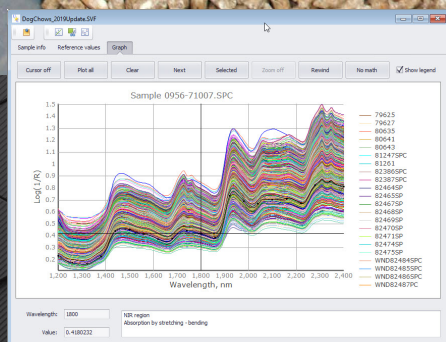


UCal 4TM

Advanced chemometric and database management software for the development of high performance NIR calibrations



a  **KPM** ANALYTICS brand



FEATURES:

- Quantitative and qualitative model development
- Enhanced graphical displays for quick and thorough evaluation of results
- New batch processing routine for automated evaluation of multiple calibration options
- ISO 12099 Compliant

ROBUST CALIBRATION DEVELOPMENT

A variety of multivariate regression algorithms, including PLS, variance scaled PLS and locally weighted regressions, ensures the most accurate quantitative calibrations for your product.

For conformity analysis and detection of bad products, UCal 4 includes a complete set of tools to develop and validate qualitative models and optimize classifications.

To improve the precision and reliability of results, UCal 4 reduces unwanted variation in calibration sets due to sampling or instrument differences with the Unique Minimization (MIN) file.

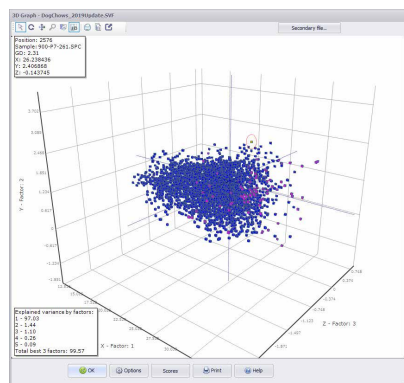
The new population structuring section simplifies calibration sample selection and maximizes the value from reference analyses.

A patented Condense algorithm uses the neighborhood distance principle to remove unwanted redundancy from large databases for efficient and effective calibration updates.

Simplified Sample Management

The heart of UCal is a comprehensive sample management system based on a logical data file structure that allows for sets of data to be reviewed and combined with ease. A new project manager organizes and keeps all relevant files together for easy project management and calibration management.

The UCal software contains a powerful file conversion section that converts spectral data from multiple vendor instruments into the UCal format. Data can be imported to and exported from UCal using Unity (.svf format), Jcamp (.dx, .jdx), Grams (.spc), FOSS ISI (.nir and .cal), and other formats. Spectral data can be truncated and interpolated to match wavelength ranges when transferring a database.



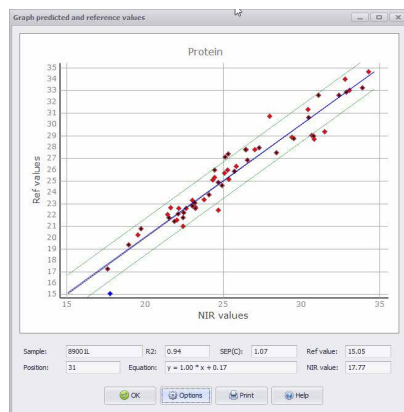
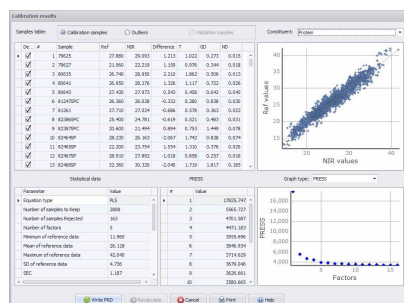
Calibration Transfer Tools

UCal 4 contains advanced standardization routines to match a network of instruments or transfer calibrations from different instrument types to the SpectraStar™XT for ready to use calibrations. New samples can then be added to the transferred database for ongoing updates and development.

Comprehensive Evaluation, Validation and Maintenance Tools

UCal 4 includes a complete suite of routines for the evaluation and validation of calibration models including statistical summaries and outlier identification. Calibrations can be easily monitored for accuracy during the development process as well as on-going update and validation protocols.

UCal 4 also provides the best tools to identify new samples for a calibration database. Because the software is focusing on individual constituents, update samples and required wet chemistry data is only necessary for specific constituents as opposed to analyzing for all constituents in a PCA structure. This can save thousands of dollars in wet chemistry costs for building and maintaining calibrations.



UCal 4 Training

Unity Scientific offers training for UCal 4 in our Milford, MA, USA headquarters, less than one hour from Boston. The class covers all aspects of NIR calibration development with UCal 4. The training is highly recommended so that users can fully utilize the features and capabilities of UCal 4 and thus realize the full value from their NIR program.

Custom on-site training is also available. Please ask your Unity sales professional for further details.



a KPM ANALYTICS brand

Unity Scientific
113 Cedar Street | Milford, MA 01757 USA
Phone: (203) 740-2999 | Fax: (203) 740-2955
www.unityscientific.com | email: info@unityscientific.com

Unity, True Alignment, UScan, UCal, SpectraStar, Infostar and Smartchem are trademarks of Westco Scientific Instruments, Inc., d/b/a Unity Scientific.

All other trademarks are the property of their respective companies.

©Copyright 2019 All rights reserved. F07.003.0027.EN v2.0