



# Chroma™ 2019.1

## Important Changes to the Previous Version 2017.1

as at May 2020

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# LIMS Interface (Measurement Jobs)

Reading of input parameters  
(measuring method, attribute  
values, sample thickness, etc.)  
from measurement job files

The screenshot displays the 'ilis Chroma 2019.1 - Standard.cdb' software interface. The 'Import' dialog is open, showing the following settings:

- File folder for new measurement jobs: C:\Users\Public\Documents\ilis\Chroma\Import
- File extension for measurement jobs: job
- File converter for measurement jobs: C:\ProgramData\ilis\Chroma\Plugins\JobToXml.exe
- File folder for finished measurement jobs: C:\Users\Public\Documents\ilis\Chroma\Completed

The 'Measurement job' configuration window is also visible, showing the following parameters:

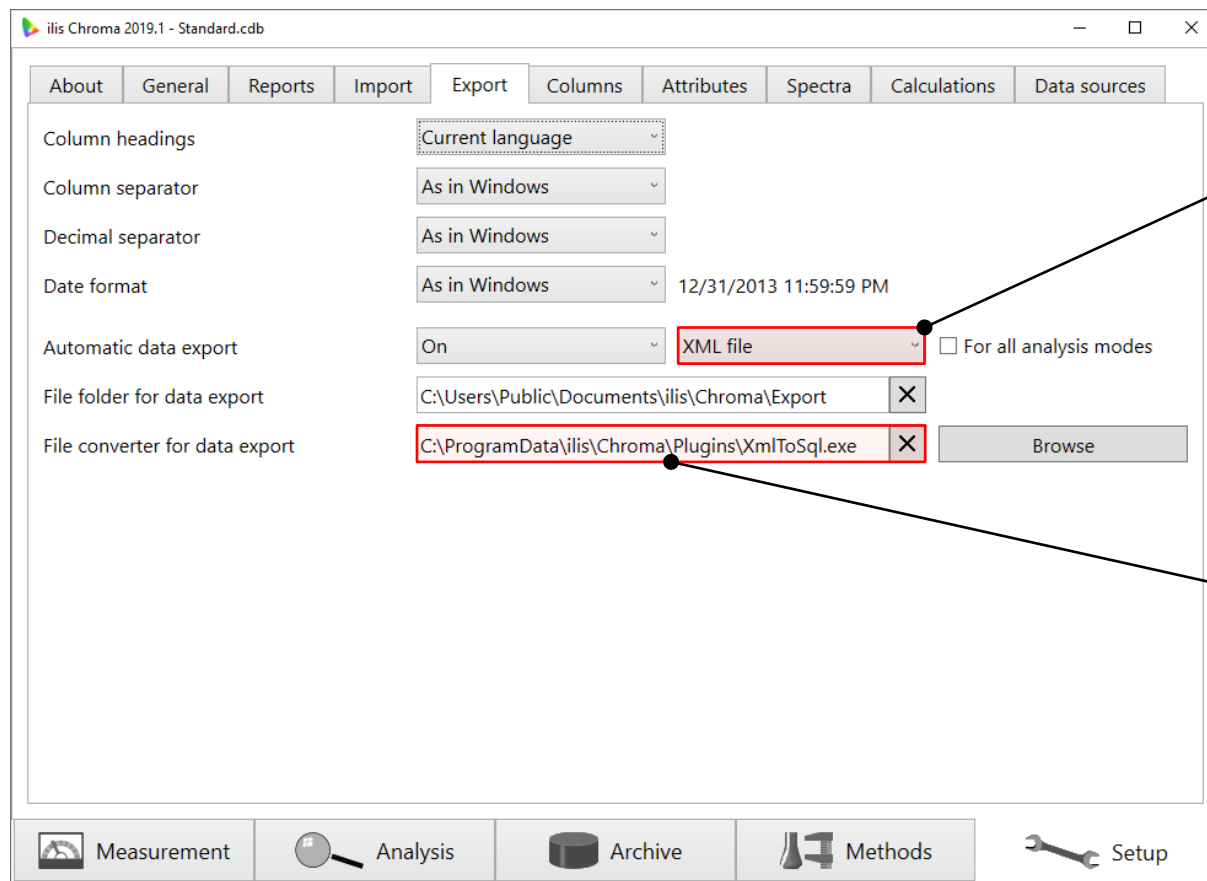
- Measurement job: A20-0034.job
- Data source: Shimadzu
- Method: Optical glass
- Spectral range: 380, 385, ..., 830 nm
- Measurement method: Transmittance in air
- Analysis mode: Internal transmittance
- Refractive index: 1.517
- Standard thickness: 5.000 mm
- Sample thickness: 4.130 mm
- Observer/illuminant: 2° / D65
- Calculations: X, Y, Z, x, y, z, DWL, S, A, L, hab
- Date: 5/19/2020
- Job number: A20-0034
- Batch number: 23
- Glass type: BK7
- Name:
- Thickness: 4.130 mm

