

NIRS Consortium Equations

Paolo Berzaghi

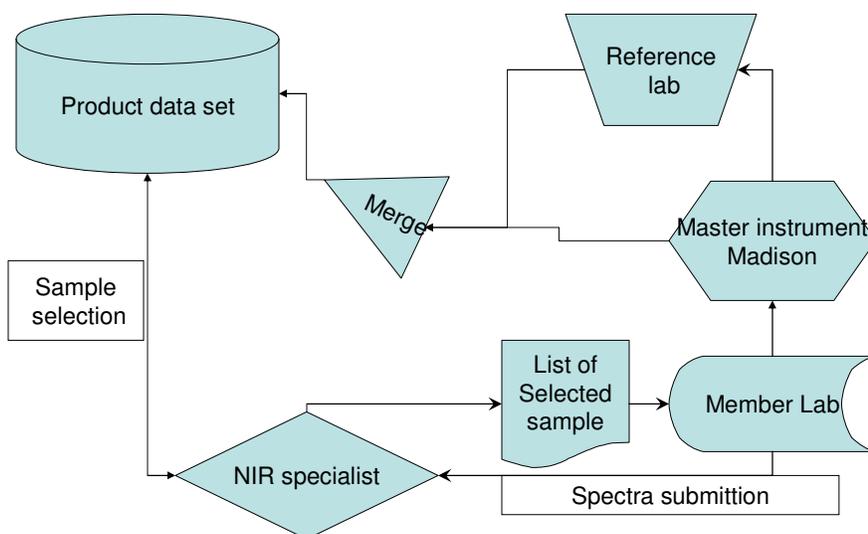
NIRSC equation

- **Core products**
 - Legume hay
 - Grass hay
 - Mixed hay
 - Fermented corn silage
 - Mixed haylage
 - Alfalfa for breeders
- **Older products**
 - Roasted soybean
 - Scissor clip
- **New products**
 - Unfermented corn
- **Special project**
 - Starch for FCS
 - Sugars for grasses

