

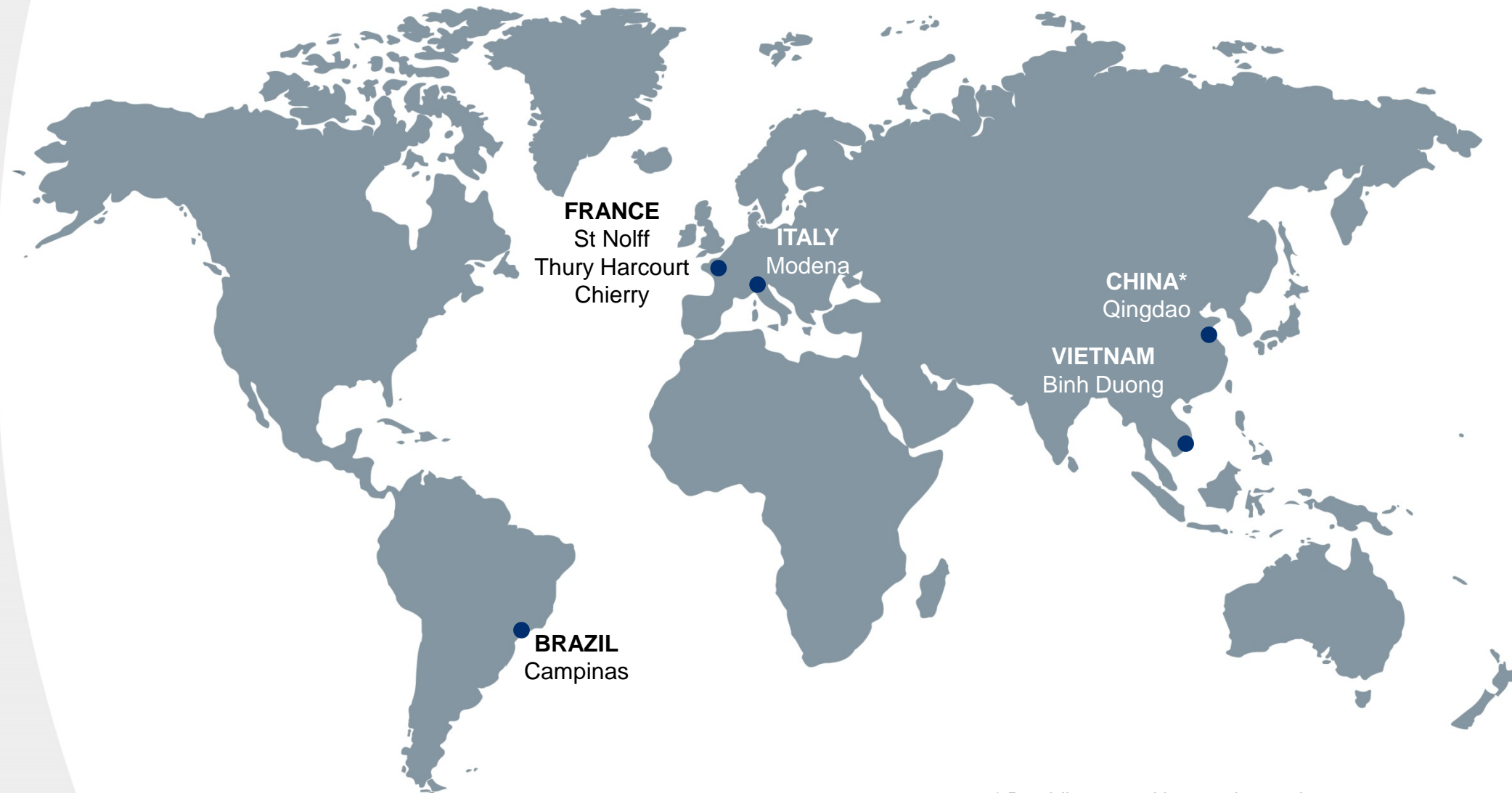


A network of analytical laboratories specialized in the support of the feed and food industries and in environmental analyses.

