

Training school in Spectroscopy September 12-14 2023 at the food research institute Nofima, Campus Ås, Norway

Tuesday - NIRS

0900 Welcome to Nofima (Jens Petter)

9.30 – 9:40 Presentation of SENSORFINT Cost Action (Dolores)

9:40:11:40 Introduction to NIR spectroscopy – theory, instrumentation and key aspects in the development of NIRS models (Dolores)

11.40 – 13.40 Modelling and calibration with spectral data (Part 1) (Tom)

12.40 – 13.30 Lunch

13.30-14.30 Tour in the lab. Look at different NIR instrumentation.

14.30 – 15.30 Modelling and calibration with spectral data (Part 2) (Tom)

15.30 – 17.00 Exercise: Analysis and modelling of spectral data

Social gathering

Wednesday – NIR Applications & Practical recommendations

9.00-10 Food & Feed applications (Dolores)

10.00-10.45 NIR and representative sampling: Consideration of measurement situation and sample properties such as heterogeneity (Jens Petter)

11.00-11.45 From lab to process – what must be considered? (Erik)

11.45-12.30 Practical example of NIR in industry: Grabbing samples, reference analyses, calibration etc. (Katinka)

12.30 – 13.30 Lunch

13.30 – 14.00 Examples of NIR process data and how they can be used for process optimisation (Jens Petter)

14.00-15.00 Spectral Imaging – how does it work (Jens Petter)

15.00-16.00 Optical instrumentation – importance of good measurements (Marion)

Training School dinner in Drøbak

Thursday – Raman

**9 – 11 Introduction to Raman spectroscopy – theory and applications (2 lectures)
(Nils Kristian)**

11-12 – Look at Raman instrumentation

12-13 Lunch

13 –14 Pre-processing of Raman spectra (Tiril)

14-16 Exercise: Pre-processing and modelling of Raman spectra

16 End of course

Lecturers will include:

Dolores Pérez Marín, University of Córdoba

Tom Fearn, University College London

Marion O’Farrell, SINTEF

Jens Petter Wold, Nofima

Nils Kristian Afseth, Nofima

Erik Tengstrand, Nofima

Katinka Dankel, Nofima

Tiril Lintvedt, Nofima

Petter Andersen, Nofima