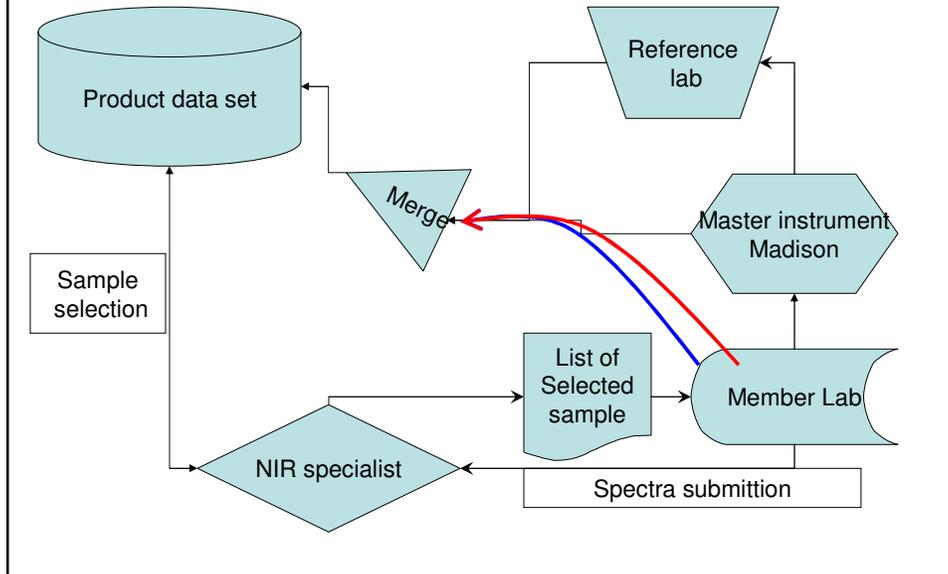
Fermented corn silage

Constituent	N	Mean	SD	SEC	RSQ	SECV	1-VR
DM	421	96.24	3.60	1.42	0.85	1.53	0.82
PROTEIN	702	9.26	1.86	0.53	0.92	0.56	0.91
ADF	633	27.52	4.66	1.53	0.89	1.61	0.88
NDF	1056	46.29	7.36	2.03	0.92	2.08	0.92
dNDF48	535	27.67	4.95	1.63	0.89	1.72	0.88
IVTDMD	534	82.19	3.14	1.37	0.81	1.47	0.78
FAT	192	2.43	0.42	0.17	0.83	0.19	0.79
ASH	286	6.00	3.22	0.64	0.96	0.79	0.94
Lignin	307	3.80	1.11	0.48	0.81	0.55	0.75
P	263	0.22	0.04	0.03	0.51	0.03	0.41
CA	262	0.27	0.10	0.06	0.63	0.08	0.48
K	300	1.20	0.47	0.26	0.69	0.28	0.64
MG	293	0.21	0.07	0.04	0.66	0.04	0.61
starch	97	24.73	10.00	1.83	0.97	2.26	0.95

NIRSC equation update



NIRSC equation update



Intellectual property

An NIRSC equation is defined as:

“an NIRS equation (calibration) derived from NIRSC aggregate spectra and chemical data submitted to the NIRSC.”

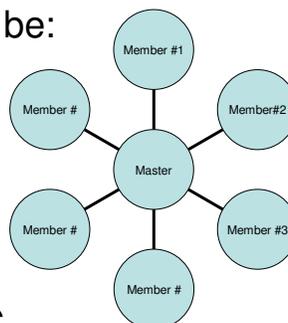
Members submitted spectra is NOT donated or owned by the NIRSC.

NIRSC Bylaw

Equation policy

The equation (calibration) can not be:

- biased.
- expanded
- or modified in any way.

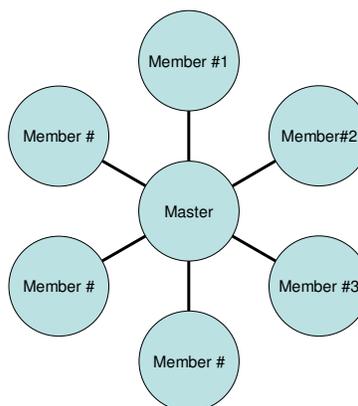


Expiration of calibrations:

Board voted 11-8-06 for all NIRSC calibrations to expire 1 year.

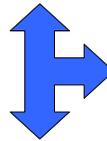
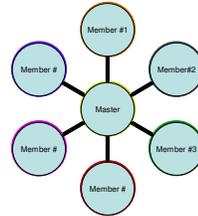
Multiple instrument platforms

- Foss 5000 network
- All the samples selected need to be scanned on the same type of instrument.

