



NIBIO

NORSK INSTITUTT FOR
BIOØKONOMI

NIBIO – Experiences with new instruments in the laboratory

Lina Aarsbog - EURL (SRM-FV) Pesticides Residue Workshop – 14.10.22

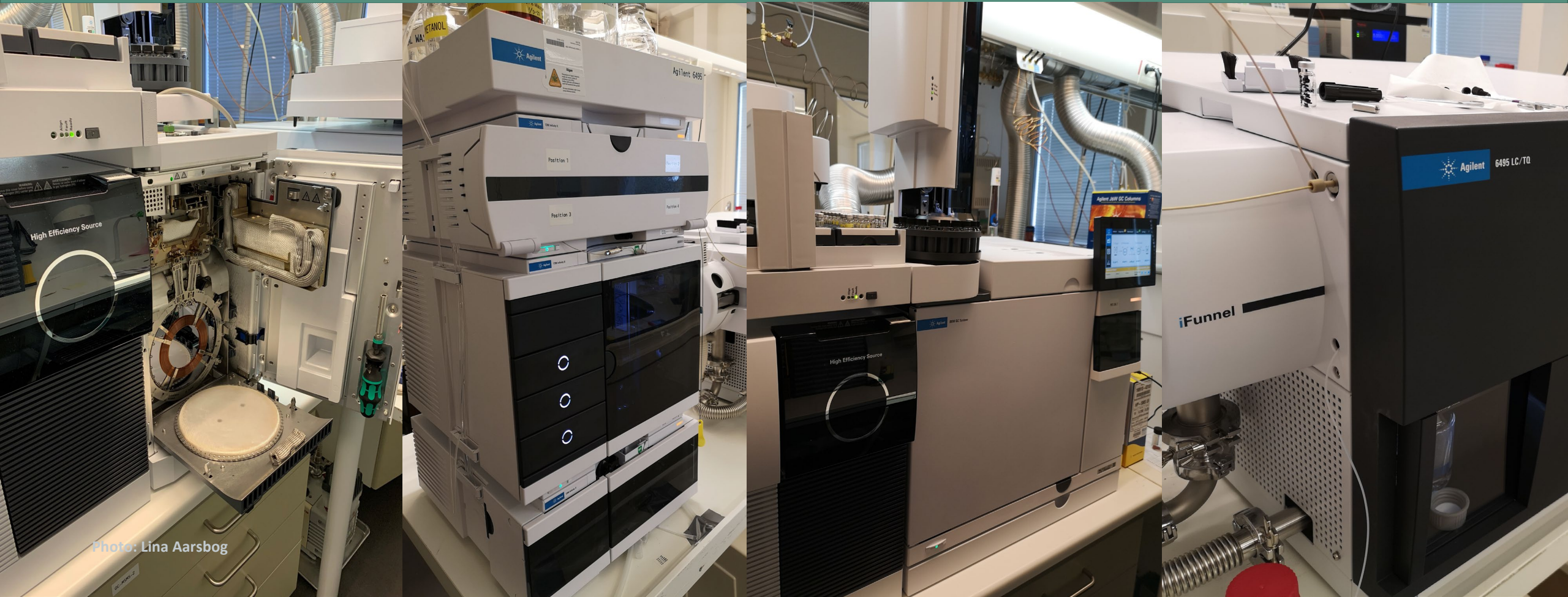


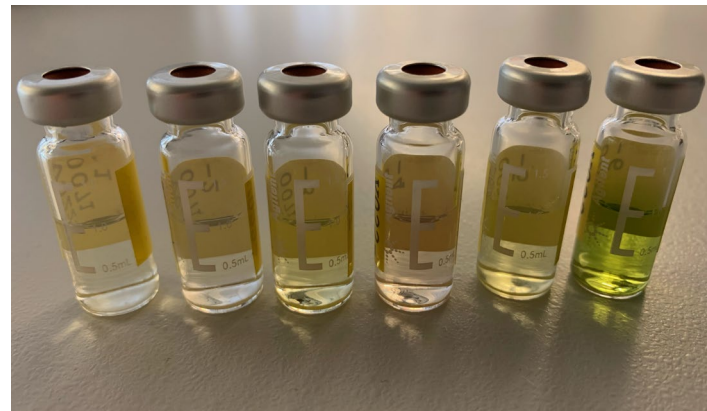
Photo: Lina Aarsbog

“Norwegian Institute of Bioeconomy Research (NIBIO) is to contribute to food security and safety, sustainable resource management, innovation and value creation through research and knowledge production within food, forestry and other biobased industries.”