HELIOSPIR 27/11/2017

Julien Guillory

UPSCIENCE'S NETWORK



* Providing consulting services only



KEY FIGURES



6 accredited
laboratories



300
employees



2,000,000
analyses



OUR FIELDS OF EXPERTISE



Agrifood



Feed



Environment



Pet food



Nutraceuticals



OUR MISSIONS

*Through a **global analytical solution**,
We support you in all the steps of your
production process.*

SECURE



CONTROL



OPTIMIZE



Quality & reliability



- **Accreditations:**



Elenco prove disponibile sul sito www.accredia.it

- **Approved laboratory for:**

- > OQUALIM
- > INAO
- > QS
- > Bleu Blanc Cœur
- > Industrial Groups

- **Technical memberships:**

- > Standardization commissions
(AFNOR, AOAC International, ISO, BIPEA, AGLAE)
- > Animal nutrition commission - fats
- > Dietary and food labelling commission
- > GMP and mycotoxins commission
- > Amino acids, cereals and flour commission

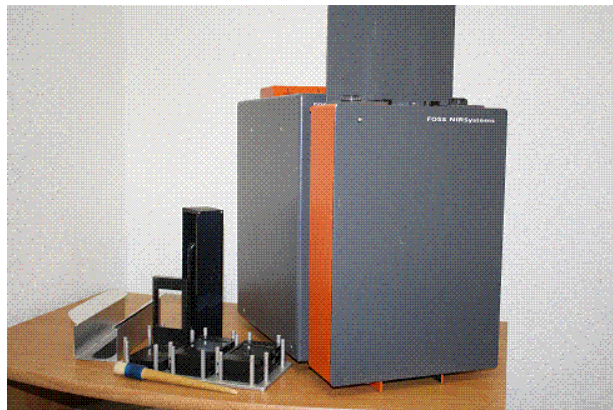
Usecases of NIR in feed industry

- Technical support for customers : coops/feed millers
- Development of quantitative and qualitative prediction models
- Raw materials = cereals, oil byproducts, protein concentrate...
- Finish products = swine, poultry, ruminant, rabbit, horse, petfood
- Forages = corn silage /grass, hay



Issues

- Maintenance of data bases/ instruments
- Transferability of calibrations



Use of NIR for forage characterization

- 10 models developed on corn silage for in vitro & in vivo digestibility
 - Protein solubility
 - Dry matter solubility
 - Starch digestibility
 - NDF digestibility
- Better knowledge of corn silage => added value for valorization and calculation of ration



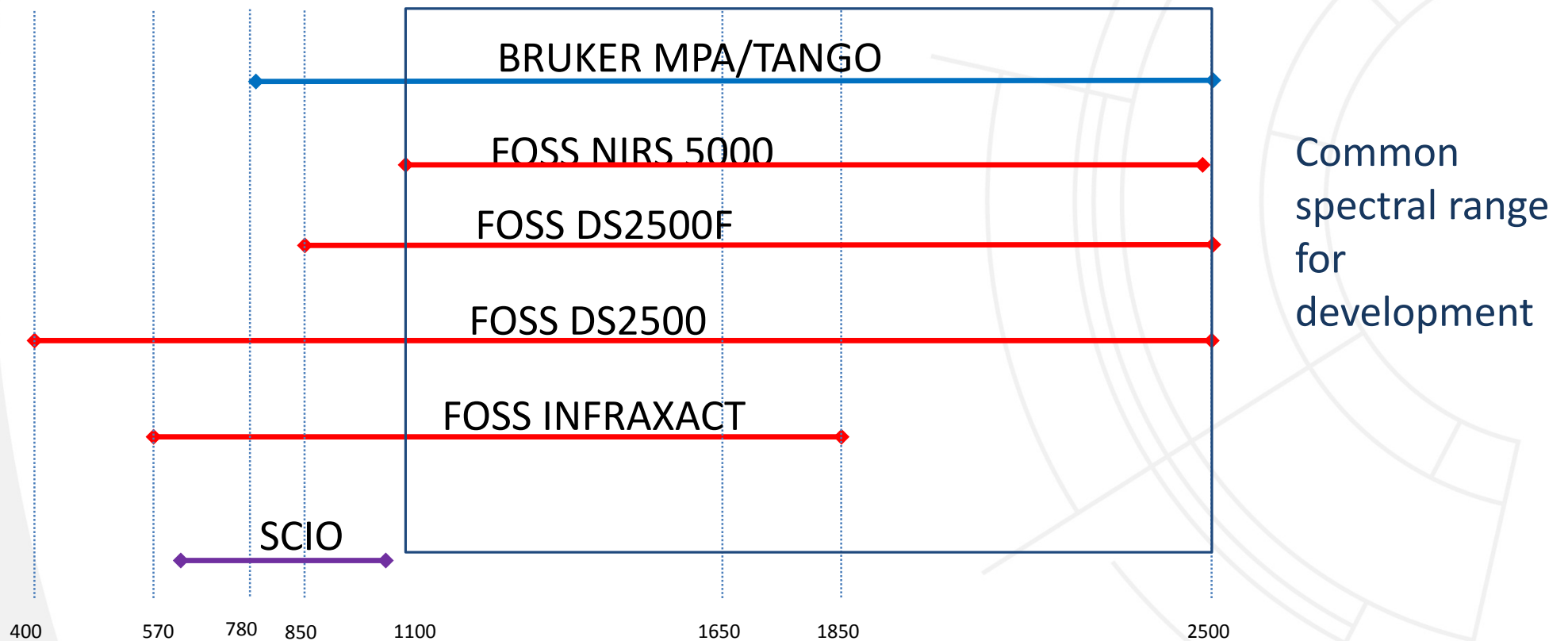
What is SCIO ?



