breeze.

RELEASE NOTE VERSION 2020.1.0

Prediktera.

What's new in Breeze Version 2020.1.0

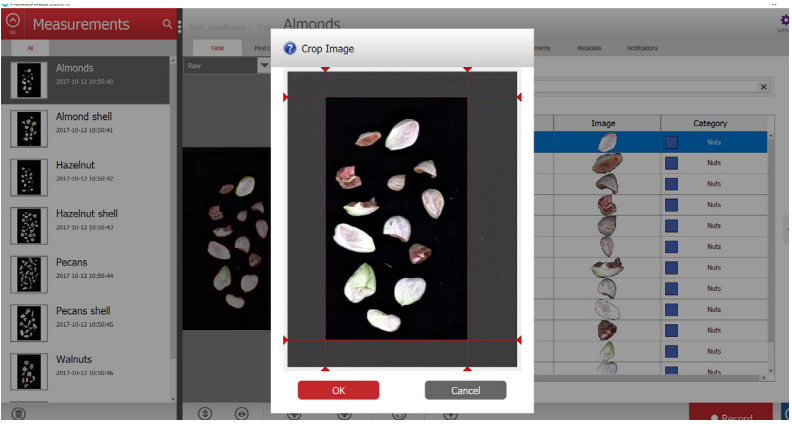
Your software solution for hyperspectral image analysis taking you from idea to solution in no time. This version has improved performance and functionality to help you develop and run your applications for routine analysis in lab and in-line in your process as efficiently as possible. At our website you will find tutorials and user guides as well as video tutorials.

Improved performance and speed

- Real time data analysis up to two times as fast
- Recording of high resolution raw data at high frame rates
- Faster data processing when applying updated workflows on your recoded data (e.g. image segmentation)
- Improved memory (RAM) efficiency for processing large image files (5 Gb>)

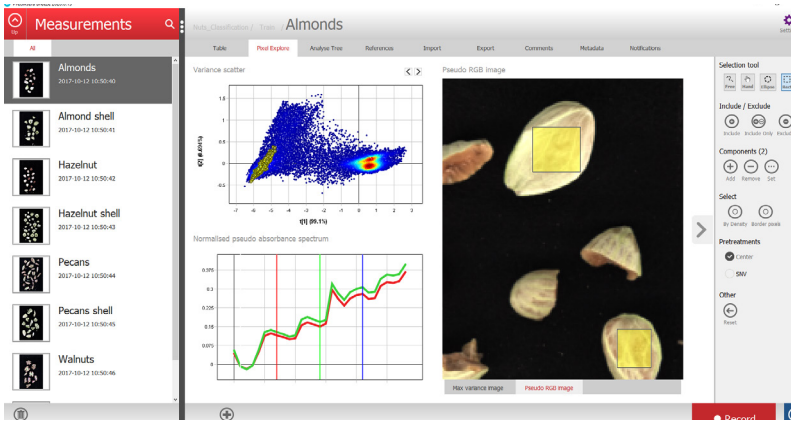
Crop function for images

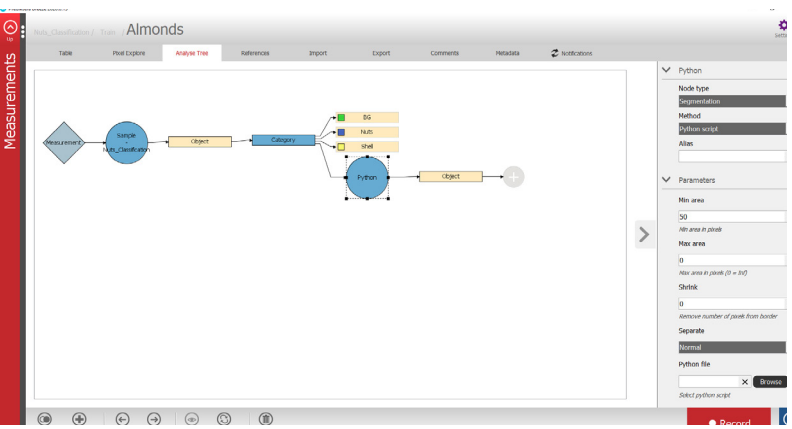
Enables you to crop images directly to reduce image and file size.

