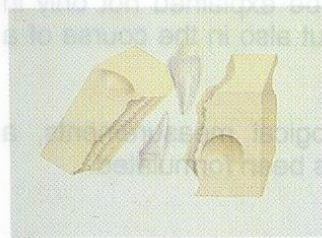
The phases in tasting



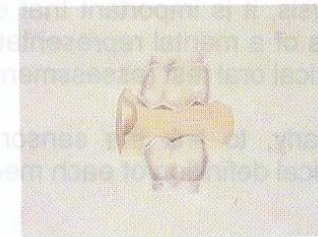
Visualizing



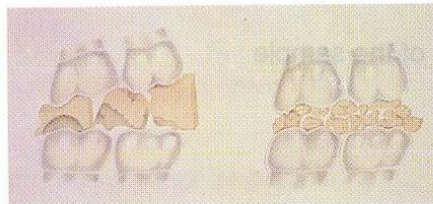
Touching



Biting



Deforming



Reducing

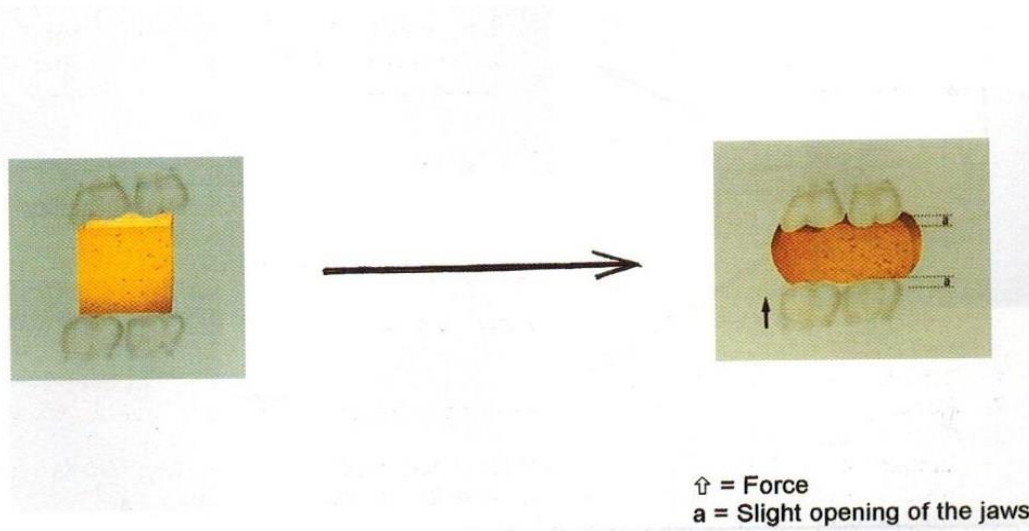


Cheese Sensory Evaluation

TEXTURE



FIRMNESS/HARDNESS



Physical Definition: resistance to a given deformation

Sensory Definition: resistance of the sample to a very slight opening and shutting of the jaws.

Texture

A general term for the fabric or feel of cheese when touched, tasted or cut. Characteristics of cheese texture may be smooth, grainy, open or closed, creamy, flaky, dense, crumbly and so forth, depending upon the specific variety.

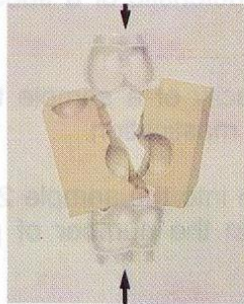


Cheese Sensory Evaluation

DEFORMABILITY

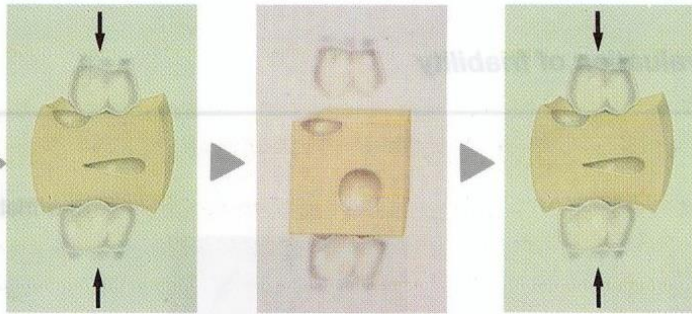


Low deformability
Breaks or melts immediately

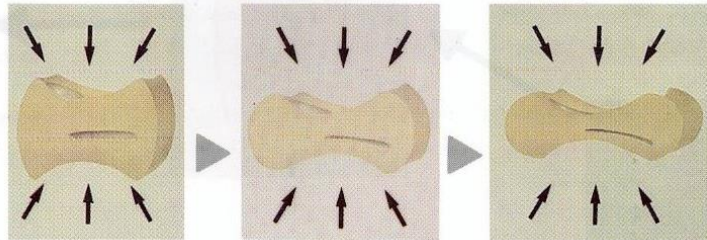


2 types of high deformability

Springs back



Stretches



Physical Definition: the capacity of internal binding to be deformed and thus bring about displacements inside the substance.

Sensory Definition: the ease with which the sample, once placed in the mouth, deforms in a gradual process or becomes stretched out of shape before breaking up.