???

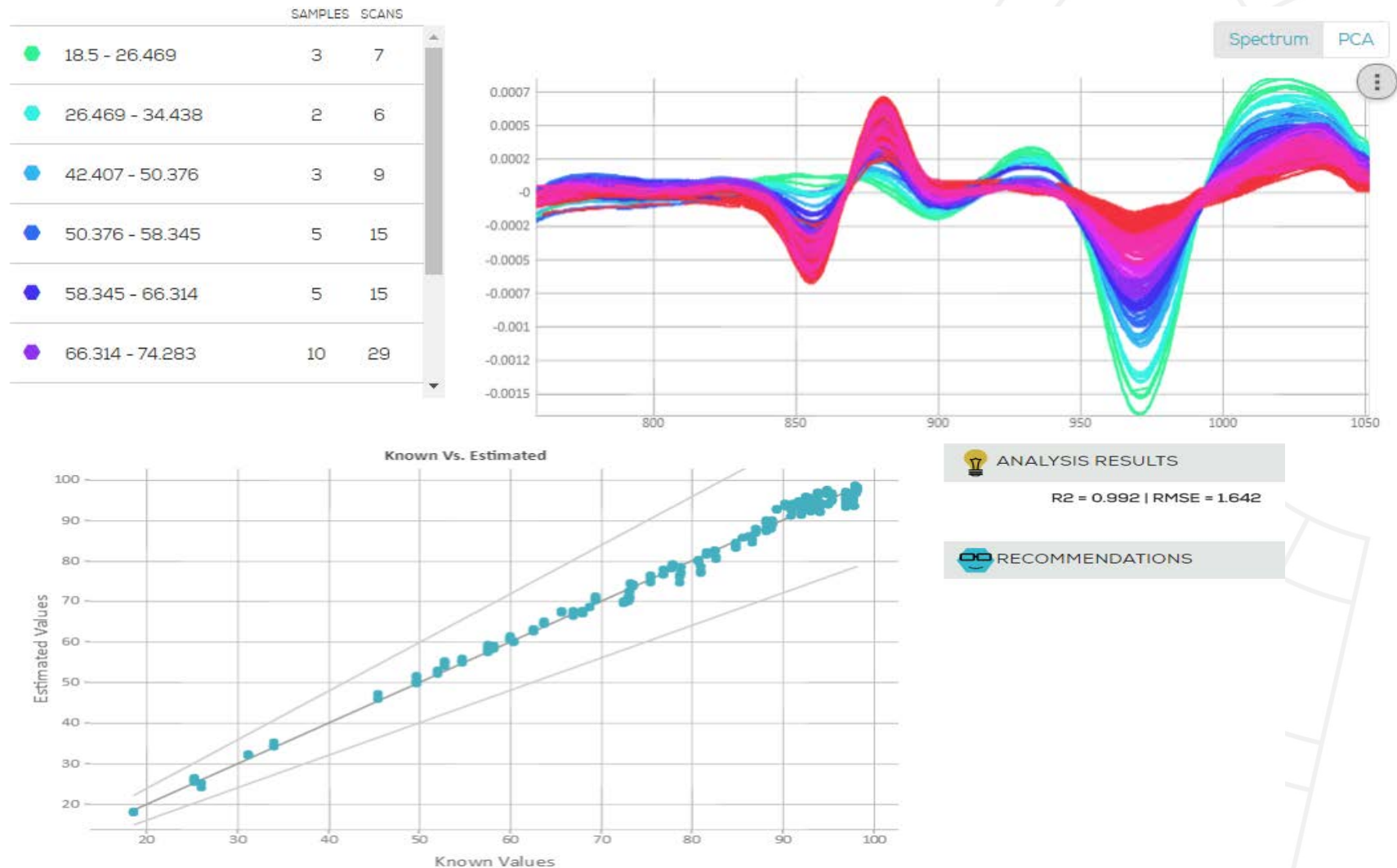
What is SCIO ?

