Frego Creek Dye Trace

March 11, 2008 to June 16, 2008

Jeffrey A. Green[1], Andrew J. Peters[1], Andrew J. Luhmann[2], E. Calvin Alexander, Jr.[2] and Scott C. Alexander [2]

[1] Minnesota Department of Natural Resources, Division of Waters, 2300 Silver Creek Road NE, Rochester, Minnesota, 55906; Phone (507) 285-7430; Fax (507) 285-7144;
emails: jeff.green@dnr.state.mn.us & andrew.peters@dnr.state.mn.us

[2] Geology & Geophysics Department, University of Minnesota, 310 Pillsbury Drive. SE., Minneapolis, Minnesota, 55455; Phone (612) 624-3517; Fax (612) 625-3819;
emails: luhm0031@umn.edu, alexa001@umn.edu & alexa017@umn.edu

Table of Contents

Table of Contents i

Introduction 1

Results 2

Appendices
Appendix 1: Dye Input 4
Appendix 2: Dye Receptors 8
Appendix 3: Summary of Analytical Results 10
Appendix 4: Scanning Spectrofluorophotometer Results 13

Tables
Table 1: Dye Inputs 2

Figures
Figure 1: Location of Frego Creek Dye Trace, Canton, Minnesota 1
Figure 2: Area Springsheds 3

Introduction

A dye trace was conducted in an area near the city of Canton, Minnesota from March 11, 2008 to June 16, 2008. Dye traces have been completed in this area in the past and this effort was made to further refine delineation the springsheds in this area due to the close proximity of Frego Creek, a Minnesota designated trout stream. Much of the city of Canton's stormwater flows to sinkholes throughout the city limits and some just outside of city limits. Achieving a better understanding of the connection of these sinkholes receiving this stormwater flow and their connectivity to springs that provide a cold water source for Frego Creek was the goal of this trace.

The city of Canton, Minnesota is located in southern Fillmore County, Minnesota, very near the Minnesota/Iowa border (Figure 1).

