

SOP-E043

Filter Scans

Objective: Scan filters to check or confirm transmission spectrum, wavelength, and filter type of optical filters

Procedure:

1. Log into Novell Network
2. Make sure that USB2000 is plugged in (via USB) and connected to filter scanning box (via fiber)
3. Open Spectra Suite icon on Desktop
4. Make sure "Electric Dark Correction" box is unchecked
5. Remove black unit cover
6. Turn lamp on- Switch located on back of blue "LS-1" unit
7. On computer, lower "integration time" until spectrum is not over-saturated (no flat line at top of peak).
8. *Should be below 15msec, if not may be necessary to realign fiber (thick blue wire leading to black transmission detection unit) until not over saturated at 15 msec.
9. Increase Boxcar width to ~5.
10. Change Scans Average to 1,000.
11. Turn lamp off
12. Replace black unit cover.
 - 12.1. Be sure not to hit blue fiber at any point before, during, or after scans. It fits easily in a groove on the black unit cover. Hitting the wire will misalign the unit.
13. Wait for spectrum to flat line
14. Click on black light bulb icon
15. Remove back unit cover and turn light on.
16. Replace cover
17. Wait for spectrum to return to max value
18. Click the yellow light bulb
19. Click the blue "T" for transmission mode
20. Open Cover
21. Find and remove correct size filter holder for filter scanning. It may be lying near unit.
22. Using pen suction cup, gently place filter in filter holder.
23. *Note the direction of arrow on filter side. This is the direction the light must pass through the filter. Arrow should point toward blue fiber wire.
24. Carefully secure filter in holder with ring nut- Use micro spanner wrench to tighten gently.
25. *Do not over tighten or filter may break!
26. Place optical filter holder back into post holder on the stage.
27. Turn black stage rotation knob until rotating stage reaches 0°.
28. Turn optical filter holder in the stage until reflected light on "LS-1" light output opening is centered.
29. Secure optical filter holder in stage post holder by turning knob on side of stage until tight.
30. Replace black cover over unit. Be careful not to touch blue fiber wire
31. Minimize Spectra Suite software
32. Double click on Excel document "Blank Filter Transmission Sheet" on desktop
33. Click "File" → Click "Save As"

34. Rename file with filter information: Wavelength, Filter Type, 90 ° scan and Serial # or Part # (if available) – Files are usually saved under T:\Filter Scans
35. Return to Spectra Suite
36. Click “Copy spectral data to clipboard” icon. (Looks like two sheets of paper.)
37. Return to Excel document
38. Click in first empty cell in the wavelength column and paste data from clipboard. (Right click→”paste” or type “ctrl” + “v”)
39. Add filter information in “Filter Transmission Scan” section. May not have all information so fill in what is available. Most information may be found on filter carrying case or bag.
40. Save sheet information: “File” → “Save”
41. Print “% Transmission sheet” and “Optical Density” sheet
42. To do a 45° scan of the same filter, remove black unit cover and turn stage rotation knob to 45 °.
43. Repeat steps from #26 on. Be sure to note it is a 45° scan in the Excel file name and in the cell indicating filter angle
44. Carefully remove ring nut with micro spanner wrench. Lay optical filter holder on table for stability and filter safety.
45. Carefully remove filter with suction cup pen and replace in carrying case or bag.
46. If more filters to scan, repeat from step #19 with new filter.
47. If no more filters to scan, turn lamp off, replace cover, close Spectra Suite and Excel, and log off.

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Date: 3-30-08

Verified by: _____ **Date:** _____

Print Name

Sign Name