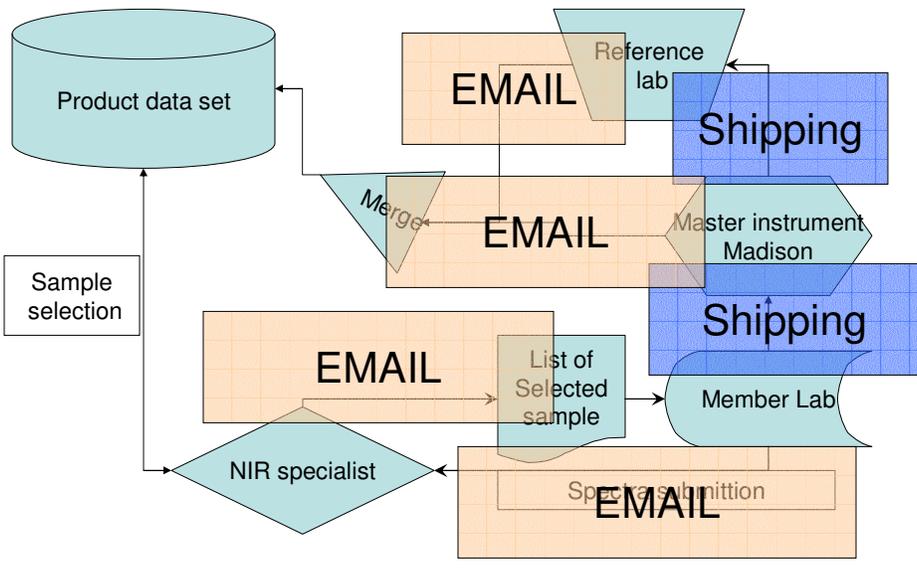


Multiple instrument platforms

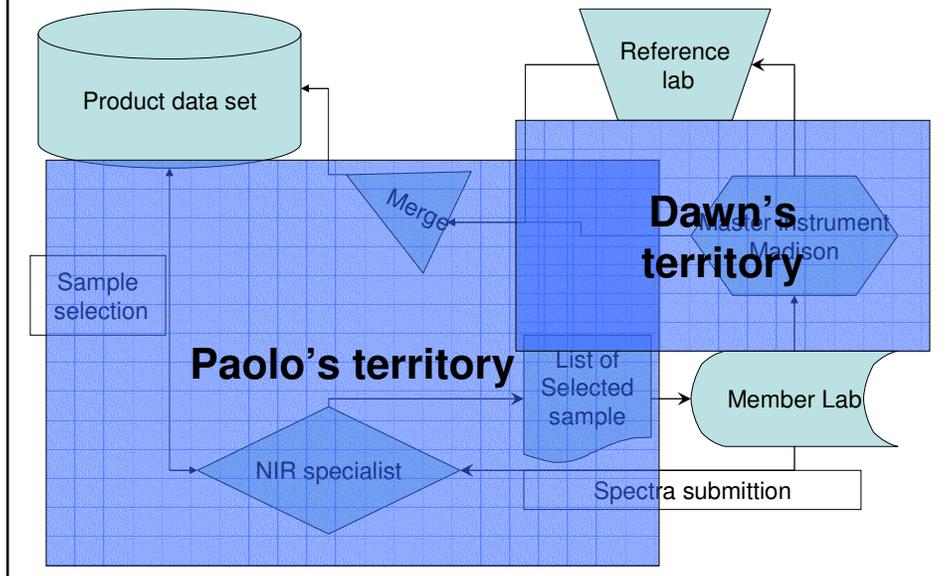
1. Need to transfer current data set on a different platform (see **NIRSC Standard Instrument Company Work Plan**).
2. Need to maintain and update the data sets with all the samples selected.
3. The complexity of the system can cause problem. We need to have a plan to manage flow of information



NIRSC equation update



NIRSC equation update



Players

- Paolo – email and technical work;
- Dawn – scanning, shipping, keeping track of samples
- Member lab – email, shipping
- Reference lab – chemistry and email

Technical website

<http://147.162.137.200:8080/>



NIRS CONSORTIUM

Welcome to NIRS Technical support webpage!

Please enter your login information

User Name:

Password:

[Forgot your password?](#)

NIRS Help Desk Software by Ilient

Technical website

<http://147.162.137.200:8080/>

Experiencing technical problems?

Here, you can find solutions to common problems, and request support (by submitting Service Requests) from NIRS Technical support administrators.

Please choose one of the following:

-  **Submit a service request.**
-  **Self service -view common problems and their solutions.**
-  **View your old service requests.**

Technical website

<http://147.162.137.200:8080/>

The screenshot shows a web form with the following fields and options:

- Category:** A dropdown menu with the selected option "submit spectra for sample selection".
- Title:** A text input field.
- Description:** A text input field containing the text "submit spectra file(s) to the alfalfa breeders only selected samples for calibration. There will be".
- Urgency:** A dropdown menu with the selected option "Low".
- Asset:** A dropdown menu with the selected option "Not associated to asset".
- Attachments:** A list of attachments with a "Remove" button next to each.

The attachment list includes:

- grass haylage
- Please select a sub-category.
- Teff
- grass haylage
- grass hay
- grass haylage
- legume hay
- legume haylage
- mixed hay
- mixed haylage
- sudangrass
- unfermented corn forage
- Remove

A "Submit" button is located at the bottom of the form.

Technical website

- It has been very useful to keep track of service request;
- It is still under a free licence agreement, which has limitation;
- We would need a regular licenced copy to have access of all the administrators (Patty, Dawn and Paolo).
- Any other software that does the some is welcome, any suggestion?

Samples database

- Access based database
 - To track received spectra and selected samples
 - Received and shipped samples
 - Received chemistry

Managing the Consortium

- Managing the flow of data is not easy;
- We need to have better communication and better system for accessing data by the administrators
- The expansion to new instrument platforms is a great opportunity for the NIRSC, labs (members and potential new members), Instrument company to better serve our industry
- The greater complexity will require a higher-better system to manage flow of information.