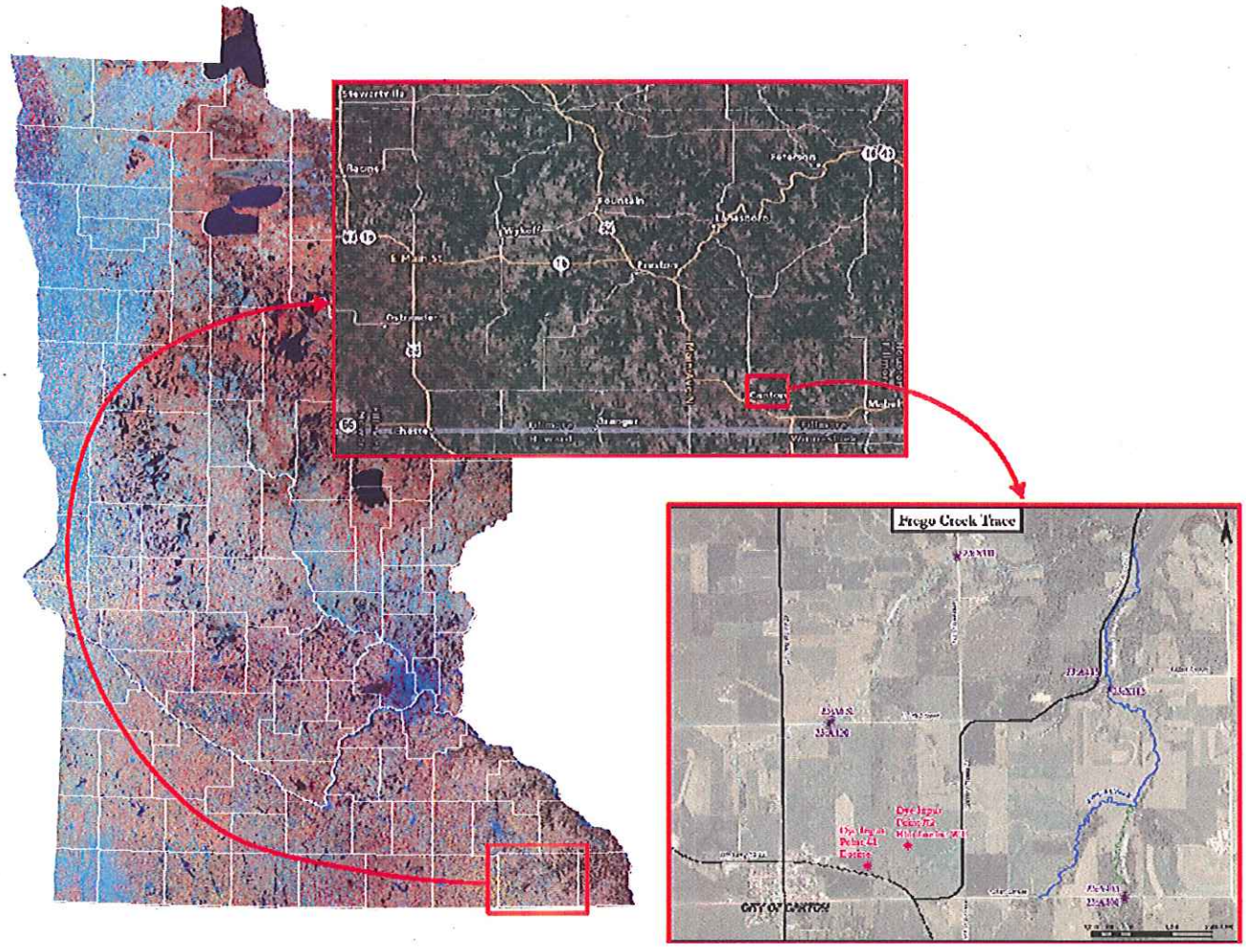


Figure 1: Location of Frego Creek Dye Trace, Canton, Minnesota

Dye tracing entails using fluorescent dyes to track groundwater flow directions and travel times. The dye is poured into a sinkhole or sinking stream; from there, it flows through the karst conduit system

until it re-emerges at a spring. For this project, the dyes used were Eosine and Rhodamine WT. Both direct water samples and passive dye detectors (packets of coconut charcoal also known as "bugs") were used and all the samples were analyzed at the University of Minnesota Geology Department using a scanning spectrofluorophotometer. The traces were designed