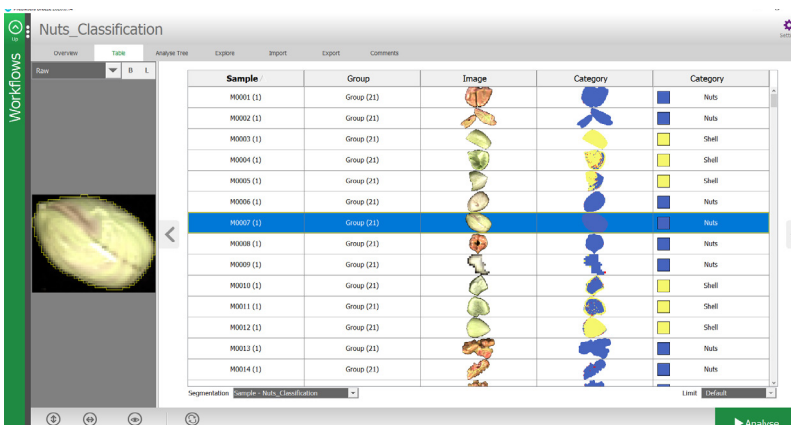


Multiple selection tools

We have added multiple selection tools for images and plot including Rectangle, Ellipse and Single pixel.







Add python code

A new feature to enable you to add your own python code to the Breeze workflow for image segmentation and calculation of parameters.

Save spectral raw data for objects

Reduce the size of recorded spectral raw data by only saving the pixels belonging to cropped objects in the image stream when using automatic object identification.

Images, Plots and Graphs

- Pan function to move the window in zoomed-in plots and images
- Improved automatic contrast setting for Pseudo RGB images in Pixel Explore
- Right click to copy images and plots to clipboard for pasting outside of Breeze

Modelling and data analysis

- Import Evince project with models and training data into Breeze study
- Change min and max cut-off for PLS-DA classification in wizard and confusion matrix
- Show wavelength importance in classification and quantification wizard for PLS and PLS-DA
- Turn SNV data filtering on/off for PCA in Pixel Explore
- Constrained spectral unmixing and export of end members

Record

- Stop button in the Record wizard for stopping recording of started new measurement
- Update of models to apply any changes you have done in Categories and Properties names
- Options to set when in the Record wizard to set when to give notification to take dark reference and to write name of measurement before recording the image

Breeze Runtime

- Output real time analysis results as pseudo RGB image data stream through API
- Show time stamp for taken white and dark references in Breeze Runtime client

Settings for Hardware

- HySpex camera drop down menu to select lenses and to set spectral and spatial region of interest
- Option to save white reference intensity to improve white ref. stability over time.

Workflow Development

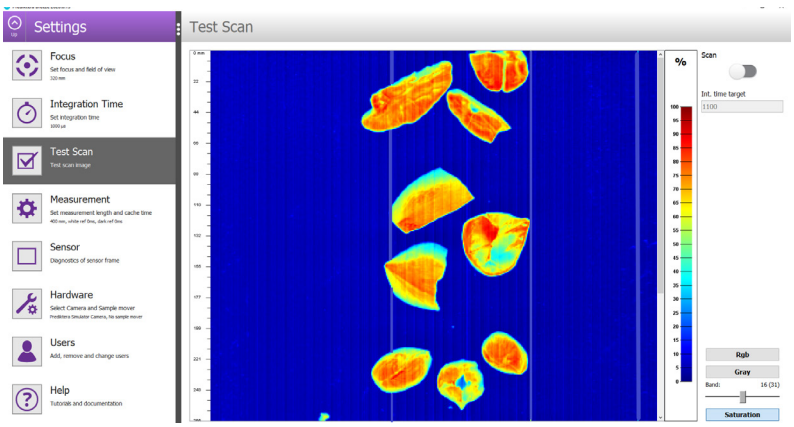
- Automate action to take white and dark reference during continuous data recording based on events like identification of objects
- Send object information using webservice

Import and Export

- File explorer opens automatically after export of data
- Import of Play measurement into Record to use spectral data and predicted values for descriptors as new training data for models

Other

- Help section in Settings with shortcuts to available tutorial and user guides
- Breeze and Breeze Runtime available for Windows, Linux (x64 and ARM), Mac
- Java no longer needs to be installed separately
- Specim Lumo SDK version updated to 2019_4439
- Basler Pylon SDK updated to 6.1



Test Scan feature

We have added a feature for performing a test scan to see image quality using RGB, gray scale and saturation image visualisation.

A trusted partner in hyperspectral imaging.

Prediktera gives you user-friendly software solutions. With over 15 years of experience in data and imaging analysis we aim to be your preferred provider of software solutions for hyperspectral imaging.

We can assist you all the way from early inquiries and hyperspectral application development to custom integration projects. We are here for you!

Feasibility study → **Training** → **Development of application** → **Customisation**

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