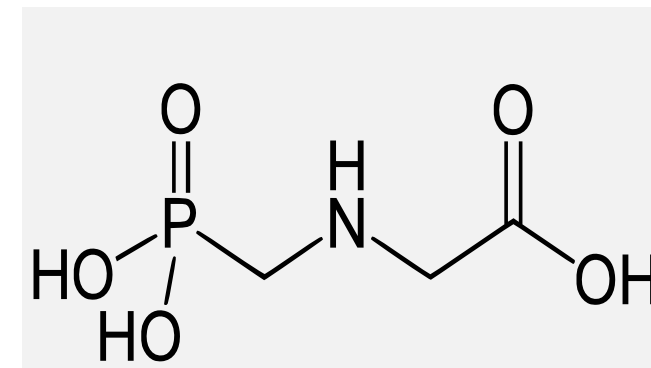
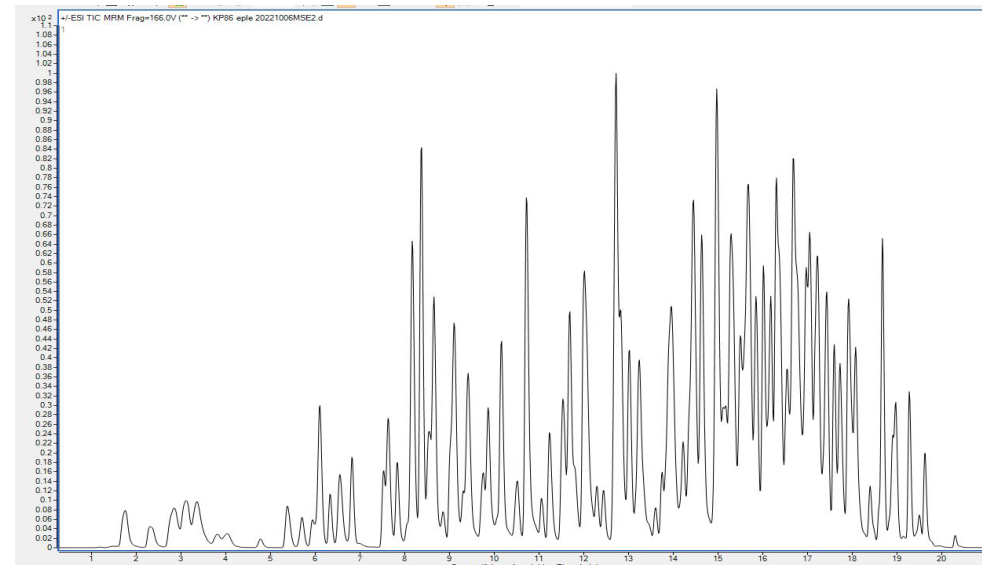
Pesticides and natural products chemistry

- National reference laboratory
- Official monitoring program
- The need for more capacity



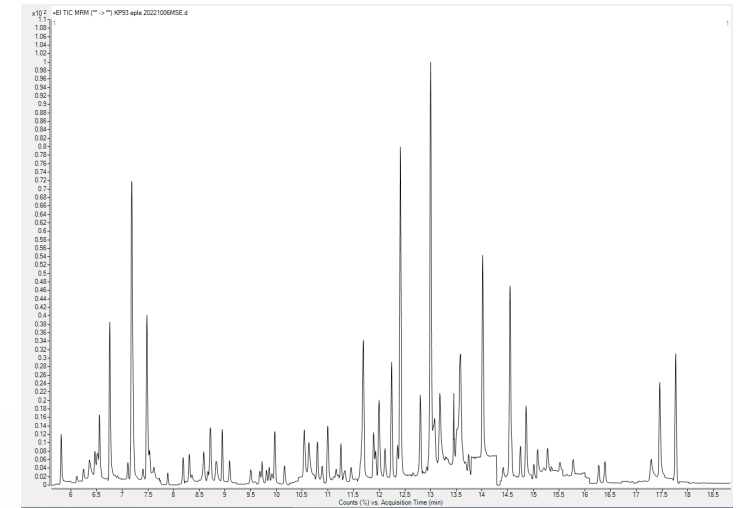
LC-MS/MS

- From 6470A + 1260 HPLC to 6495C + 1260 II prime bio UHPLC
- Will be used for multimethod for over 270 compounds and analysis of glyphosate and metabolites