and executed by Jeff Green and Andrew Peters of MNDNR Waters. E. Calvin Alexander, Jr., Andrew Luhmann, and Scott Alexander of the University of Minnesota Geology Department performed the sample analysis and interpretation.

Results

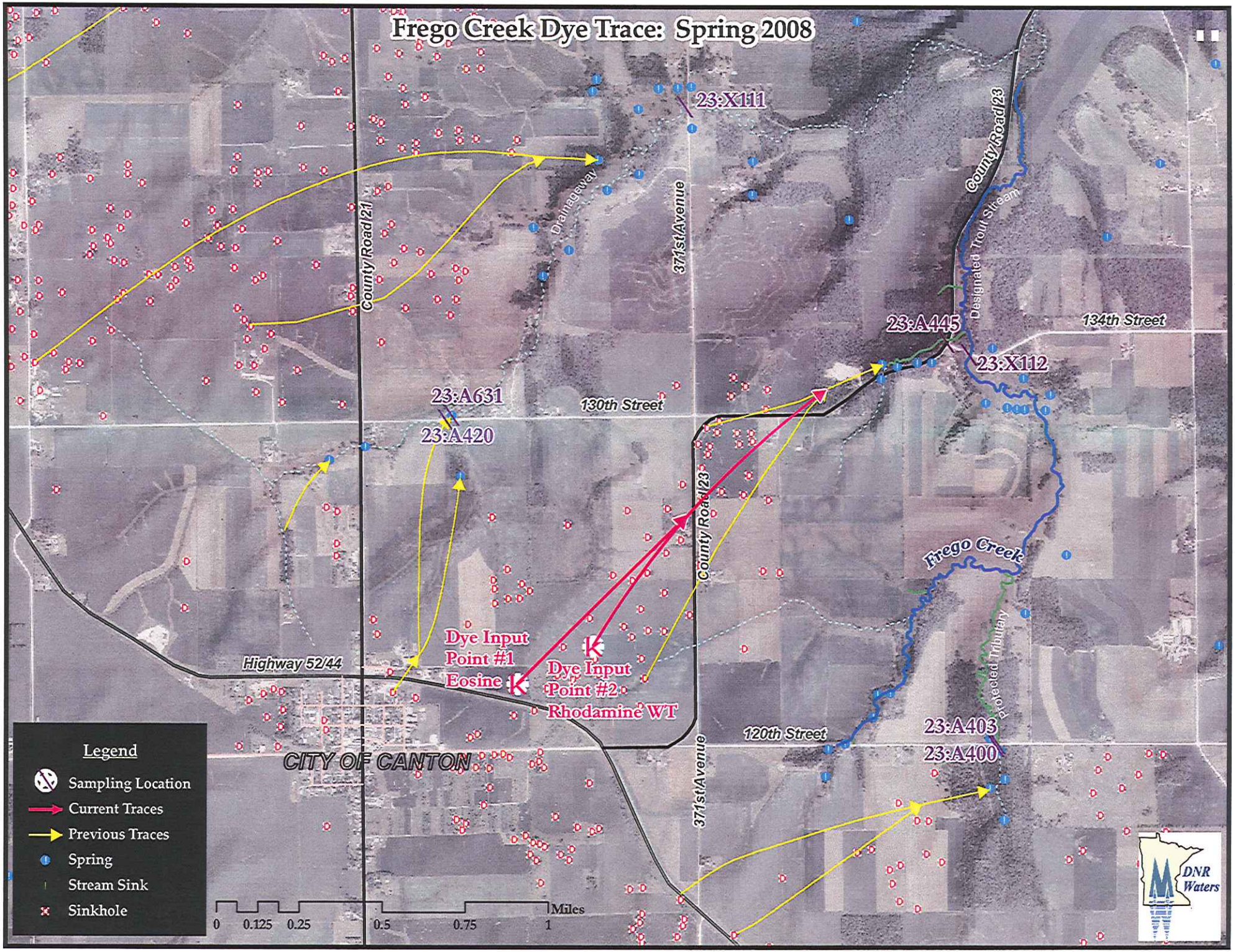
The MNDNR Waters and the Fillmore County SWCD had previously contacted the landowners who owned the relevant sinkholes and springs. Prior to dye injection, bugs had been placed at all the sampling points to determine background levels of dyes. The dye trace was run on March 31, 2008, using runoff from melting snow and recent precipitation events. Table 1 summarizes the dye input information.

