

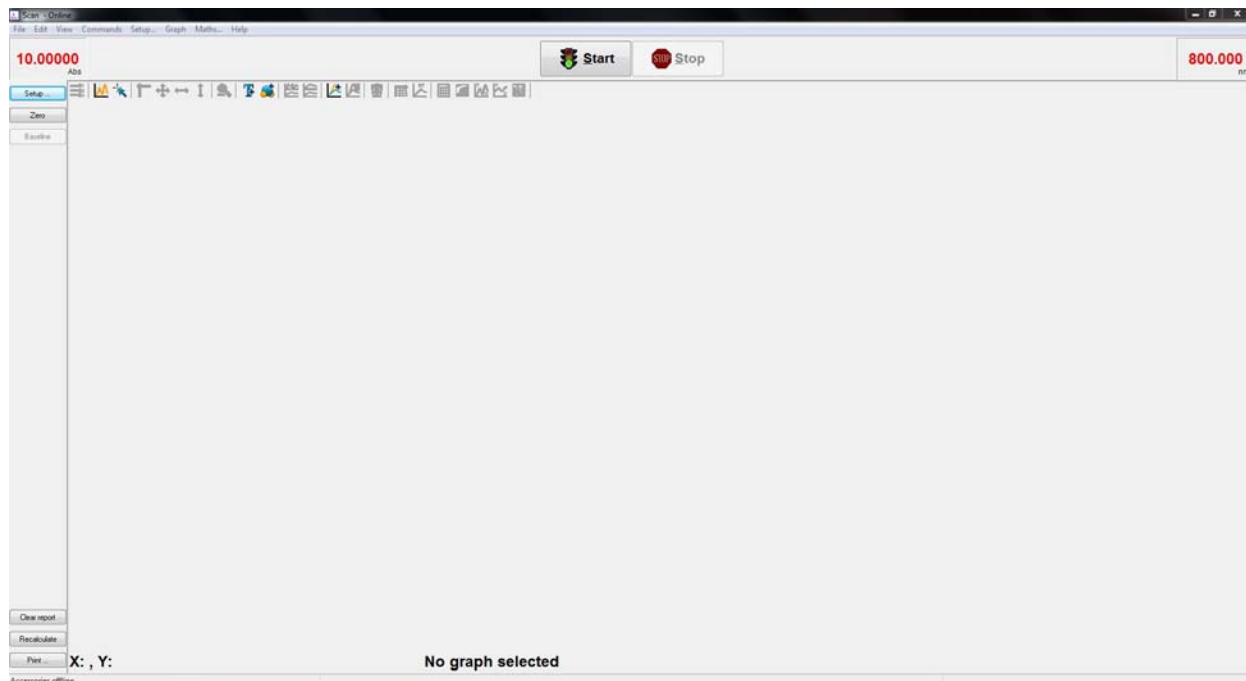


Cary 7000 Universal Measurement Spectrometer

Operation instructions

Starting up

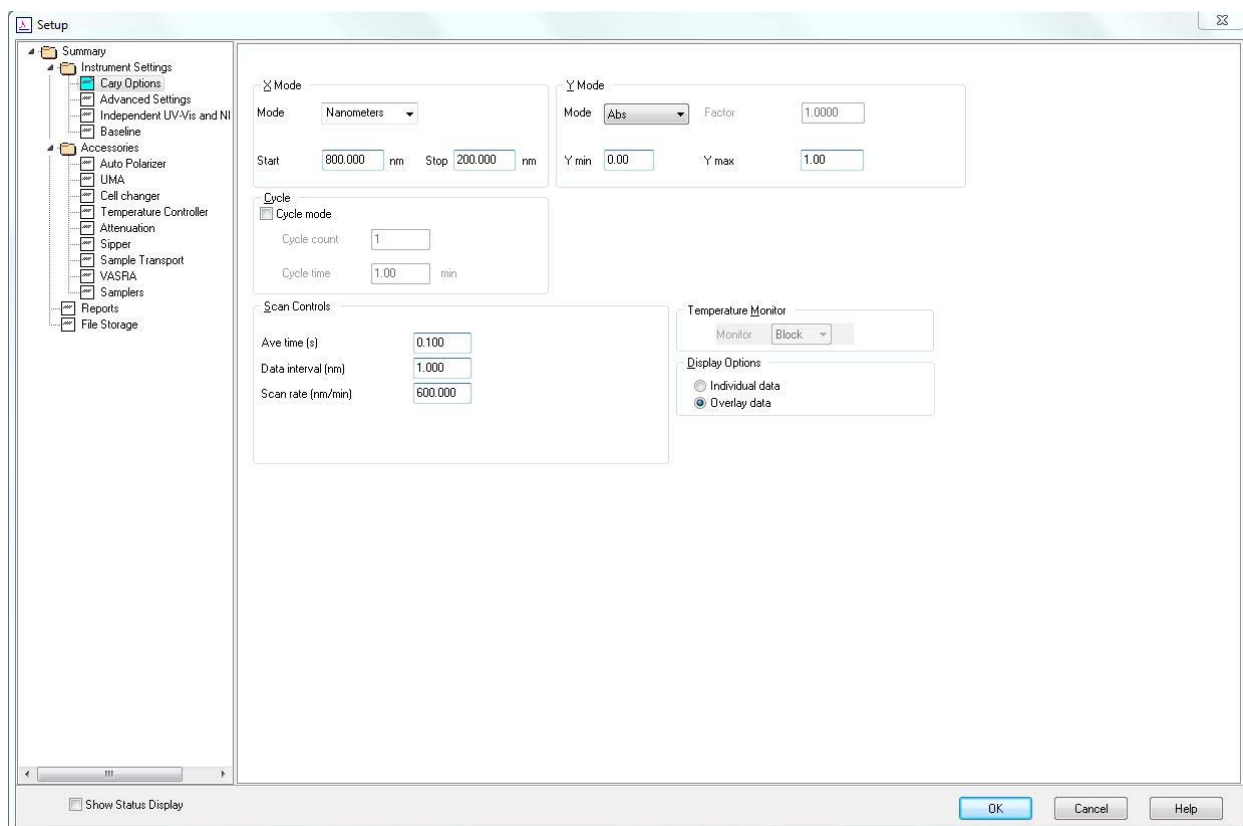
1. Turn on the instrument. The switch is at the front panel.
2. Double click on the Cary icon on the desktop. Wait till the instrument fully initialize and software is active.



