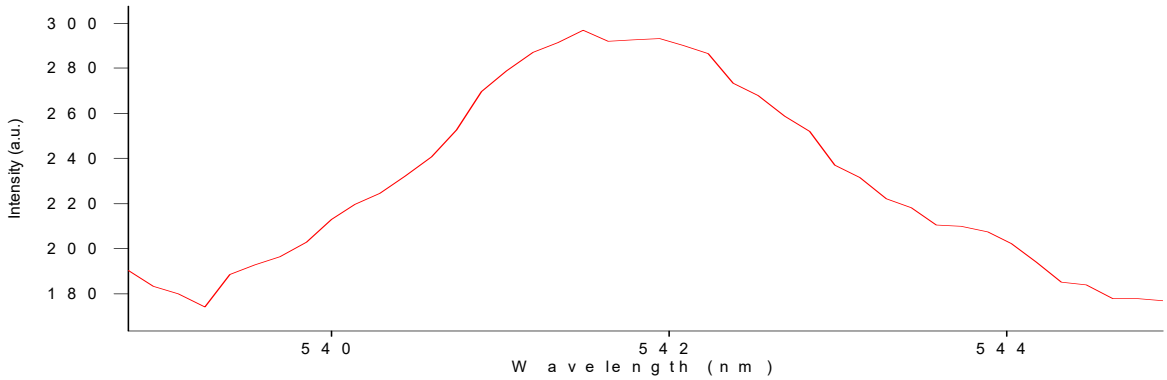
Eclipse Validation Report

Report time	6/08/2020 2:40:23 PM
Batch file	6_08_2020 2;40;23 PM.FBVO
Instrument	Eclipse
Instrument serial number	EL06043601
Software Version	1.2(146)
Firmware Version	1.12

Wavelength Accuracy Ex.Mono (Xe)

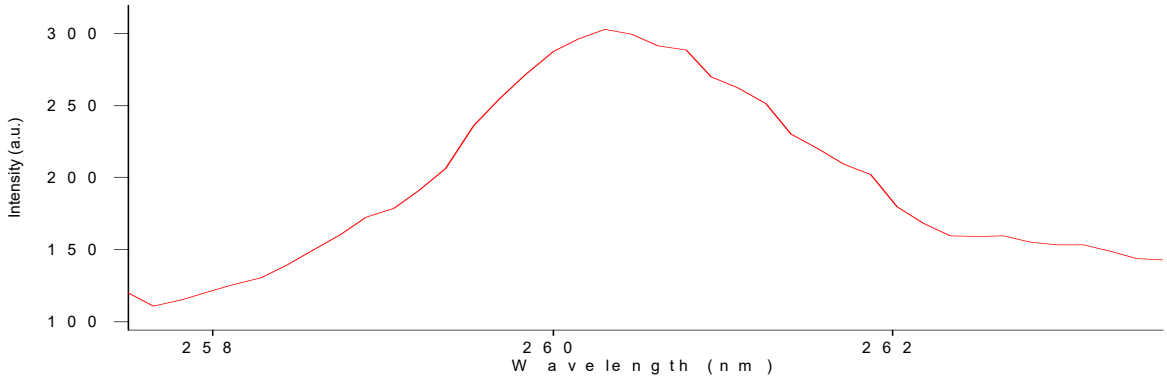
Instrument Parameters :

Scan mode	Excitation
Scan type	Fluorescence Excitation
Ex.Wavelength (nm)	541.92
Ex. Slit (nm)	1.5
Ex. Filter	Auto
Ave. time (s)	1.00000
Data interval (nm)	0.15
Tolerance of 541.92nm peak	±0.50nm
Tolerance of 260.54nm peak	±1.00nm
Ex. PMT (V)	855



541.92nm peak found at 541.71nm PASSED

Ex. PMT (V) 887



260.54nm peak found at 260.39nm PASSED

Wavelength Accuracy Ex.Mono (Xe) test Passed

Wavelength Accuracy Em.Mono (Xe)