Dye Inputs				
Dye Input Point	Dye (type, quantity)	Time	Runoff (Est.)	Dye Detection Point
Sinkhole 23:D7667	Rhodamine WT, 834.42 grams	1210 hrs.	2 - 4 G.P.M.	Spring A445 (A632)
Sinkhole 23:D7460	Eosine, 1186.91 grams	1313 hrs.	500 - 750 G.P.M.	Spring A445 (A632)

Table 1: Dye Inputs, Frego Creek Dye Trace, Canton, Minnesota

Direct water samples were taken at some or all the sampling sites on March 13th, March 25th, March 31st, April 2nd, April 9th, April 24th, May 7th, and May 30th of 2008 and are continuing to be sampled. Charcoal detectors were in place at all sampling locations from March 11th until present. Both dyes were detected at levels high enough for positive identification. The dyes, Rhodamine WT and Eosine, were detected in the charcoal detectors no more than 48 hours later. This translates to a groundwater flow rate of no greater than approximately ¾-mile per day. This is consistent with previous traces in this geologic setting (Ordovician Galena limestone).

The dye points and connections from this dye trace in addition to previously completed traces are shown in Figure 2. Through this double trace, we have further delineated the springshed feeding Spring A632. There are several springs visible in the immediate area of A632 but they all feed the same coldwater tributary to Frego Creek. The new trace from these sinkholes that was detected in the flow from the springs in this area has expanded the known boundaries of that springshed.


Frego Creek Dye Trace: Spring 2008
23:X111
County Road 21
Drainageway
371st Avenue
County Road 23
Designated Trout Stream
23:A445
134th Street
23:X112
23:A631
23:A420
130th Street
Frego Creek
Dye Input
Point #1
Eosine
Dye Input
Point #2
Rhodamine WT
Highway 52/44
Protected Tributary
120th Street
23:A403
23:A400
CITY OF CANTON
Legend
Sampling Location
Current Traces
Previous Traces
Spring
Stream Sink
Sinkhole
0
0.125
0.25
0.5
0.75
1
Miles
DNR Waters

Appendix 1

Dye Input

Frego Creek Dye Trace: March 11, 2008 to June 16, 2008

Dye Input Points:

Input Point #1:

Sinkhole D7667:	**Minnesota Karst Feature Database Number - MN23:D7667**
UTM:	**587,597 E, 4,820,714 N**
Township, Range, Section:	**NW ¼ of the SE ¼ of Section 21, T101N, R9W (Canton Twp., Fillmore Co.)**
Elevation:	**~1300 feet**

At 1210 CDT on 31 March 2008, 834.42 grams of Rhodamine WT dye solution was introduced into an open swallow hole in D7667 with an undetermined amount of water. Melting snow and on going precipitation were used to flush the dye into the sinkhole.

Input Point #2:

Sinkhole D7460:	**Minnesota Karst Feature Database Number - MN23:D7460**
UTM:	**587,238 E, 4,820,521 N**
Township, Range, Section:	**SE ¼ of the SW ¼ of Section 21, T101N, R9W (Canton Twp., Fillmore Co.)**
Elevation:	**~1290 feet**

At 1313 CDT on 31 March 2008, 1186.91 grams of Eosine dye solution was introduced into water flow into the sinkhole D7460. The water flow into the sinkhole was approximately 500 to 750 gallons per minute. Melting snow and on going precipitation were used to flush the dye into the sinkhole.

Photograph of Sinkhole D7460 After Dye Input

3/31/08:

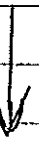
Frego Creek Trace:

Rain/Sleet 35°, High winds

Sinkhole 23D7667 on Tortoise Property

- Small flow, likely larger under ice, 2-4 gpm visible
- No ponding, swallet still snow covered, dye poured into void in bottom of sink
- RhWT Chromatint Lot 041807E, 834.42 gm
- UTM- 4820714, 587597
- Dye Poured at 1210

2nd Pour



3/31/08 cont.