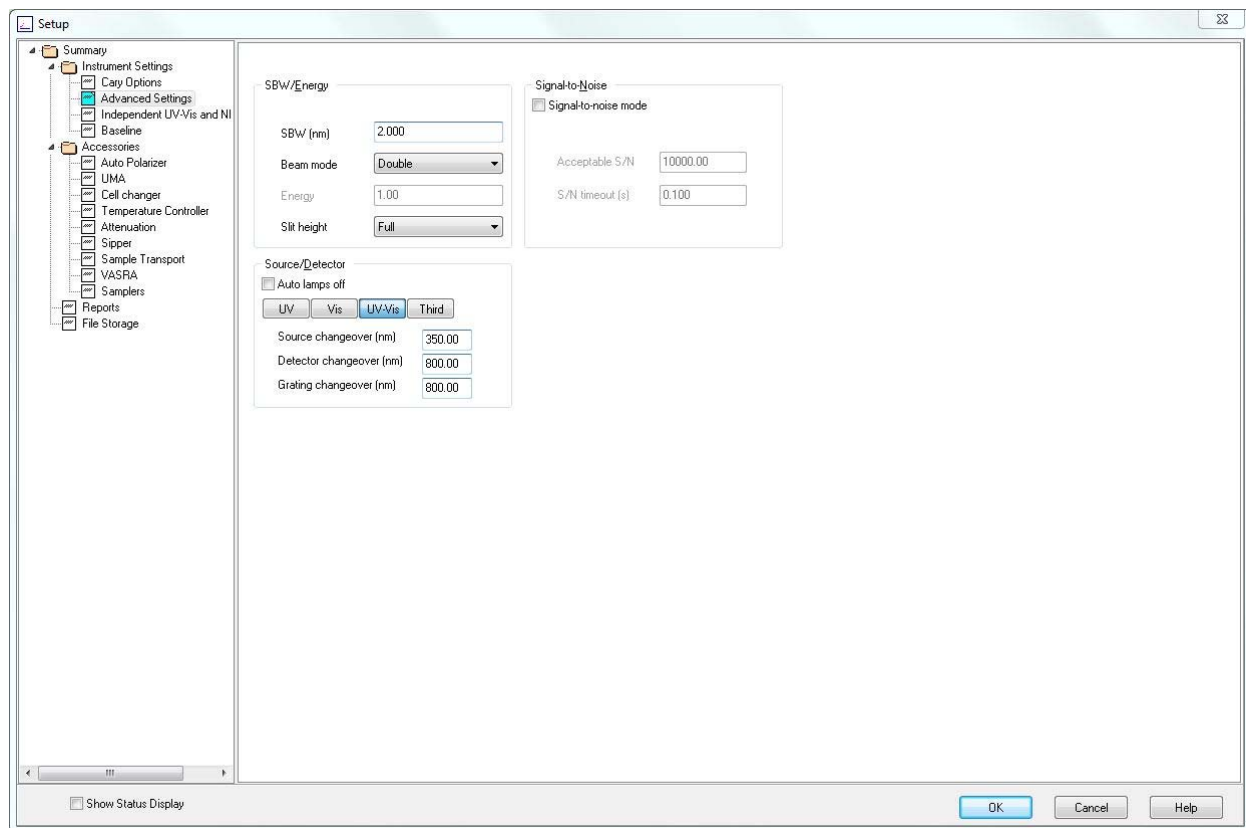
3. Select Command / Zero order for sample placement and alignment.
4. Place the sample in the sample compartment. **Please, do not unscrew any sample holder or position unless has been instructed during the training or received permission to do so. Changing the sample holder position will result in immediate misalignment of the centric coordinate for sample rotation, hence the performance of the spectrometer.**
5. Once the instrument performed full initialization place the sample in compartment. Select Command/Align to make the beam visible.
6. Select Setup to access experimental parameters:



- At Cary Options select spectral range, amount of cycles and measurements time and scan rate. The menu is self-explanatory.



- Change Advanced Settings.