The 'Select measurement job' dialog is open, showing a list of measurement jobs:

- A20-0034.job
- A20-0035.job
- A20-0036.job
- A20-0037.job

The 'Measurement job' configuration window also includes a graph showing Wavelength (nm) on the x-axis (400 to 800) and a y-axis (0 to 10). The 'Zero calibration', 'Measure', and 'Save' buttons are visible at the bottom of the window.

# LIMS Interface (Extended Data Export)



New file formats  
.xml and .chroma  
for data export

Conversion of the  
XML format into  
customer-specific  
formats

# LIMS Interface (XML Formats)

```
<?xml version="1.0" encoding="utf-8"?>
<Chroma>
  <Jobs>
    <Job>
      <MethodName>Test method</MethodName>
      <SampleName>Test measurement</SampleName>
      <DateTime>2020-05-10T16:30:00</DateTime>
      <WavelengthMinimum>360</WavelengthMinimum>
      <WavelengthMaximum>830</WavelengthMaximum>
      <WavelengthStepWidth>5</WavelengthStepWidth>
      <SampleThickness>4.13</SampleThickness>
      <StandardThickness>2</StandardThickness>
      <SellmeierEquation>
        <B1>1.03961212</B1>
        <B2>0.231792344</B2>
        <B3>1.01046945</B3>
        <C1>6.00069867E-03</C1>
        <C2>2.00179144E-02</C2>
        <C3>103.560653</C3>
        <MinWavelength>350</MinWavelength>
        <MaxWavelength>900</MaxWavelength>
      </SellmeierEquation>
      <Attributes>
        <Attribute>
          <Name>Job number</Name>
          <Value>A46-03213</Value>
        </Attribute>
        ...
      </Attributes>
    </Job>
    ...
  </Jobs>
</Chroma>
```

Measurement Jobs

```
<?xml version="1.0" encoding="utf-8"?>
<Chroma>
  <Measurements>
    <Measurement Index="1">
      <Name>Test measurement</Name>
      <DateTime>2020-05-10T12:20:28.4852173+02:00</DateTime>
      <Timestamp>2020-05-10T12:20:28.4852173+02:00</Timestamp>
      <User />
      <MethodName>Test method</MethodName>
      <WavelengthMinimum>360</WavelengthMinimum>
      <WavelengthMaximum>830</WavelengthMaximum>
      <WavelengthStepWidth>5</WavelengthStepWidth>
      <MeasurementMethod>TransmittanceAir</MeasurementMethod>
      <AnalysisMode>Transmittance</AnalysisMode>
      <Illuminant>D65</Illuminant>
      <Observer>2</Observer>
      <SampleThickness>4.13</SampleThickness>
      <StandardThickness>2</StandardThickness>
      <ReflectionCorrection>Reflectivity</ReflectionCorrection>
      <Reflectivity>0.0784</Reflectivity>
      <DateTimeMode>CurrentDateTime</DateTimeMode>
      <SampleNaming>Optional</SampleNaming>
      <DataSource>Demonstration</DataSource>
      <DataSourceConfiguration>float_glass</DataSourceConfiguration>
      <Attributes />
      <AbsorbanceSpectra />
      <Calculations>
        <Calculation>
          <Name>X</Name>
          <Value>85.9</Value>
        </Calculation>
        ...
      </Calculations>
      <SpectrumValues>
        <Value>
          <Abs>360</Abs>
          <Ord>0.8644</Ord>
        </Value>
        ...
      </SpectrumValues>
    </Measurement>
    ...
  </Measurements>
</Chroma>
```