Instrument Parameters :

Scan mode	Emission
Scan type	Fluorescence Emission

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Ex.Wavelength (nm)          0.00
Ex. Slit (nm)               5
Ex. Filter                  Auto
Em.Wavelength (nm)          541.92
Em. Slit (nm)               1.5
Em. Filter                  Auto
Ave. time (s)               1.00000
Data interval (nm)          0.15

Tolerance of 541.92nm peak  ±0.50nm
Tolerance of 260.54nm peak  ±1.00nm

Ex. PMT (V)                 411
Em. PMT (V)                 913
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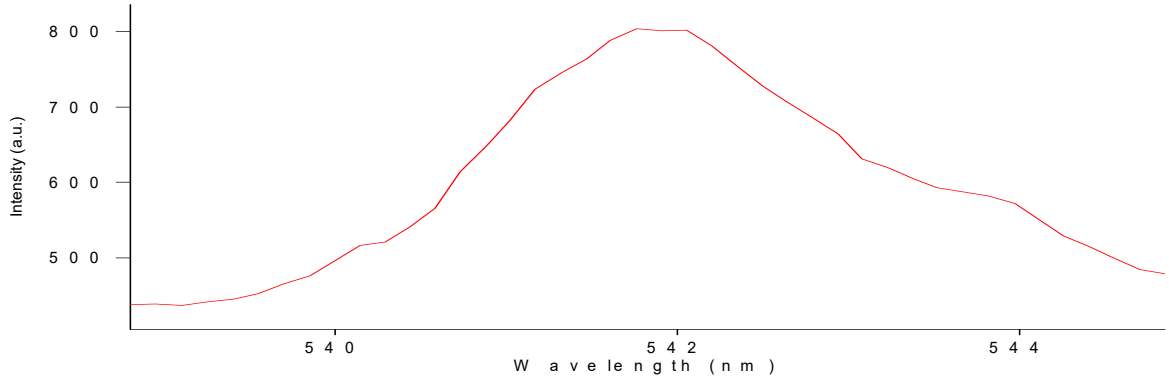

541.92nm peak found at 541.84nm PASSED

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Ex. PMT (V)                 411
Em. PMT (V)                 1000
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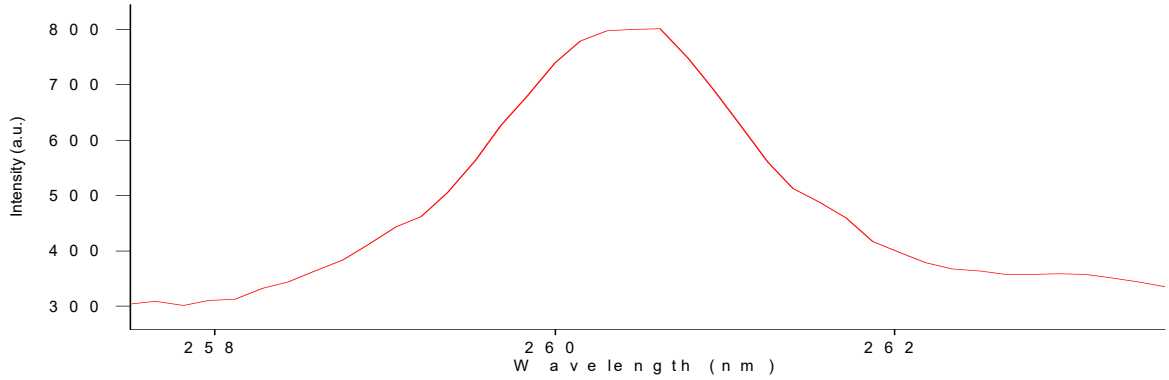