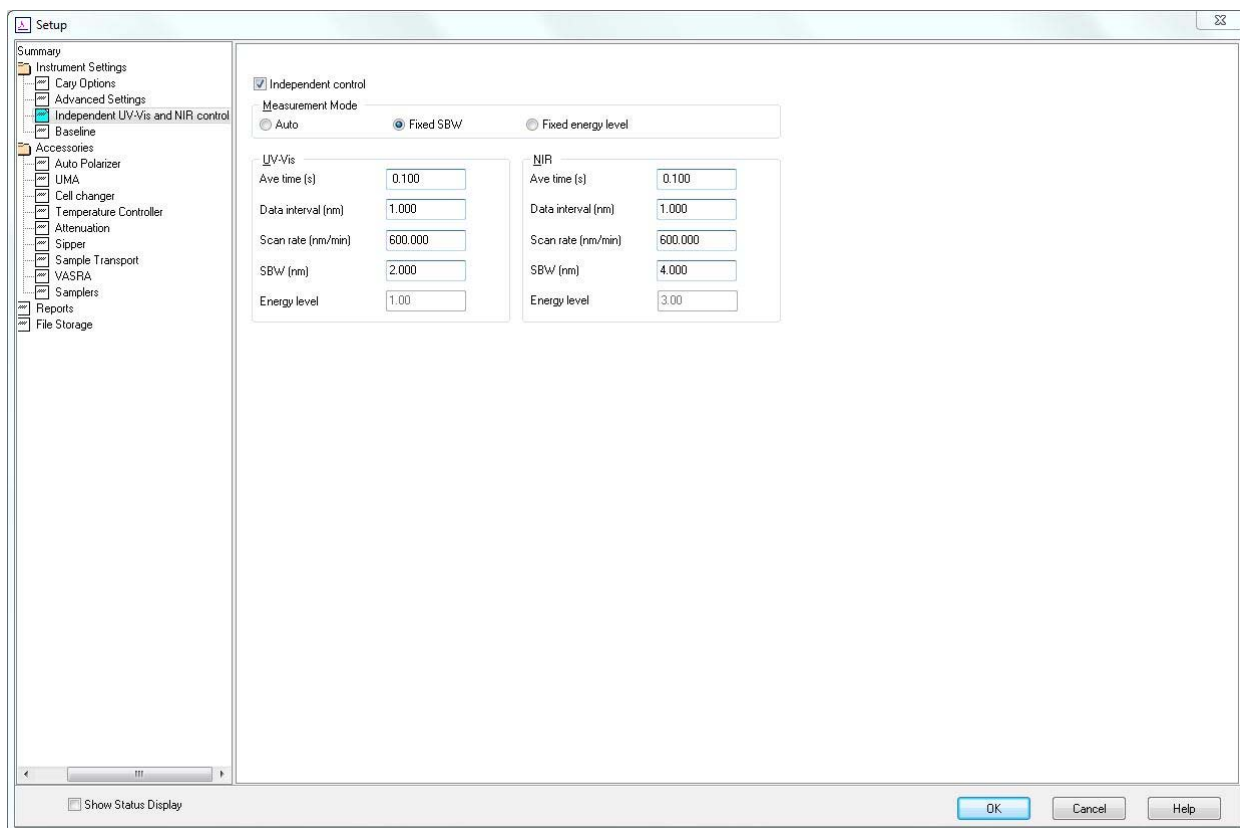
Choose measurement standard bandwidth. For measurements using UMS accessories use reduced slit height.

You can choose option to perform measurements based on signal-to-noise ratio effectively rejecting any data points that does not fits the criteria.

Select the source, detector or grating changeover wavelengths only if necessary.