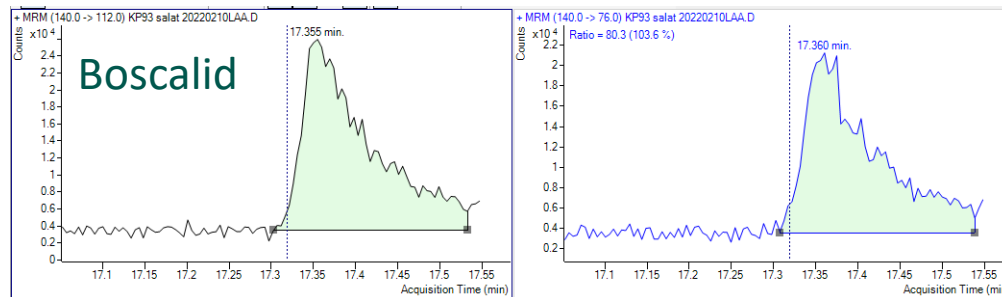
GC-MS/MS

- From 7890A GC + 7000D to Intuvo 9000 + 7010B.
- Upgrade to ion source with jetclean
- Agilent database for pesticides

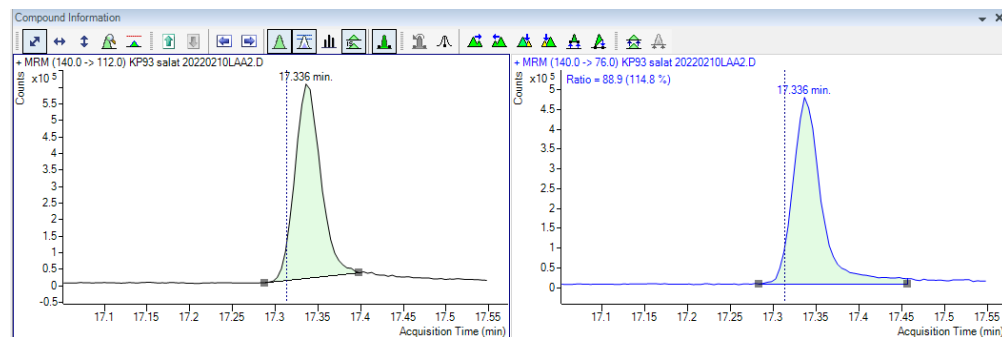


Issues with intuvo

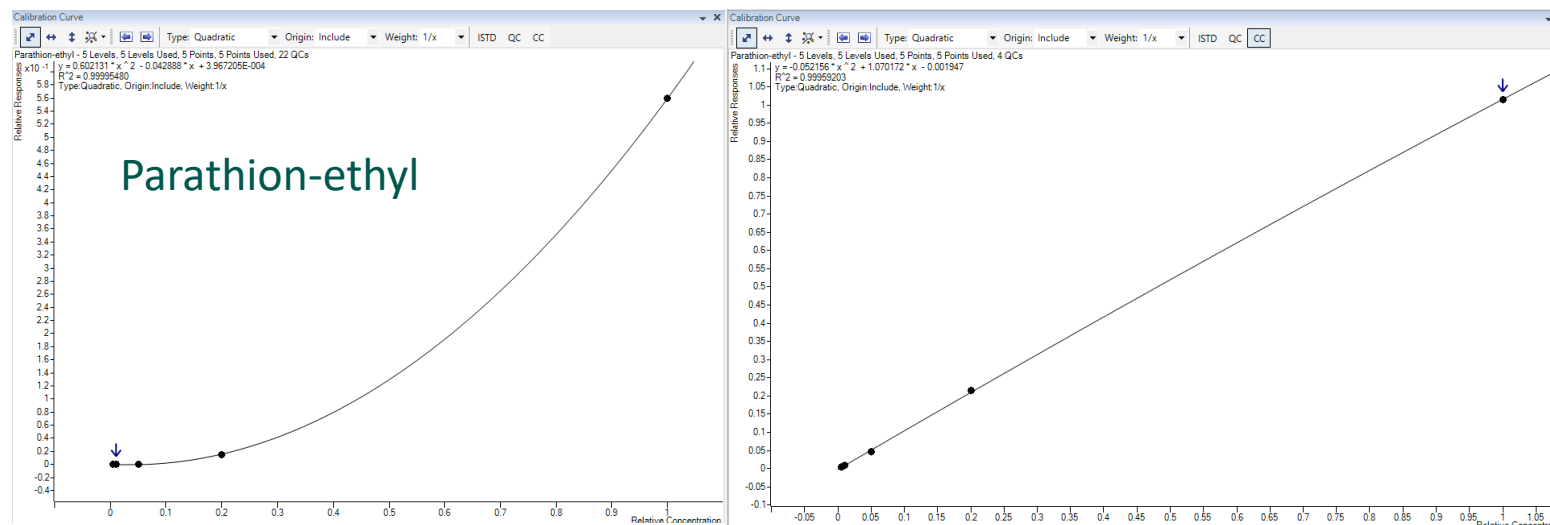
- Carry-over
- Repeatability within and between sequences