Freyo Creek Trace:

Rain/Sleet, 35°, High Winds

Sinkhole 23D7460 on Livstikow Property

just north of

- Large flow, visited 1.5 hrs. previously with no flow visible. Current flow of 500-750 gpm. Runoff burst through snow and ice and filled the two depressions until levels stabilized.
- Dye Poured into flow that directly entered the two depressions
  - 1) Eosine Chromatint Red 0143, Lot 020706, 590.92 gm
  - 2) Eosine Chromatint Red 0143, Lot 020706, 595.99 gm
  - UTM - 4820521, 597238
  - Dye Poured at 1313

Appendix 2

Dye Receptors

Frego Creek Dye Trace: March 11, 2008 to June 16, 2008

Dye Receptor Locations:

Dye Receptor #1:
23:A631 Minnesota Karst Feature Database Number - MN23:A631
UTM: 586,868 E, 4,821,780 N
Notes: Receptor located on north side of spring. Accessed through farm.

Dye Receptor #2:
23:A420 Minnesota Karst Feature Database Number - MN23:A420
UTM: 586,841 E, 4,821,756 N
Notes: Receptor located south side of road on the east side of culvert

Dye Receptor #3:
23:A445 Minnesota Karst Feature Database Number - MN23:A445
UTM: 589,265 E, 4,822,137 N
Notes: Receptor located on west side of county road 23 along the north side of the culvert

Dye Receptor #4:
23X112 Minnesota Karst Feature Database Number - MN23:X112
UTM: 589,375 E, 4,822,077 N
Notes: Receptor located on the south side of the road tied to small tree on the west side of the east culvert

Dye Receptor #5:
23:A403 Minnesota Karst Feature Database Number - MN23:A403
UTM: 589,514 E, 4,820,195 N
Notes: Receptor located in culvert and is tied to debris on the south side of 120th street

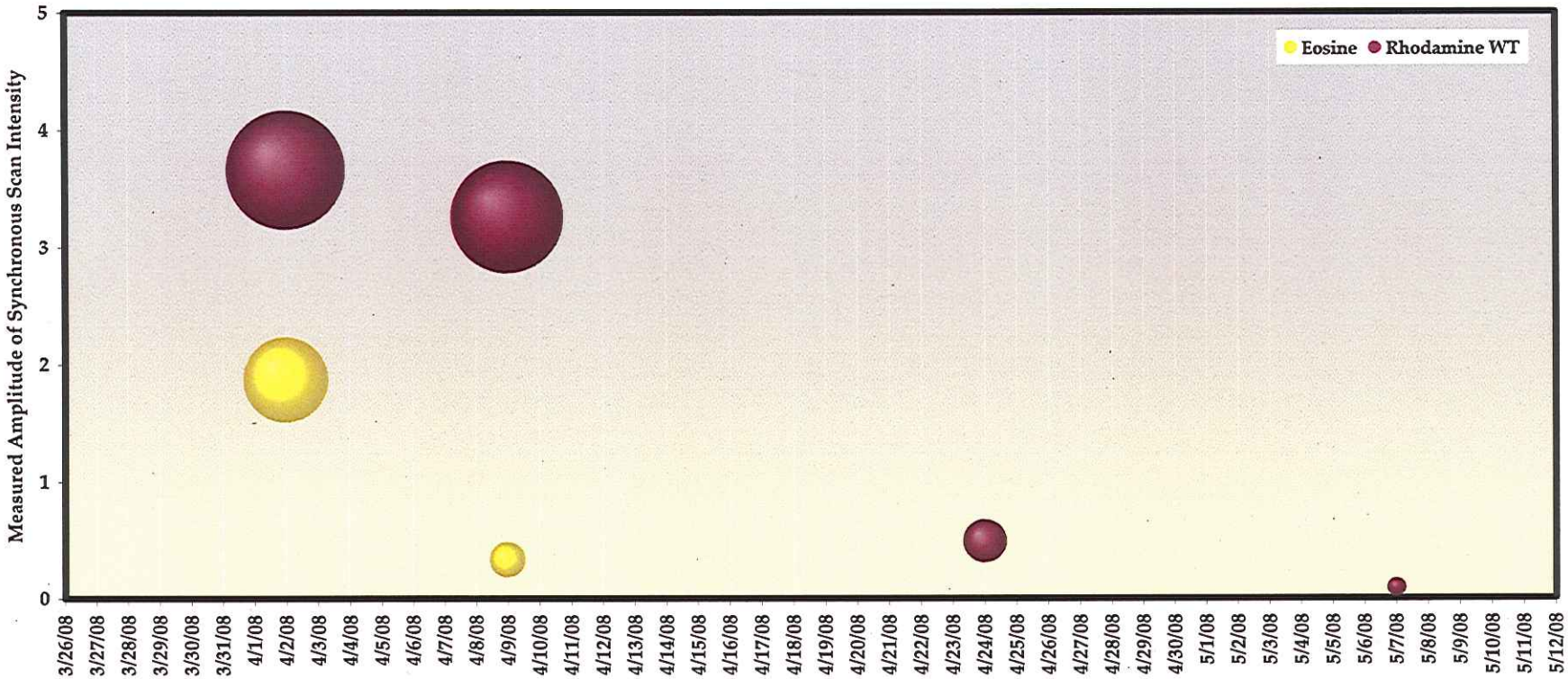
Dye Receptor #6:
23:A400 Minnesota Karst Feature Database Number - MN23:A400
UTM: 589,551 E, 4,820,220 N
Notes: Receptor located just upstream of 23:A403 along the west side of the stream

