

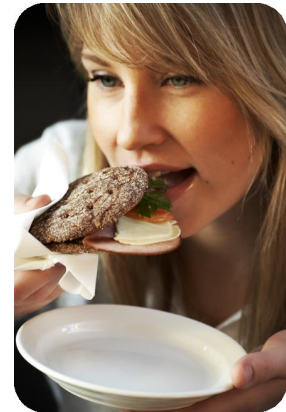
## ***VTT's Research on Tailoring Flavour and Texture***

### **Contacts**

Dr. Raija Lantto, Team leader (texture)  
tel. +358 20 722 4411, [Raija.Lantto@vtt.fi](mailto:Raija.Lantto@vtt.fi)

Dr. Raija-Liisa Heiniö, Senior Research Scientist (flavour)  
tel. +358 20 722 5178, [Raija-Liisa.Heinio@vtt.fi](mailto:Raija-Liisa.Heinio@vtt.fi)

Dr. Riitta Partanen, Research Scientist (texture)  
tel. +358 20 722 7156, [Riitta.Partanen@vtt.fi](mailto:Riitta.Partanen@vtt.fi)



***We combine the methods of food technology and sensory analyses to develop healthier foods with better sensory and processing quality: foods to meet the needs of food industry and consumers. Currently, consumer trend is towards low fat, low calorie and fibre-rich foods in which achieving good texture, flavour and stability is a great challenge.***

### **Our expertise covers**

- ✚ Improvement of texture and water-binding of milk and meat products
  - Controlled modification of proteins can be used to modify textural properties, to increase firmness and prevent syneresis in milk and meat based foods.
- ✚ Improvement of flavour and texture of cereal- and berry-based products
  - The relatively mild flavour and tough texture of unprocessed grains can be tailored according to consumer expectations using appropriate processing technologies: mechanical processing, such as fractionation, or biotechnological means, such as variable combinations of enzymes and microbes.
- ✚ Improvement of rheological properties and the texture of high fibre doughs and breads
  - Our results have shown that by selecting the right combination of enzymes and microbial strains the quality of many different cereal food matrices can be enhanced. The obtained advantages have been e.g. improved baking quality of gluten free or high fibre breads with added nutritional quality.
- ✚ New processing technologies aiming at development of light products
  - Reduced energy content and improved mouth feel of various protein-based foods is obtained by foaming. Foam stability is improved by enzymatic and chemical methods.
- ✚ New processing methods to tailor texture and flavour and to enhance the nutritional quality of cereal products, berries and vegetables
  - To understand how flavour and texture are formed, the intensity of sensory attributes can be linked with the instrumental measurements of flavour-active compounds and texture analyses using statistical multivariate methods.