

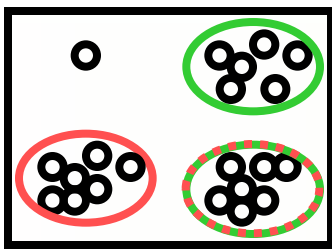
## **Q&T received a grant for a high throughput 600 MHz NMR spectrometer equipped with cryo-probe and sample-jet for research in metabolomics and nutrimentalomics**

### **Publications with peer review:**

- HF Seefeldt, A Blennow, BM Jespersen, B Wollenweber and SB Engelsen. Accumulation of mixed linkage (1→3) (1→4)-β-D-glucan during grain filling in barley: A vibrational spectroscopy study, *Journal of Cereal Science* (2009), **49**, 24–31.
- AJ Lawaetz, B Schmidt, D Staerk, JW Jaroszewski, R Bro. Application of Rotated PCA Models to Facilitate Interpretation of Metabolite Profiles: Commercial Preparations of St. John's Wort. *Planta Med* (2009) **75**: 271–279.
- H Winning, N Viereck, B Wollenweber, FH Larsen, S Jacobsen. I Søndergaard and SB Engelsen. Exploring abiotic stress on asynchronous protein metabolism in single kernels of wheat studied by NMR spectroscopy and chemometrics. *Journal of Experimental Botany* (2009) **60**, 291–300.
- L Andrade, IA Farhat, K.Aeberhardt, R Bro and SB Engelsen. Modeling of Temperature-Induced Near-Infrared and Low-Field Time-Domain Nuclear Magnetic Resonance Spectral Variation: Chemometric Prediction of Limonene and Water Content in Spray-Dried Delivery Systems. *Applied Spectroscopy* (2009), **63**, 141-152.
- HT Simonsen, MS Nielsen, NJ Christensen, U Christensen, TV La Cour, MS Motawia, BPM Jespersen, SB Engelsen and BL Møller. Molecular interactions between barley and oat b-glucans and phenolic derivatives. *J. Agric. Food Chem.* (2009) **57**, 2056–2064.
- JM Prats-Montalbán, A Ferrer, R Brob, T Hancewicz. Prediction of skin quality properties by different Multivariate Image Analysis methodologies. *Chemometrics and Intelligent Laboratory Systems* (2009), **96**, 6–13.
- T Salomonsen, HM Jensen, FH Larsen, S Steuernagel and SB Engelsen. Alginate monomer composition studied by solution- and solid-state NMR – A comparative chemometric study. *Food Hydrocolloids* (2009), **23**, 1579–1586.
- JM Amigo and C Ravn. Direct quantification and distribution assessment of major and minor components in pharmaceutical tablets by NIR-chemical imaging. *European J. of Pharmaceutical Sciences* (2009), **37**, 76-82.
- R Bro and L Eldén. PLS works. *J. Chemometrics* (2009) **23**: 69–71

### **Other Publications:**

- CM Andersen, JP Wold and SB Engelsen. Autofluorescence Spectroscopy in Food Analysis, Chapter 15, In: **Handbook of Food Analysis Instruments** (Ed. S. Ötles), CRC Press, Taylor & Francis Group (2009), ISBN: 978-1-4200-4566-6, pp. 347-363.
- Å Rinnan, L Nørgaard, F vd Berg, J Thygesen, R Bro and SB Engelsen. Data Pre-processing. In: **Infrared Spectroscopy for Food Quality Analysis and Control**, editor: Da-Wen Sun, Elsevier, USA, 2009, 29-50.



## Other publications cont.:

F vd Berg and Å Rinnan. Calibration Transfer Methods. In: **Infrared Spectroscopy for Food Quality Analysis and Control**, Editor: Da-Wen Sun, Elsevier, USA, 2009, 105-118.

B Møller Jespersen and L. Munck, L. Cereals and Cereal Products. In: **Infrared Spectroscopy Analysis for Food Quality Analysis and Control**, Editor. Da-Wen Sun, Elsevier, USA, 2009, 275-320

B Møller, L Nørgaard and L Munck. Near infrared reflectance spectroscopy and computer graphics visualizes unique genotype specific physical-chemical patterns from barley endosperms. Options Méditerranéennes. **Cereal Sciences and Technology for Feeding Ten Billion People: Genomics Era and Beyond**, Series A, No. 81, 253-259.

SB Engelsen, R Bro and L Nørgaard. Det Kemometriske Rum - Forbehandling af spektroskopiske data. *Dansk Kemi* (2009), **90**(1), 35-37.