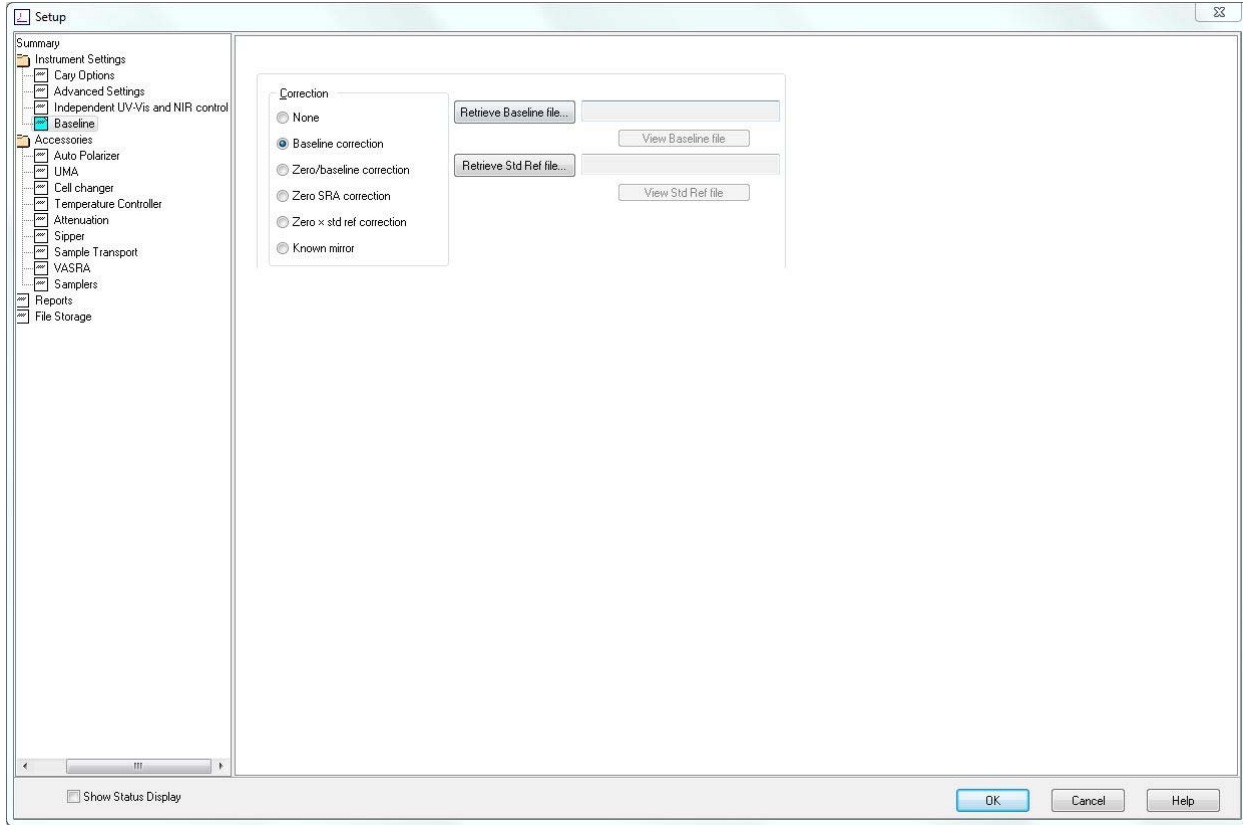
9. Select independently parameters for UV-Vis-NIR and NIR-MIR regions. It is recommended to use independent control. Although, use the same data interval, for

similar signal-to-noise ratio it is recommended that SBW for NIR is 4 times higher than SBW for UV-Vis.