260.54nm peak found at 260.39nm PASSED

Wavelength Accuracy Em.Mono (Xe) test Passed

Spectral Bandwidth Accuracy Ex.Slit

Instrument Parameters :

```
Scan mode                   Excitation
Scan type                   Fluorescence Excitation
Ex.Wavelength (nm)          350.00
Ex. Slit (nm)               1.5
Ex. Filter                  250 - 395 nm
Ave. time (s)               1.00000
Data interval (nm)          0.15

Ex. Slit (nm): 1.5    Scan Range -3nm to  3nm
Ex. Slit (nm): 2.5    Scan Range -5nm to  5nm
Ex. Slit (nm): 5    Scan Range -10nm to 10nm
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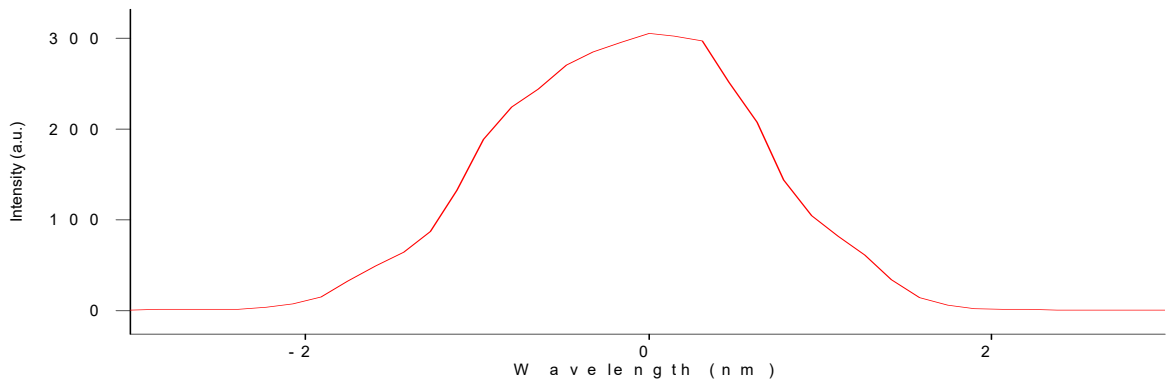