R. Bro, SB Engelsen and L Nørgaard, Det Kemometriske Rum – Intermezzo: tre ligninger med fire ubekendte, *Dansk Kemi* (2009), **90**(2), 37-38.

L Nørgaard, R. Bro and SB Engelsen, Det Kemometriske Rum – Krydsvalidering, *Dansk Kemi* (2009), **90**(3), 28-29.

## Media and press:

Dansk projekt om sensorer og dataopsamling. Nyhedsmagasinet Elektronik og Data (Nr. 2, 18-19. februar 2009). R Bro interviewed QbD (Quality by Design in the Food and Pharmaceutical Industries).

[http://www.life.ku.dk/uddannelse/studerende/erhverv/Karriereveje/Procesanalytisk%20teknologi/Interview\\_Laursen.aspx](http://www.life.ku.dk/uddannelse/studerende/erhverv/Karriereveje/Procesanalytisk%20teknologi/Interview_Laursen.aspx) - interview with Kristoffer Laursen regarding the Process Analytical Technology master's programme at Q & T

<http://.life.ku.dk/erhverv/Finansiering/ErhvervsPhD/InterviewTinaSoren.aspx> - interview of SB Engelsen and T Salomonsen regarding industrial PhD collaboration

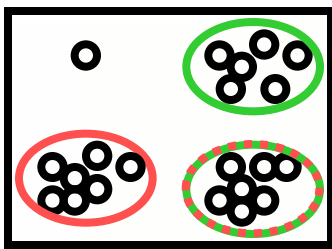
R Bro. Sådan får du bedre brød Food of Life 030209

B Godske. Find en størrelse som passer. Ingeniøren, Feb. 27, 2009, 16-17 – an article about Rasmus Bro's collaboration with Sangdon Lee using PARAFAC in anthropological studies (Anthropometry)

B Pedersen. Bønner i fattige egne. [www.udvikling.dk](http://www.udvikling.dk). – an article issued by the Ministry of Foreign Affairs of Denmark describing the Marama II EU-financed project coordinated by Åse Hansen – Mar 09

## MSc defences:

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# Q&T NEWS

## Staff:

**Lea Giørtz Johnsen** – (Jan 09 – Dec 11) PhD student. Supervisor: R Bro

**Jonas Thygesen** – (Feb 09 – Jan 12) PhD student. Supervisor: F vd Berg

**Abdelrhani Mourhrib** – tab technician – from Feb 1.

**Cemile Kalkan** – (Feb 09 – Jan 10) - lab trainee

**Maria Holm Rasmussen** – (Feb 09 – Jan 10) - lab trainee

**Christian Lyndgaard Hansen** is back from his work/study stay at Fonterra in New Zealand

## Guest Researchers:

**Juan Fernandez-Novales** (Feb – May) - PhD student from the University of Cordoba, Spain - The feasibility of using UV-VIS-NIR spectroscopy to predict quality parameters during grape ripening, wine making and aging of wine – working with F vd Berg

**Raquel Callejon** (Mar) – Post doc from University of Seville, Spain – aroma analysis – working with MA Petersen, J Amigo & M Popielarz

## PhD defences:

**Michael Riis Hansen** - Food Uses of Enzyme-Modified Starches. Supervisor: SB Engelsen – 2.2.09

**Vibeke Tølbøl Svensson** – Handling Complex Data in Food Analysis. A Chemometric Approach. Supervisor: R Bro – 18.3.09

**Hanne Winning** - Quantitative multivariate NMR spectroscopy in Food Science and Nutrition. Supervisors: N Viereck & SB Engelsen – 27.3.09

## Courses:

**Beer Production** – 23 participants. B Møller Jespersen

**Råvarekvalitet (Quality of Raw Products)** – block 3 – 48 participants. Major contributor: Å Hansen

**Aroma and Instrumental Quality Analysis of Processed Plant Foods** – blocks 3 & 4 – 32 participants. MA Petersen & Å Hansen

**Process Analytical Technology** – blocks 3 & 4 – 9 participants. F vd Berg

**Multi-way Analysis – PhD course** - Jan 12-30 – 17 participants. R Bro

**ODIN - Basic Chemometrics** – Jan 6-7 – 17 participants. T Skov & K Kjeldahl

- **Design of Experiments** – Mar 10-11 – 14 participants. F. vd Berg

- **Advanced Chemometrics** - Mar 25-27 – 18 participants. R Bro

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