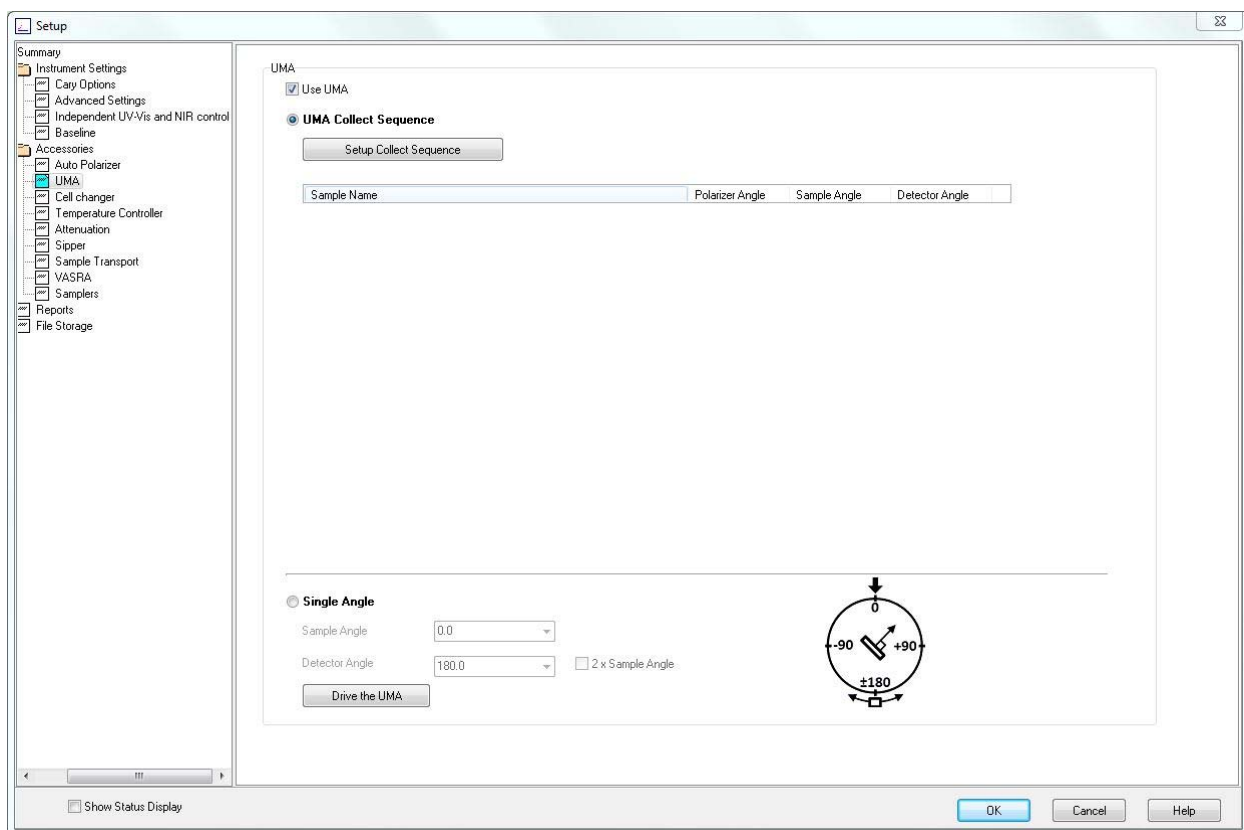


If Fixed energy selected, the bandwidth will be adjusted according to the same energy region at each spectral region.

10. Choose Baseline correction. Unless the signals are within 10^{-3} OD, there is no need to perform Zero scattering correction.