Dye Receptor #7:
23:X111 Minnesota Karst Feature Database Number - MN23:X111
UTM: 588,000 E, 4,823,275 N
Notes: Receptor located on the west side of the road dangling from a tree above the south culvert

Appendix 3

Summary of Analytical Results

Frego Creek Dye Trace: Analytical Results of 23:A445 Water Samples

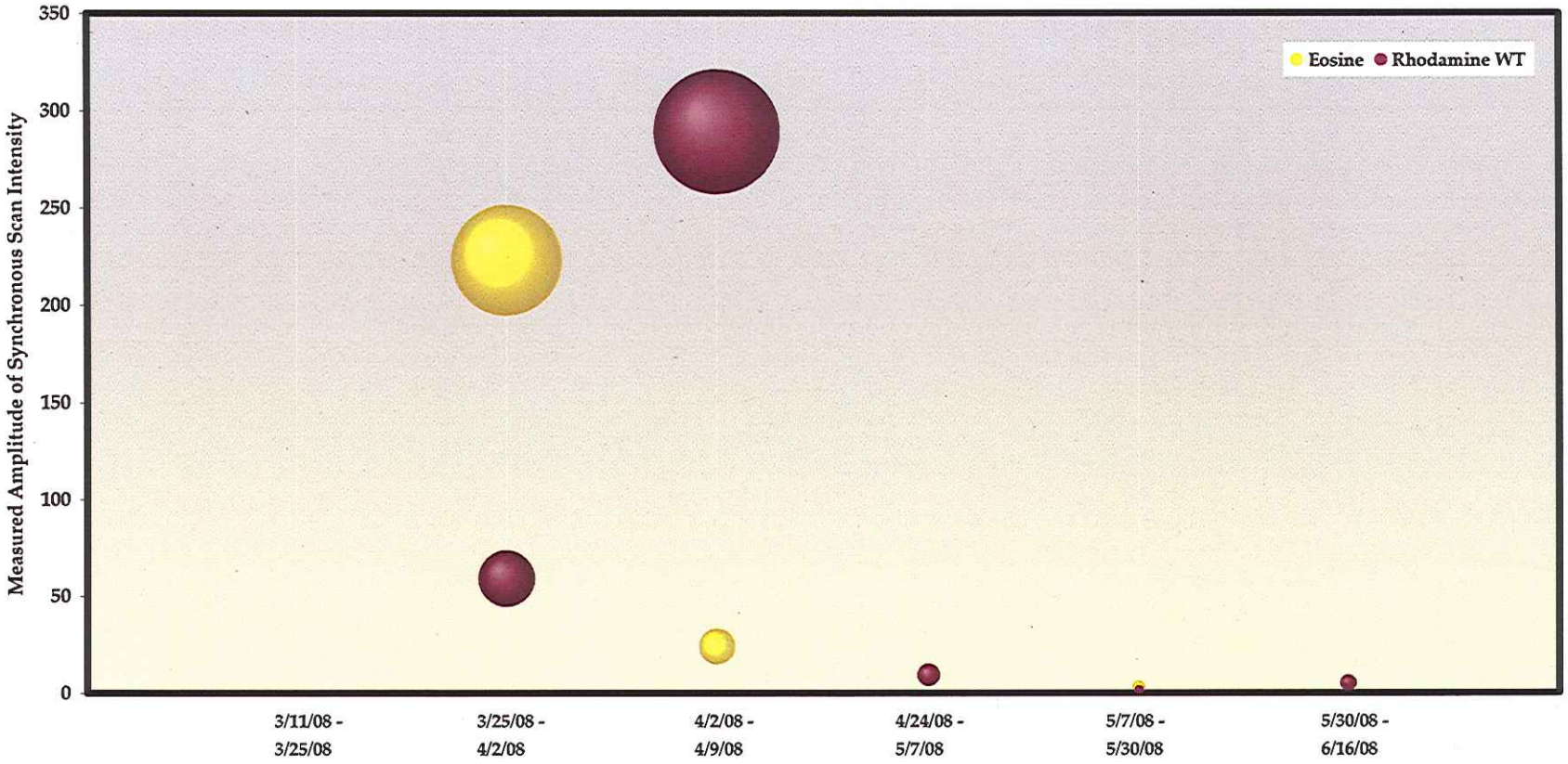


Frego Creek Dye Trace: Summary of Analytical Results

Sampling Location	3/11/08-3/25/08 (Carbon)	3/25/08-4/2/08 (Carbon)	3/31/08 (Water)	4/2/08-4/9/08 (Carbon)	4/2/08 (Water)	4/9/08 (Water)	4/9/08-4/24/08 (Carbon)	4/24/08 (Water)	4/24/08-5/7/08 (Carbon)	5/7/08 (Water)	5/7/08-5/30/08 (Carbon)	5/30/08-6/16/08 (Carbon)
23:A400	None	None	-	None	-	-	None	-	None	-	None	-
23:A403	None	None	-	None	-	-	-	None	-	-	None	-
23:A420	None	None	-	None	-	-	None	-	None	-	None	-
23:A631	None	None	None	None	-	-	None	-	None	-	None	None
23:A445	None	E*, WT*	-	E*, WT*	E*, WT*	E*, WT*	-	WT*	WT*	WT*	E*, WT*	WT*
23:X111	None	None	-	None	-	-	None	-	None	-	None	-
23:X112	None	None	-	None	-	-	None	-	None	-	None	-

* E – Eosine, WT – Rhodamine WT

Frego Creek Dye Trace: Analytical Results of Dye Receptor 23:A445 Samples



Frego Creek Dye Trace: Summary of Analytical Results

Sampling Location	3/11/08-3/25/08 (Carbon)	3/25/08-4/2/08 (Carbon)	3/31/08 (Water)	4/2/08-4/9/08 (Carbon)	4/2/08 (Water)	4/9/08 (Water)	4/9/08-4/24/08 (Carbon)	4/24/08 (Water)	4/24/08-5/7/08 (Carbon)	5/7/08 (Water)	5/7/08-5/30/08 (Carbon)	5/30/08-6/16/08 (Carbon)
23:A400	None	None	-	None	-	-	None	-	None	-	None	-
23:A403	None	None	-	None	-	-	-	None	-	-	None	-
23:A420	None	None	-	None	-	-	None	-	None	-	None	-
23:A631	None	None	None	None	-	-	None	-	None	-	None	None
23:A445	None	E, WT	-	E, WT	E, WT	E, WT	-	WT	WT	WT	E, WT	WT
23:X111	None	None	-	None	-	-	None	-	None	-	None	-
23:X112	None	None	-	None	-	-	None	-	None	-	None	-