Recovery= 16%

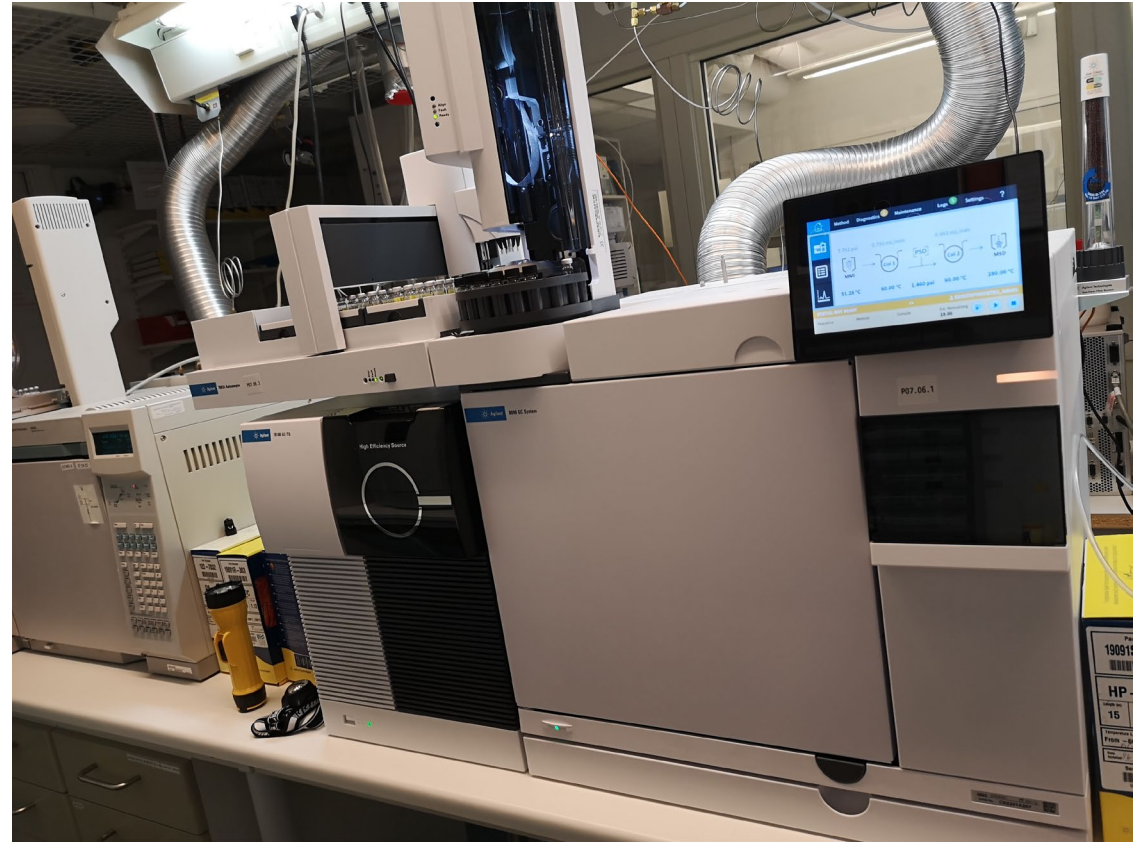


Recovery= 110%



From intuvo 9000 to 8890

- Less carry-over, but still a challenge
- No trouble with repeatability within and between sequences



To recap our experience

- Time consuming
- Not faster analysis time
- Little change in software and instrument when going from Agilent to Agilent
- Good follow-up from both Agilent and the supplier in Norway
- Today both systems are validated for multimethods and performing as expected.

Thank you!

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