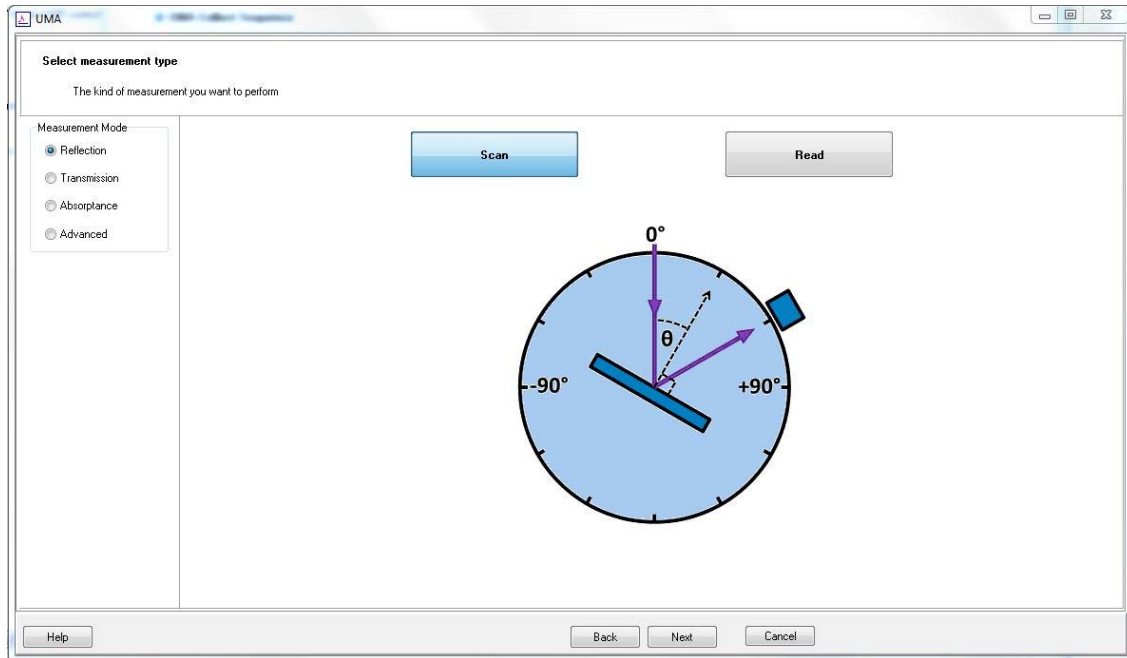


11. Select Use UMA option.

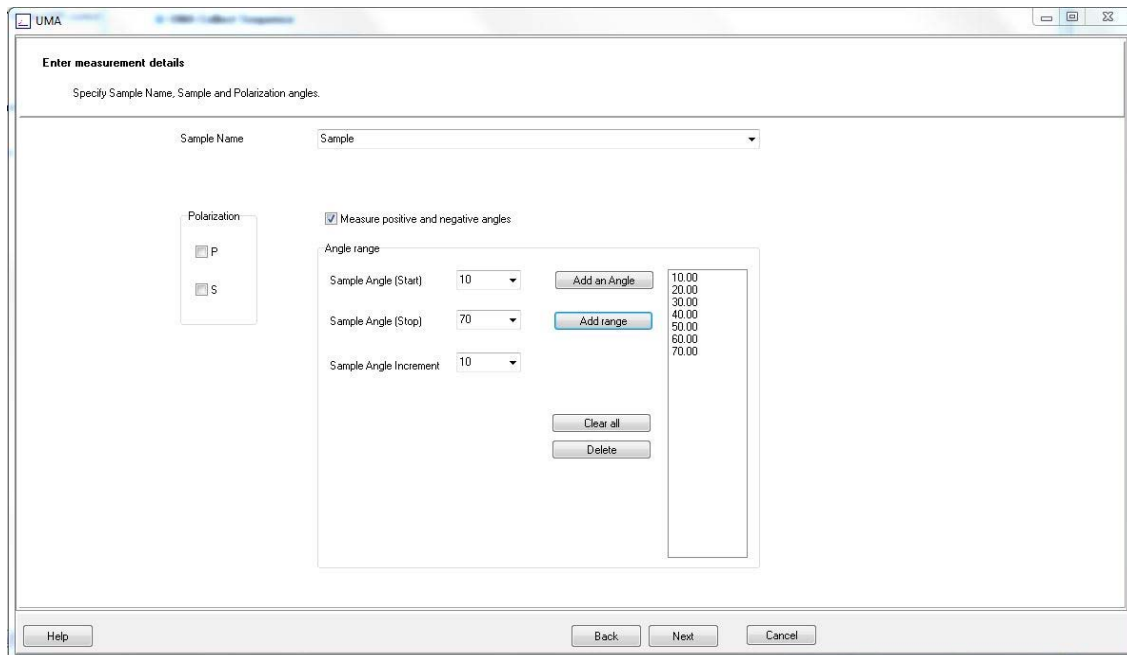


Setup Collect Sequence by