* E – Eosine, WT – Rhodamine WT

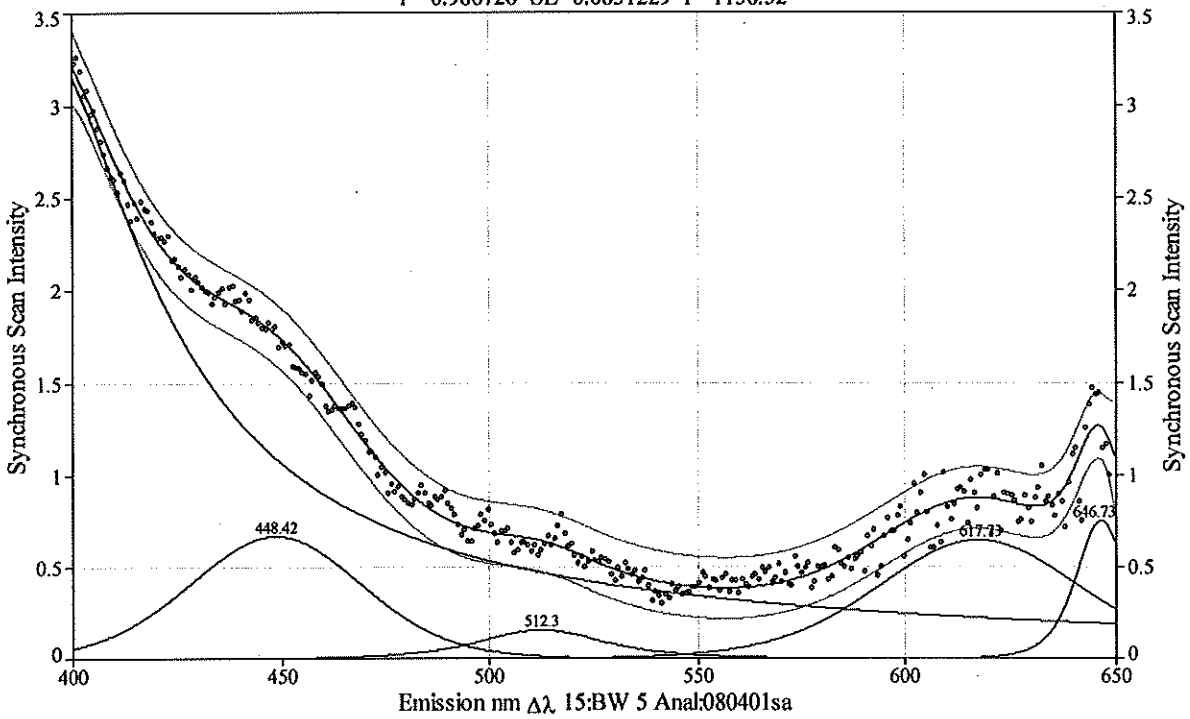
Appendix 4

Scanning Spectrofluorophotometer Results

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace

Frego Creek, Carbon, 23:A400, In:080311 1200, Out:080325 1408

Pk=Pearson VII Area 5 Peaks
r^2=0.986726 SE=0.0831229 F=1138.52



Description: Frego Creek, Carbon, 23:A400, In:080311 1200, Out:080325 1408
X Variable: Emission nm Δλ 15:BW 5 Anal:080401sa
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080311-080325\fc000325

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98672621	0.98581077	0.08312287	1138.52104

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	870.106293	391.760292	71.2414583	0.60813336
2	Pearson VII Area	35.6843158	448.419296	48.9421460	8.64187232
3	Pearson VII Area	6.87005739	512.299422	35.7645193	1.96623006
4	Pearson VII Area	41.0674689	617.728414	57.3774079	5.71008770
5	Pearson VII Area	12.4324289	646.729483	14.1421564	2.64704630

Measured Values

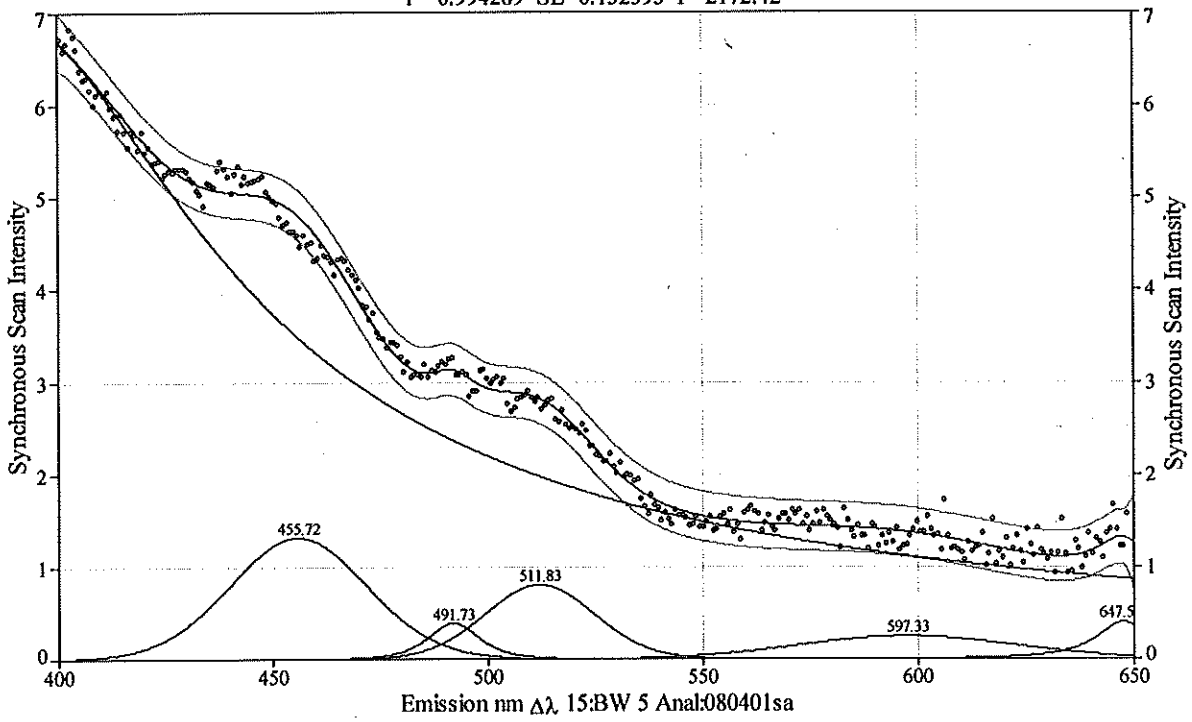
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	3.37073987	391.972477	71.2454095	0.98815765	0.00000000	0.00000000
2	Pearson VII Area	0.66807253	448.419296	48.9421460	1.00000000	102.932676	1.00000000
3	Pearson VII Area	0.15691827	512.299422	35.7645193	1.00000000	90.7113383	1.00000000
4	Pearson VII Area	0.64659932	617.728414	57.3774079	1.00000000	123.902784	1.00000000
5	Pearson VII Area	0.75063712	646.729483	14.1421564	1.00000001	33.5910595	1.00000001