Cheese Sensory Evaluation

ADHESIVITY



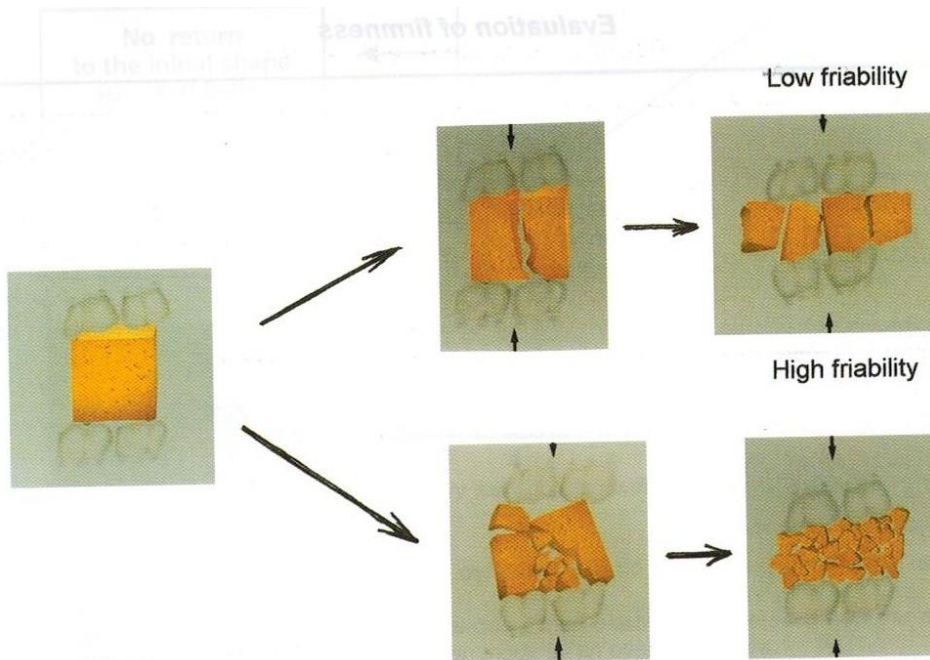
Physical Definition: the effort involved in overcoming the forces which keep two surfaces in contact.

Sensory Definition: the effort needed for the tongue to detach a product stuck to the palate and the teeth.



Cheese Sensory Evaluation

FRIABILITY



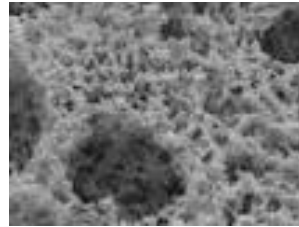
Physical Definition: characteristic of a substance which can be easily broken up into pieces.

Sensory Definition: capacity of a sample to break up into numerous pieces from the beginning of mastication.



Cheese Sensory Evaluation

MICROSTRUCTURE



Sensory Definition: perception in the final stages of mastication:

- rounded grains (more or less when bitten into);
- rough crystals (a crunching noise may be heard when crushed).

SOLUBILITY



Sensory Definition: a sensation which emerges when the sample melts extremely fast in the saliva.

HUMIDITY



Sensory Definition: perception of the degree of humidity in the sample.



Cheese Sensory Evaluation

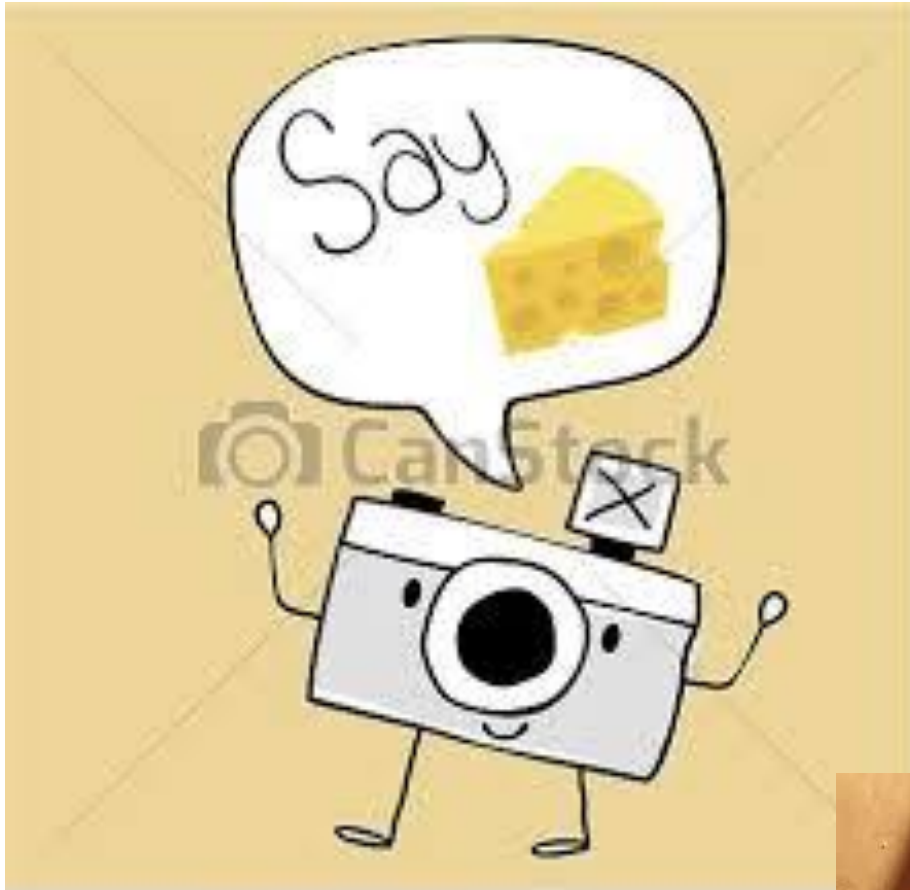


784 - EMMENTAL
251 - GOUDA
396 - SÃO MIGUEL

http://www.huffingtonpost.com/julie-Ann-Fineman/farm-to-fork-across-america-artisan_b_4440235.html



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Thanks



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References

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