pressing the this option.

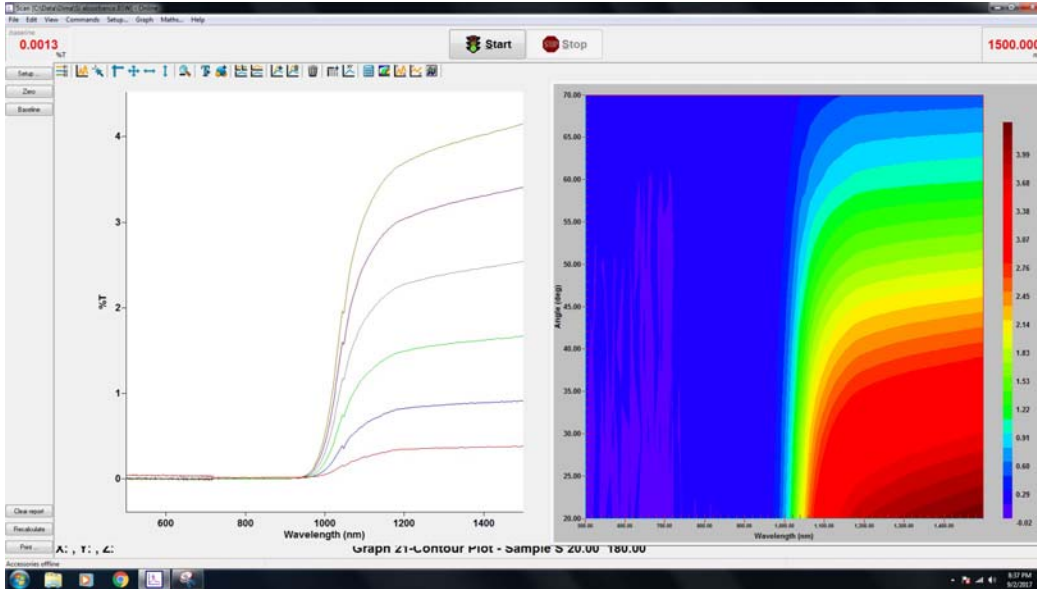
12. Select measurement geometry. Select Next to set the angle sequence.



