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University of Turku

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2013



**Complexity of Flavour properties in selected Nordic berries**

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**Sensory laboratories at University of Turku (ISO 8589)**



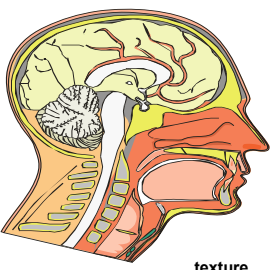

Functional Foods Forum




Food Development and Food Chemistry

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appearance

sound

smell

taste

texture

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**STRAWBERRY  
(FRAGARIA X ANANASSA DUCH.)**

**Dr. Mari Sandell (Hakala) 2002**

- Factors affecting the internal quality of strawberry (*Fragaria x ananassa* Duch.) fruit (University of Turku)

sugars, acids and volatiles are important components of flavor, depending on variety

fruit is very perishable and sensitive to injuries

every pre- and post harvest factors have influence on sensory quality

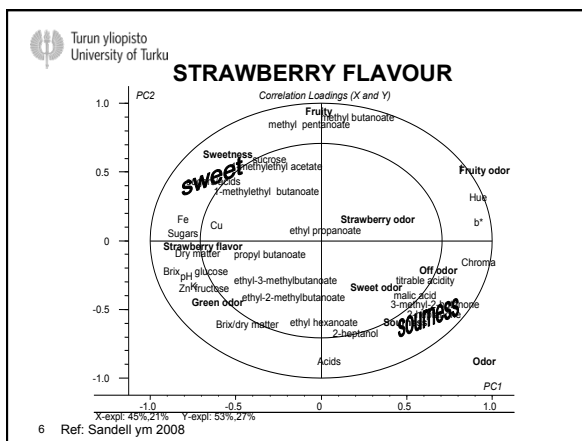
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**PRE- AND POST-HARVEST FACTORS & STRAWBERRY FLAVOUR**

Variety and genotype	Packing
Climatic conditions and environment	Pre-treatment before processing
Cultivation practices	Preservation
Maturity stage	Freezing & thawing
Harvesting	Freeze-drying
Post-harvest handling	



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**MANY OF US PREFER MORE SWEET THAN SOUR & BITTER**

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**SEA BUCKTHORN  
(HIPPOPHAE RHAMNOIDES)**

**Dr. Katja Tiitinen** (Factors contributing to sea buckthorn flavor, 2006, University of Turku)

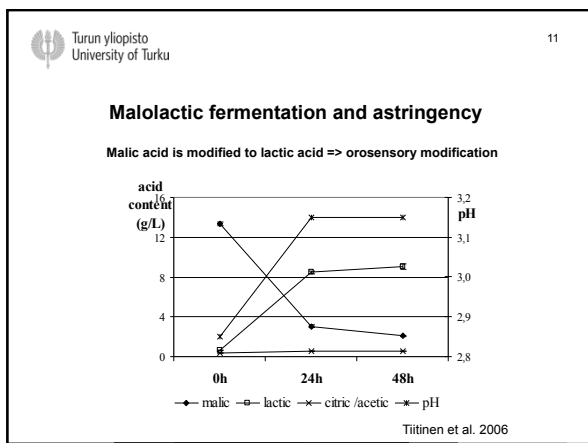
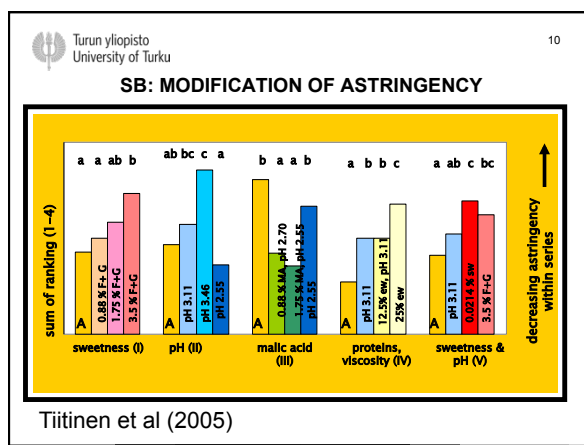
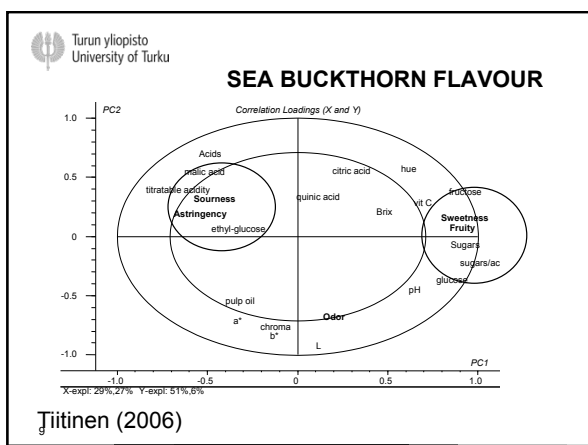
**mild aroma**

**strong sourness and astringency**

**weak sweetness and fruity flavor**

**malic acid, fructose and glucose**

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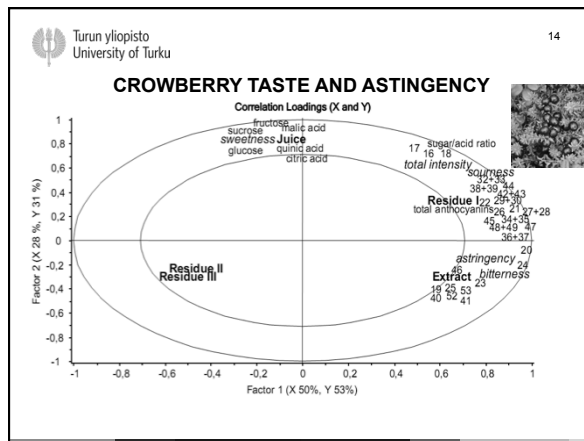
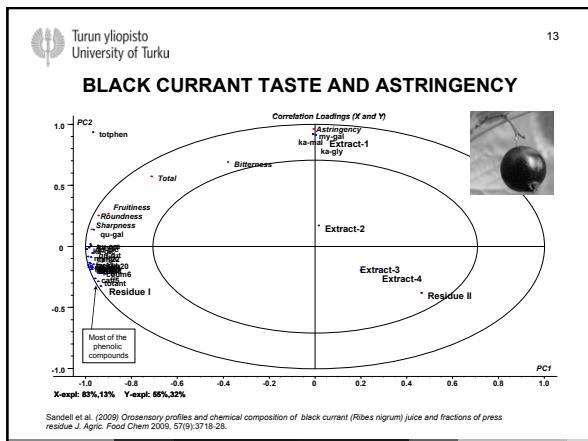
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**BILBERRY, CROWBERRY AND BLACK CURRANT**

**Dr. Oskar Laaksonen** 2011 Astringent food compounds and their interactions with taste properties (University of Turku).

**Chemical composition combined to sourness, bitterness and astringency, and pleasantness of berries**

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## Thank You!

&

Dr Oskar Laaksonen  
Dr Katja Tiitinen  
Prof Heikki Kallio  
Prof Paul A.S. Breslin  
Academy of Finland  
Tekes National Technology agency  
<http://www.utu.fi/en/units/fff/research/senses/Pages/senses.aspx>

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