- Limits of SCIO ?



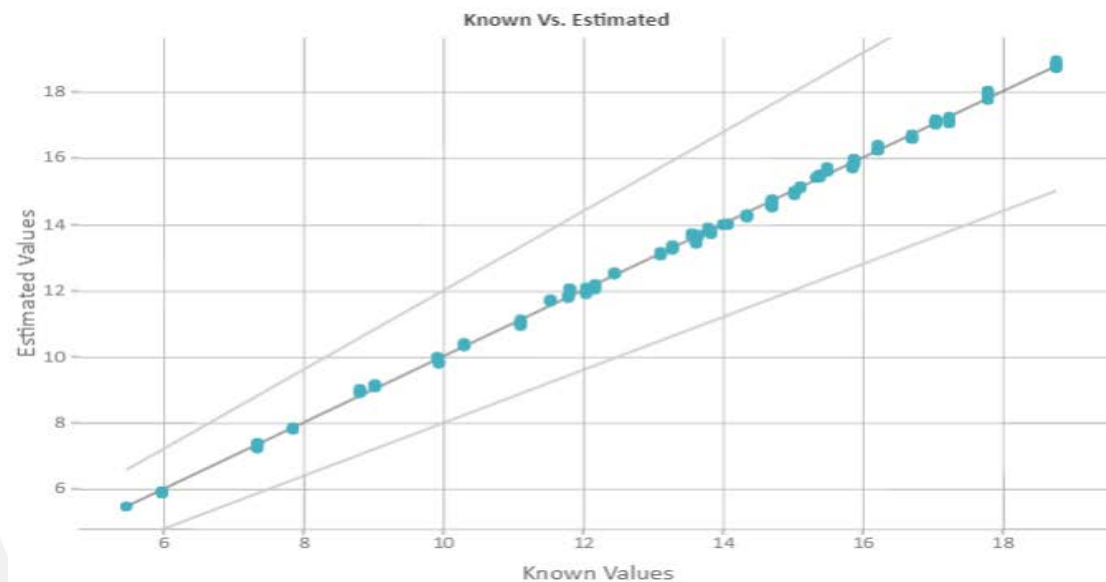
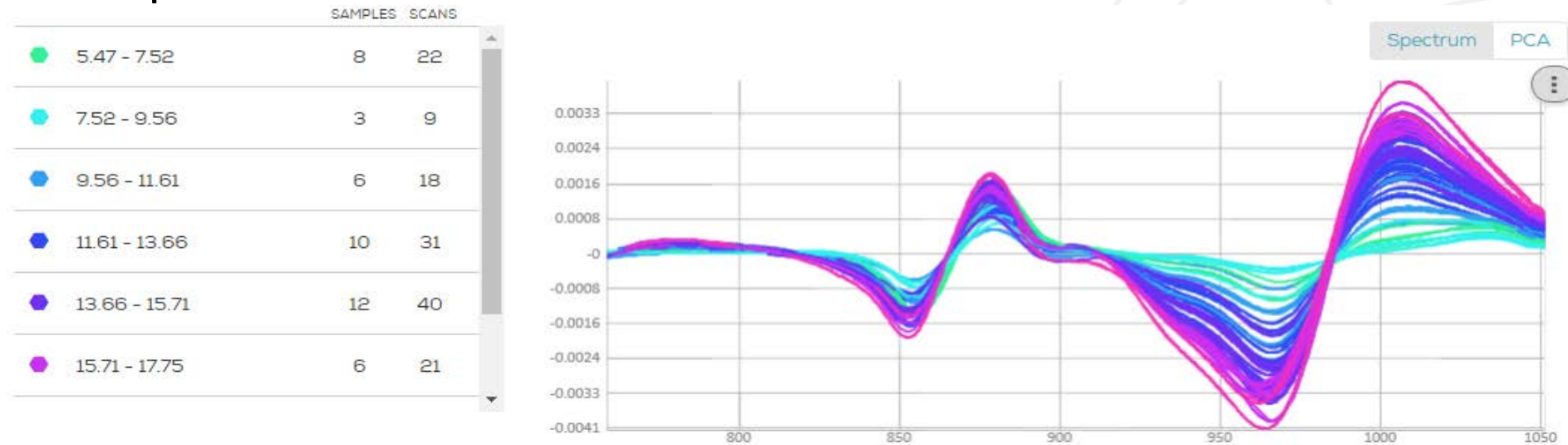
Use of NIR for quality control in feed additive industry