13. Set the start angle, stop angle and increment. You can choose P (vertical) or S (horizontal) polarizations. Please, keep in mind, that the specific polarization angle can be set at Auto-polarizing tab option. If not P or S polarization is selected, the default polarization will be set to 45°.



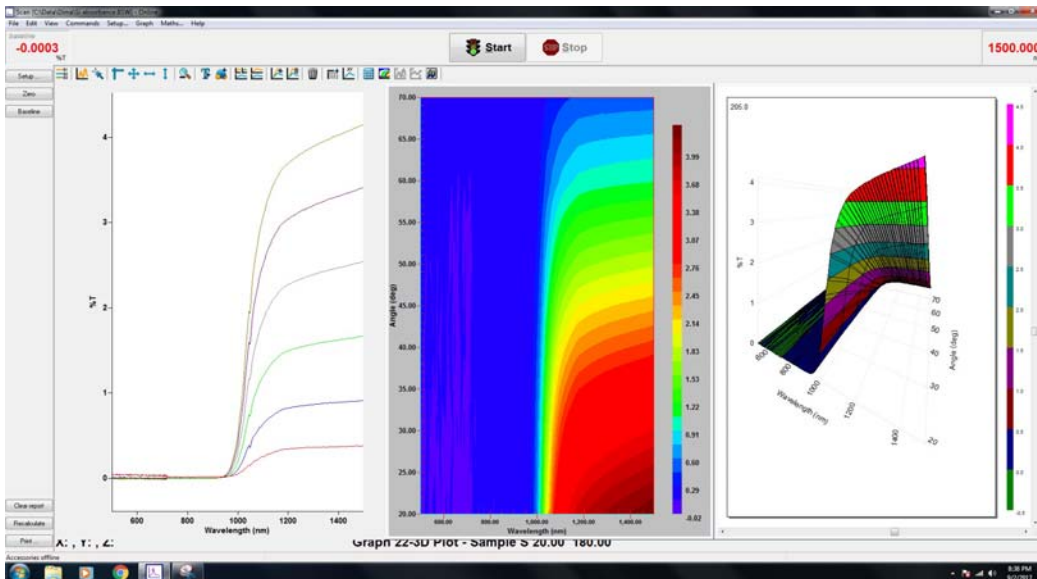
14. Click **Start** to perform the measurement.



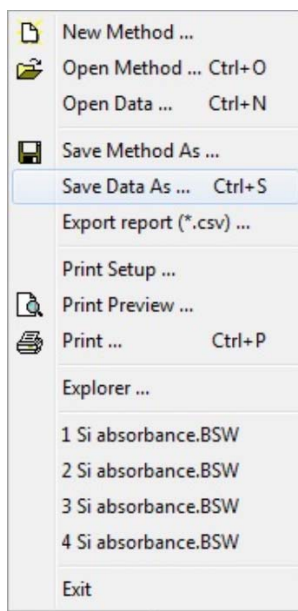
Use this icon to access, activate or deactivate measured data:



There are 2D and 3D plot possibilities:



15. Save the data from **File** menu:



16. To turn the system off switch off the software.

17. Switch off the instrument. Please, leave the computer on.