Data Export

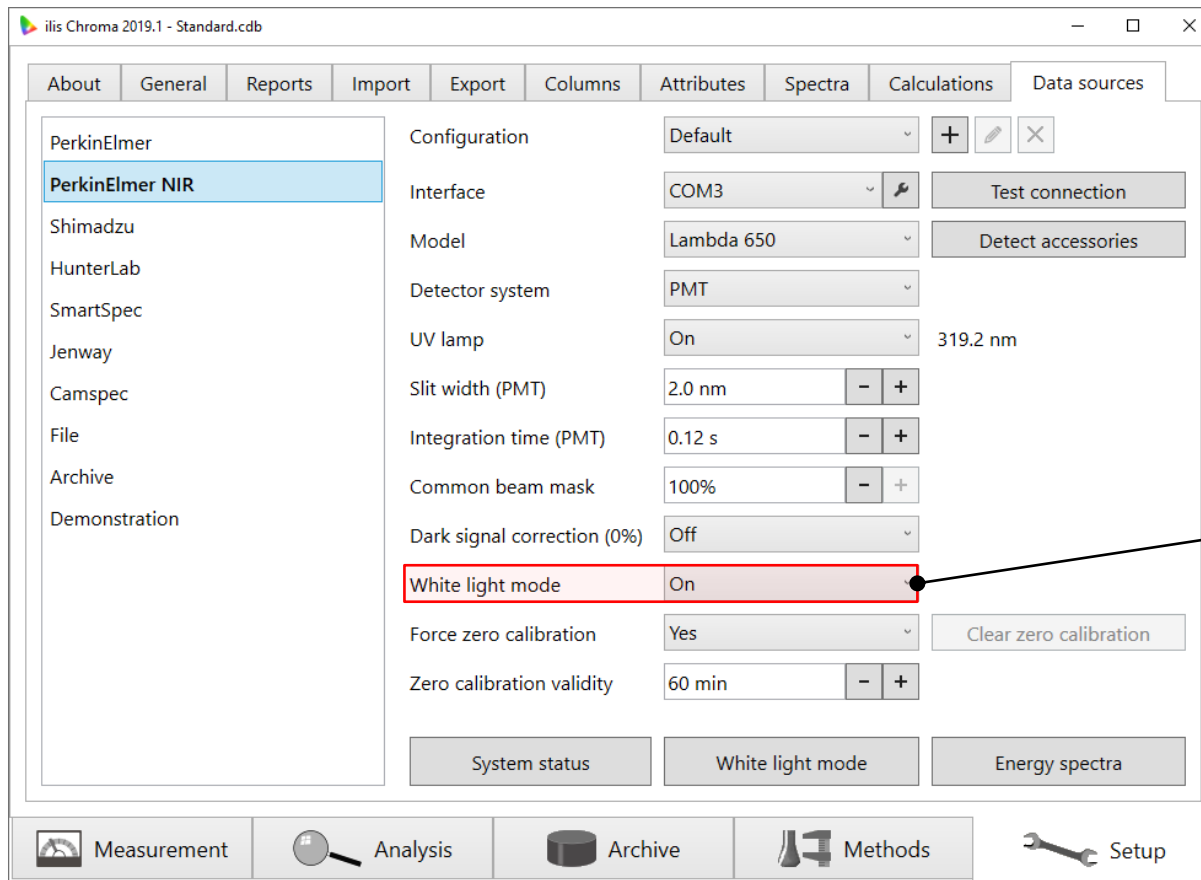
# Reflection Correction with Sellmeier Equation

The screenshot shows the 'Reflection correction' dialog box in the ilis Chroma 2019.1 software. The 'Reflection correction' dropdown is set to 'Sellmeier equation', and the 'Parameters' sub-dialog is open. The 'Parameters' dialog contains the following fields:

Parameter	Value
B1	1.039612120000
B2	0.231792344000
B3	1.010469450000
C1	0.006000698670 $\mu\text{m}^2$
C2	0.020017914400 $\mu\text{m}^2$
C3	103.560653000000 $\mu\text{m}^2$
Min. wavelength	380 nm
Max. wavelength	900 nm

Input of the Sellmeier parameters for the wavelength-dependent correction of the surface reflection directly in the method (without defining a dispersion spectrum)

# Automatic White Light Mode with PerkinElmer Lambda 650/750/850/950/1050



Automatically activate and deactivate white light mode for aligning the sample in the measuring beam before the measurement