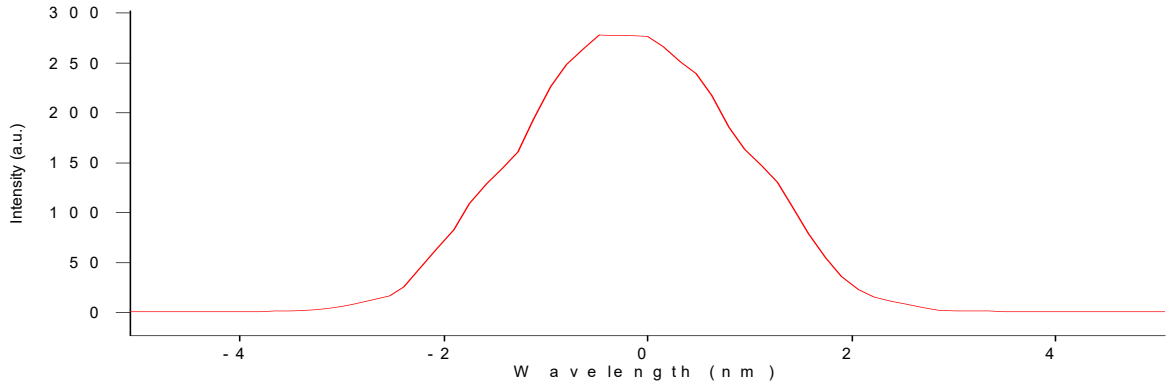

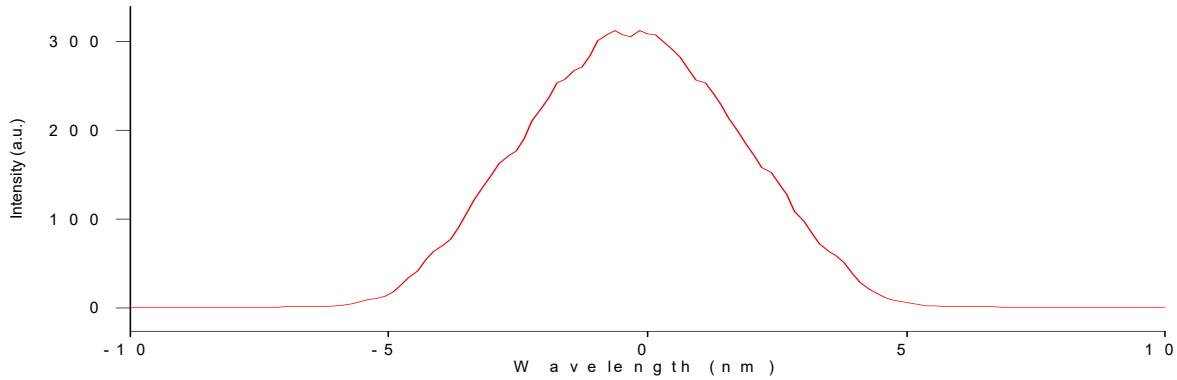

Ex. Slit (nm)	Ex. EHT (V)	Tolerance (nm)	Measured (nm)	Result
1.5	692	1.300 - 2.050	1.828	Passed
2.5	558	2.250 - 2.800	2.656	Passed
5	499	4.900 - 5.800	5.202	Passed

Spectral Bandwidth Accuracy Ex.Slit test Passed

Spectral Bandwidth Accuracy Em.Slit

Instrument Parameters :

Scan mode	Emission
Scan type	Fluorescence Emission
Ex.Wavelength (nm)	350.00
Ex. Slit (nm)	5
Ex. Filter	Auto
Em.Wavelength (nm)	400.00
Em. Slit (nm)	5
Em. Filter	Auto
Ave. time (s)	1.00000
Data interval (nm)	0.15