- Example for dihydrated saccharine




Use of NIR for quality control in feed additive industry

- Example for moisture control in a concentrated additive



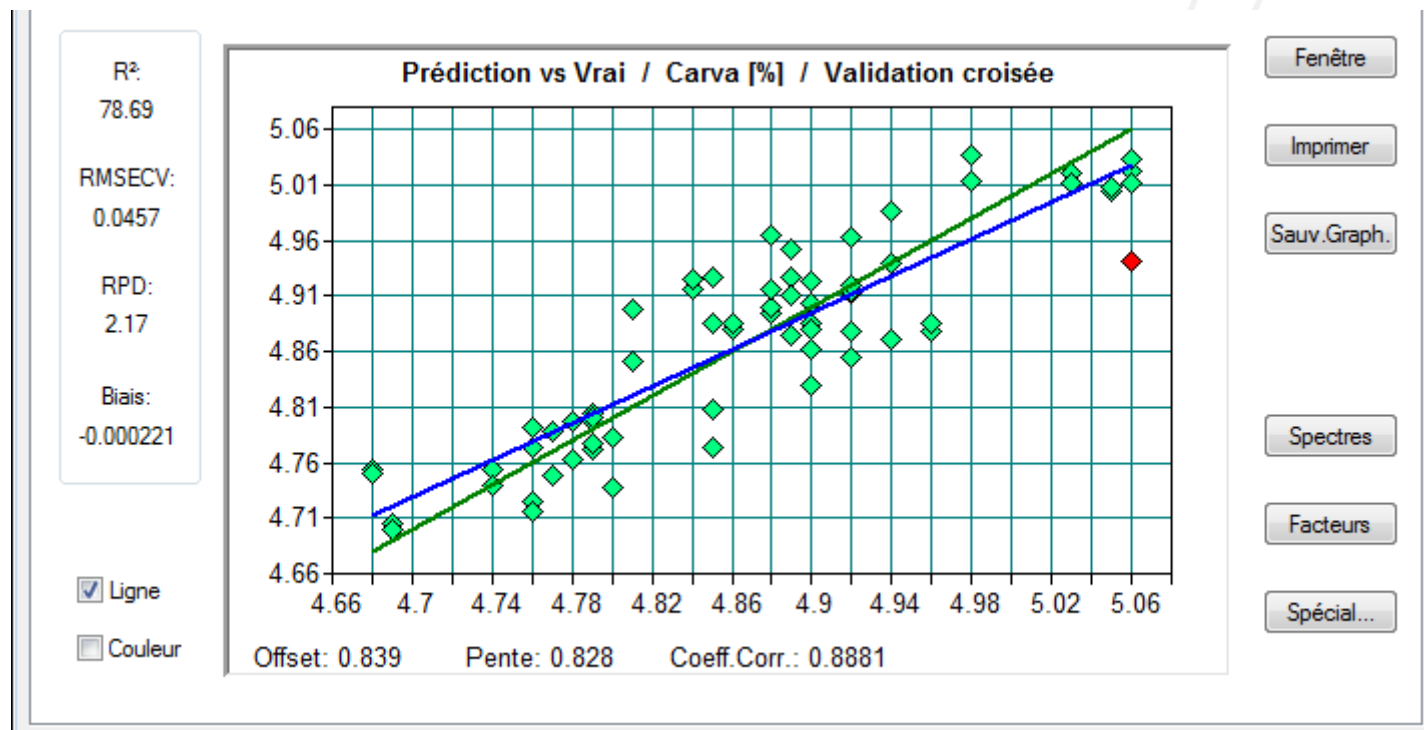
 ANALYSIS RESULTS

$R^2 = 0.999$ | $RMSE = 0.108$

 RECOMMENDATIONS

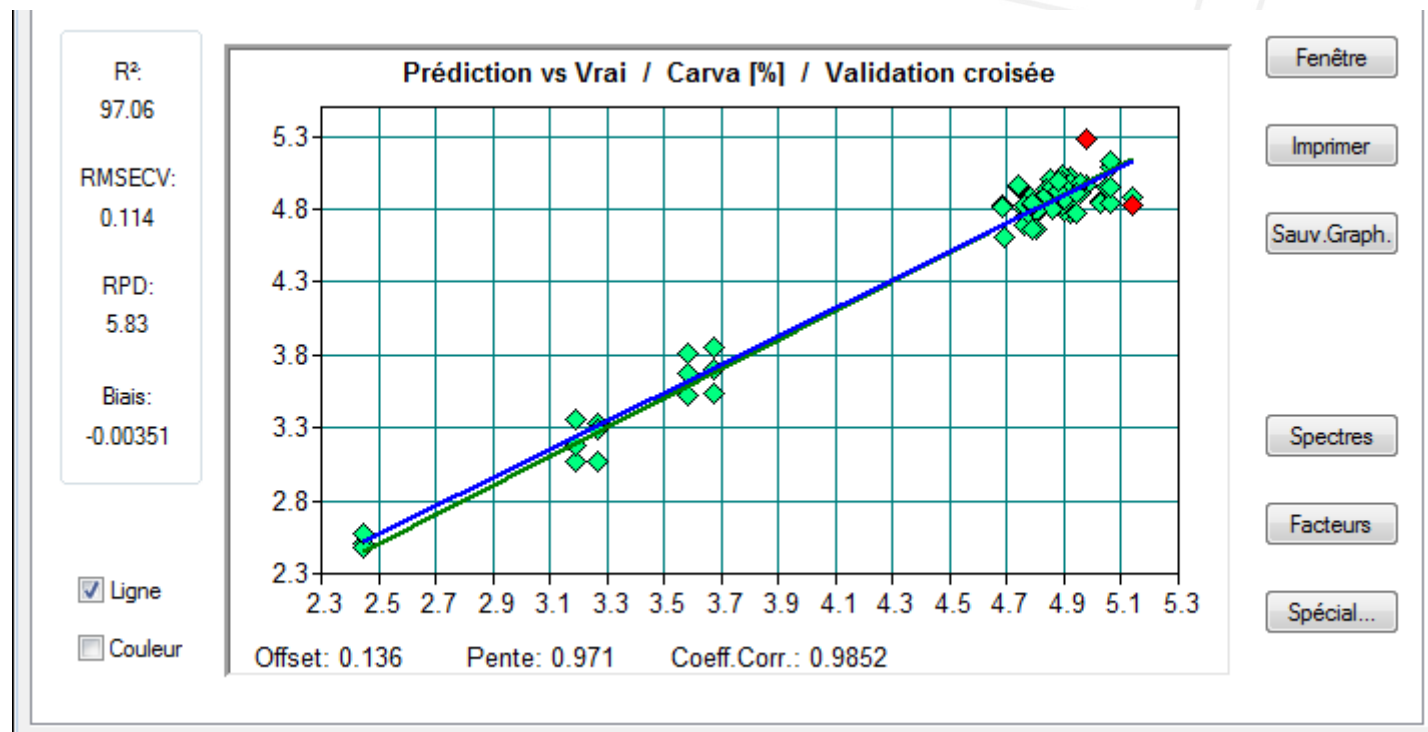
Use of NIR for quality control in feed additive industry

- Development of a quantitative model for the analysis of a ingredient in additive concentrate (33 samples)



Use of NIR for quality control in feed additive industry

- Same development but with artificial added values by mixing different raw materials





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