

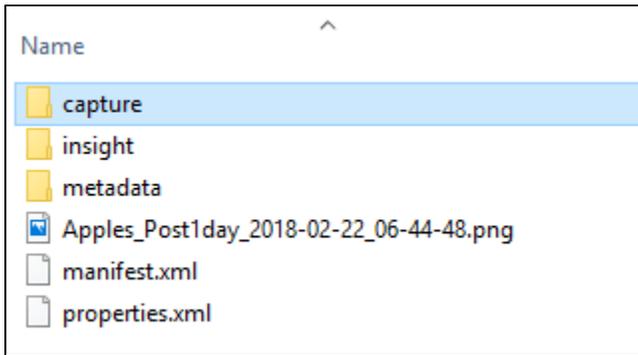
Import Data from Specim LUMO Software

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The Specim LUMO SDK creates project folders, which contain all needed ENVI files to create a balanced Hyperspectral Data Set. These ENVI files can be imported in Perception Studio. This article illustrates how to do this.

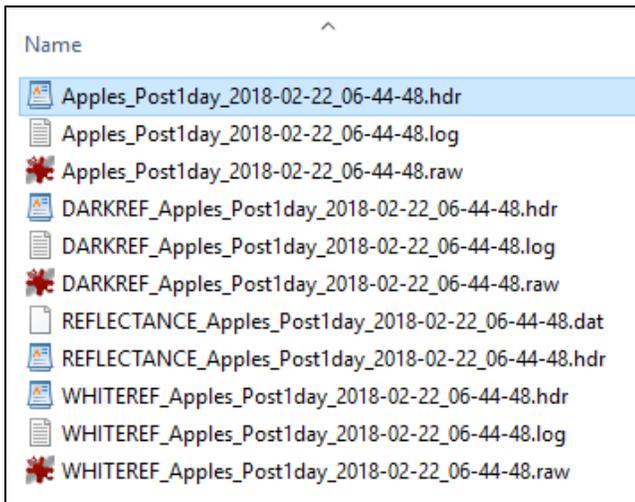
Contents of a LUMO recording

The contents of the LUMO folder may look like this



All data files are located in the "capture" folder.

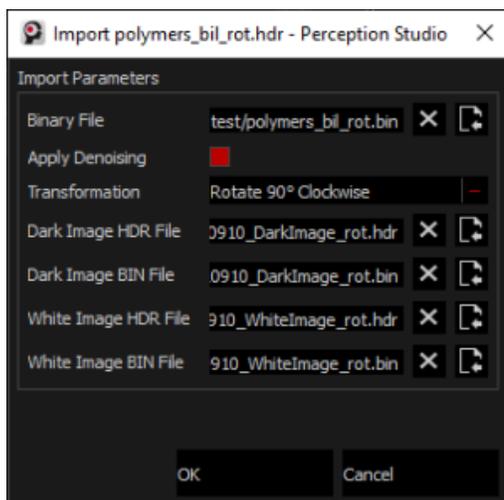
This may look similar to this:



Here the selected file is the main ENVI file, ending with *.hdr and the corresponding data file has the same name but ends on *.raw. The *.hdr holds meta information about the data whereas the *.raw file contains the actual data. The raw file can also end on *.dat, *.bin and many more, but it is usually a large file. The DARKREF and WHITEREF file pairs contain the whiteimage and darkimage and are needed to get balanced data.

How to Import in Perception Studio

To import the whole data, drag the main file (*.hdr) onto the Studio's project browser on the left side or import it via import button. When done correctly a window should pop up like this:



This window tells which files from the folder are used to load the full, balanced data and how to process the data.

The parameters are used like this

1. Binary File: The first is the binary file for the main *.hdr
2. Apply Denoising: always have this enabled when importing from LUMO, otherwise the spectral smoothing will be disabled and the data set will be more noisy. Also models generated from this cube can not be used on Perception Core
3. Transformation: files from LUMO need to be rotated by 90 degrees
4. Dark Image HDR File: the path to the dark image HDR
5. Dark Image BIN File: the path to the dark image RAW or BIN or other
6. White Image HDR File: the path to the White image HDR
7. White Image BIN File: the path to the White image RAW or BIN or other

Usually the importer should fill out all parameters by itself, but just in case some files have different naming or were moved to another place, the user can correct the pathes of the balancing image files.