```
Ex. Slit (nm): 1.5    Scan Range -3nm to  3nm
Em. Slit (nm): 1.5    Ex. WL (nm) 350.00

Ex. Slit (nm): 2.5    Scan Range -5nm to  5nm
Em. Slit (nm): 2.5    Ex. WL (nm) 350.00

Ex. Slit (nm): 5    Scan Range -10nm to 10nm
Em. Slit (nm): 5    Ex. WL (nm) 800.00

Ex. Slit (nm): 10    Scan Range -20nm to 20nm
Em. Slit (nm): 10    Ex. WL (nm) 850.00

Ex. Slit (nm): 20    Scan Range -20nm to 20nm
Em. Slit (nm): 20    Ex. WL (nm) 900.00
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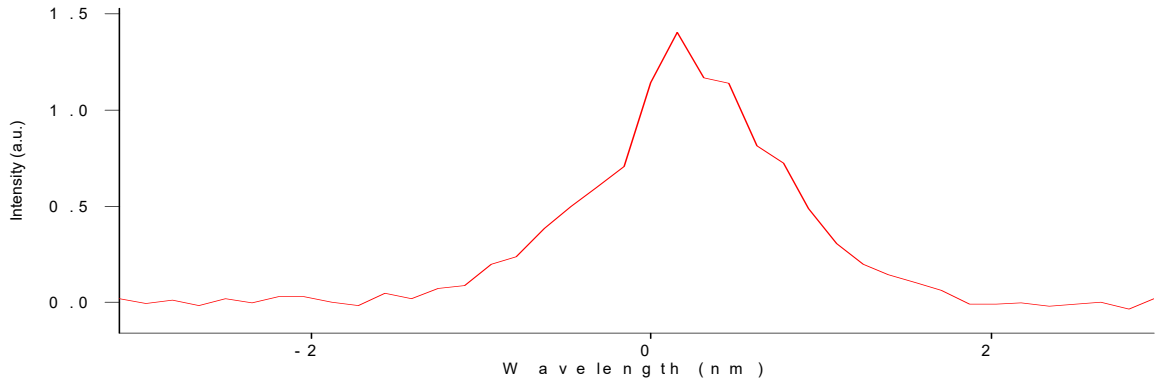
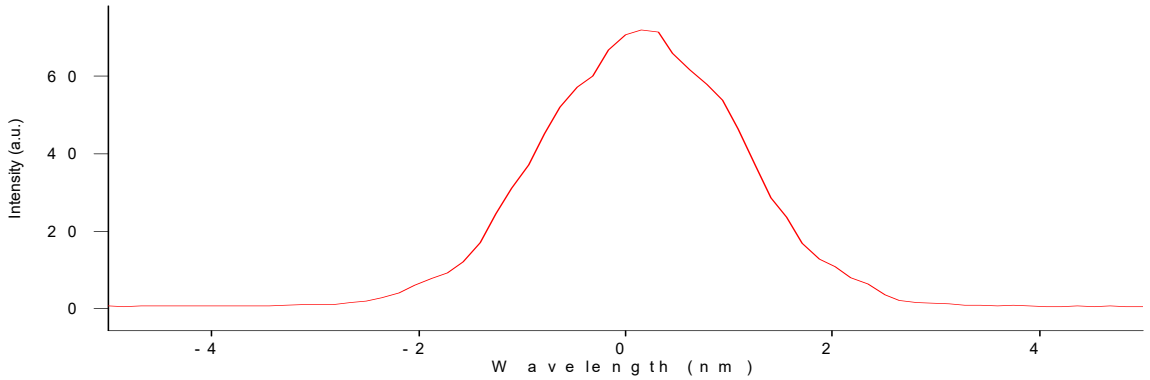
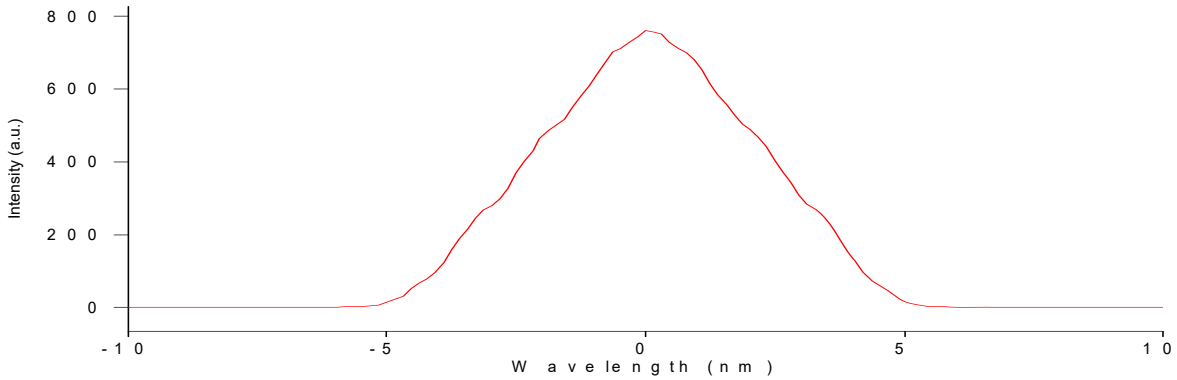
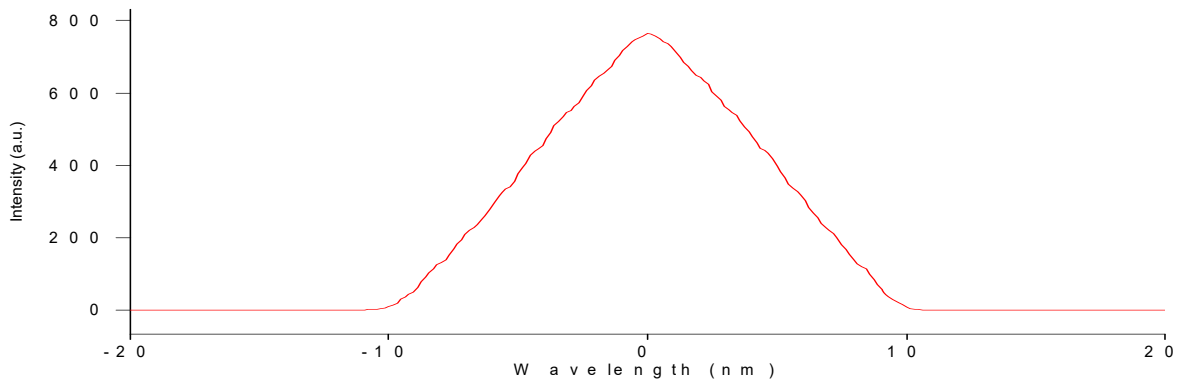
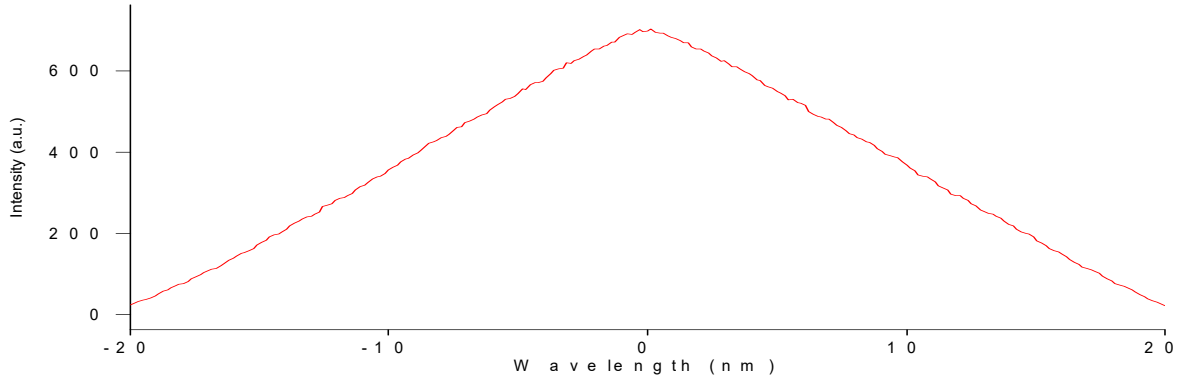










Em. Slit (nm)	Ex. EHT (V)	Em. EHT (V)	Tolerance (nm)	Measured (nm)	Result
1.5	979	1000	0.750 - 1.450	0.996	Passed
2.5	758	1000	2.000 - 2.750	2.229	Passed
5	824	817	4.500 - 5.500	5.045	Passed
10	822	734	9.700 - 11.000	10.097	Passed
20	1000	798	19.000 - 22.00	19.943	Passed

Spectral Bandwidth Accuracy Em.Slit test Passed

Stray Light

Instrument Parameters :

Scan mode	Emission
Scan type	Fluorescence Emission
Ex.Wavelength (nm)	350.00
Ex. Slit (nm)	5
Ex. Filter	Auto
Em.Wavelength (nm)	350.00
Em. Slit (nm)	5
Em. Filter	Auto
Ave. time (s)	10.00000
Ex. PMT (V)	481
Em. PMT (V)	502

Tolerance for the stray light test Int.(2)/Int.(1): ±0.0007
The measured ratio of Int.(2)/Int.(1): 0.00058

Stray Light test Passed

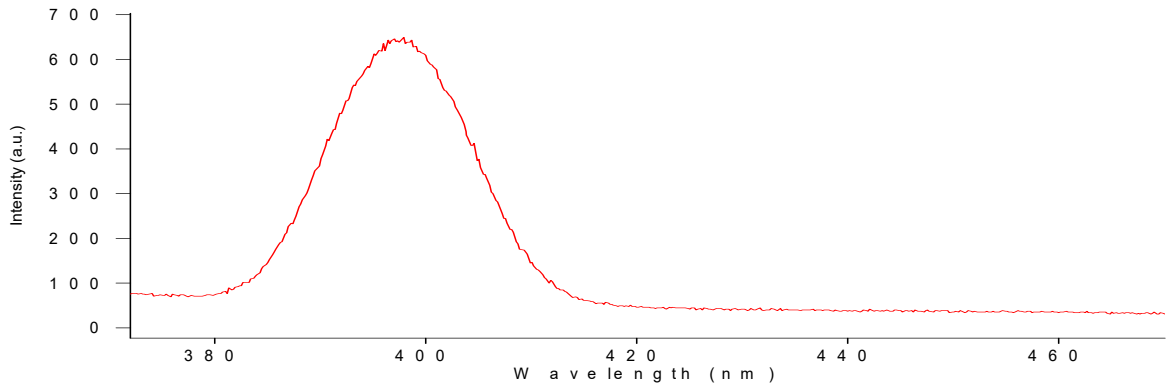
Raman water Sensitivity Ex. 350 nm

Instrument Parameters :

Scan mode	Emission
Scan type	Fluorescence Emission
Ex.Wavelength (nm)	350.00
Ex. Slit (nm)	10
Ex. Filter	Auto
Em.Wavelength (nm)	372.00

Em. Slit (nm)	10
Em. Filter	Open
Ave. time (s)	1.00000
Data interval (nm)	0.20

Ex. PMT (V)	420
Em. PMT (V)	937



Tolerance for Raman water (Ex.350 nm) S/N test: > 750:1
The measured Raman water (Ex.350 nm) S/N: 468:1

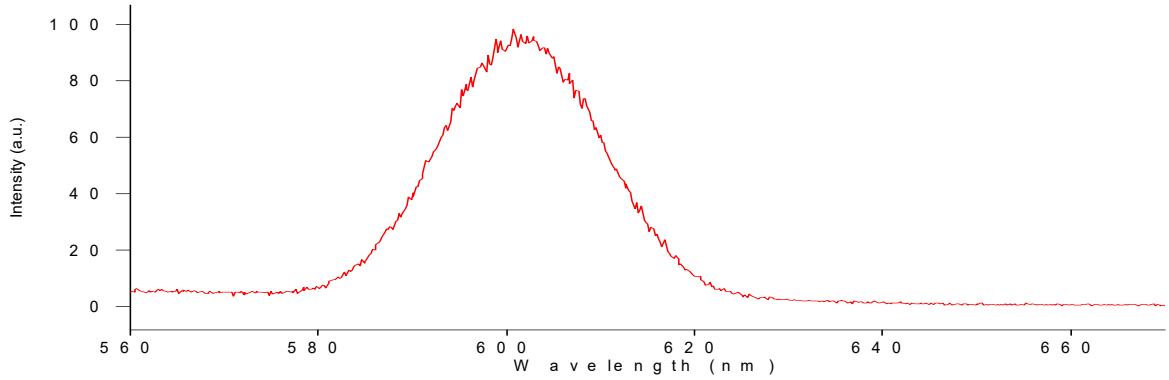
Raman water Sensitivity Ex. 350 nm test Failed

Raman water Sensitivity Ex. 500 nm

Instrument Parameters :

Scan mode	Emission
Scan type	Fluorescence Emission
Ex.Wavelength (nm)	500.00
Ex. Slit (nm)	10
Ex. Filter	Auto
Em.Wavelength (nm)	560.00
Em. Slit (nm)	10
Em. Filter	550 - 1100 nm
Ave. time (s)	1.00000
Data interval (nm)	0.20

Ex. PMT (V)	420
Em. PMT (V)	1000



Tolerance for Raman water (Ex.500 nm) S/N test: > 500:1
The measured Raman water (Ex.500 nm) S/N: 466:1

Raman water Sensitivity Ex. 500 nm test Failed

Sequence completed

Operator Signature :_____ Date : _____

Supervisor Signature :_____ Date : _____