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace

Frego Creek, Carbon, 23:A403, In:080311 1200, Out:080325 1402

Pk=Pearson VII Area 6 Peaks
r^2=0.994289 SE=0.132393 F=2172.42



Description: Frego Creek, Carbon, 23:A403, In:080311 1200, Out:080325 1402
X Variable: Emission nm Δλ 15:BW 5 Anal:080401sa
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080311-080325\fc030325

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99428886	0.99380960	0.13239278	2172.41953

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	4087.09892	388.223822	135.469600	0.58524239
2	Pearson VII Area	53.6120958	455.720399	37.5753546	14.0589815
3	Pearson VII Area	7.00140552	491.732927	14.1354000	1.84349460
4	Pearson VII Area	26.4663988	511.834401	30.3440952	19.4271140
5	Pearson VII Area	16.1114226	597.326555	60.2283640	167.899758
6	Pearson VII Area	9.11331821	647.498872	15.2070969	1.10337567

Measured Values

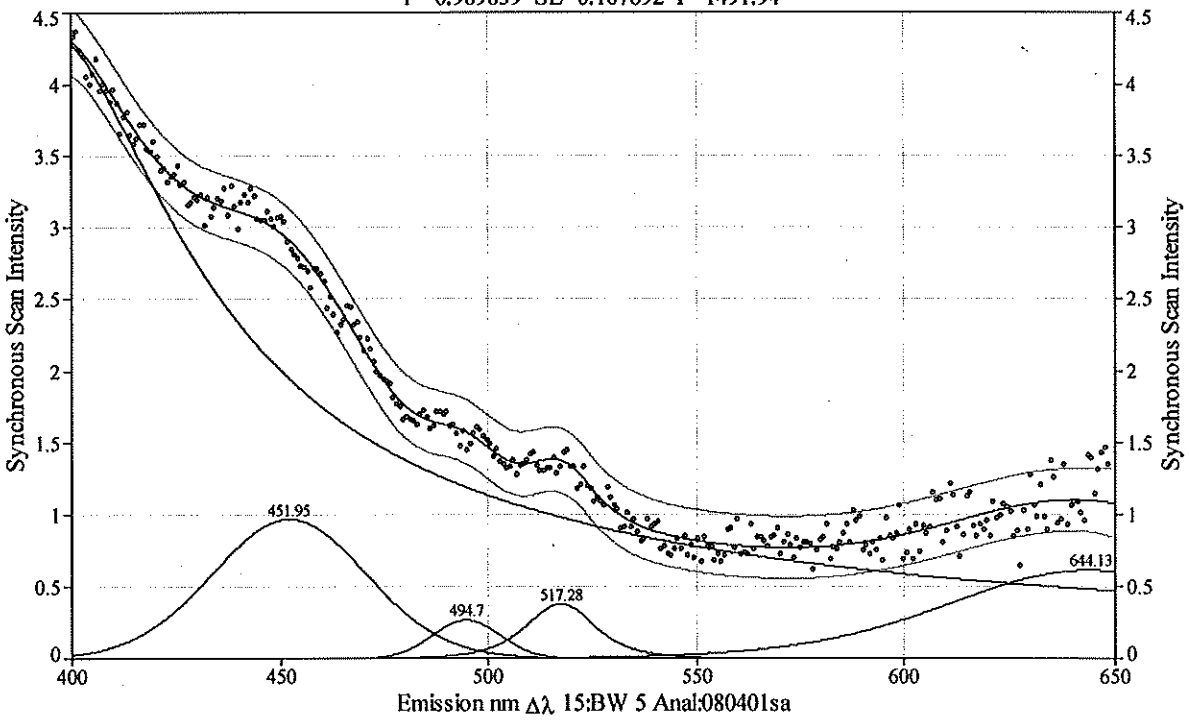
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	6.95731664	388.245413	135.469622	0.99936268	0.00000000	0.00000000
2	Pearson VII Area	1.32049336	455.720399	37.5753546	1.00000000	77.5111869	1.00000000
3	Pearson VII Area	0.39953354	491.732927	14.1354000	1.00000000	36.4853061	1.00000000
4	Pearson VII Area	0.81066979	511.834403	30.3440952	0.99999968	62.0701781	0.99999983
5	Pearson VII Area	0.25100194	597.326554	60.2283640	1.00000004	120.858923	1.00000002
6	Pearson VII Area	0.40543732	647.498872	15.2070969	0.99999995	47.9714491	0.99999998

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace

Frego Creek, Carbon, 23:A420, In:080311 1200, Out:080325 1345

Pk=Pearson VII Area 5 Peaks
r^2=0.989839 SE=0.107692 F=1491.94



Description: Frego Creek, Carbon, 23:A420, In:080311 1200, Out:080325 1345
X Variable: Emission nm Δλ 15:BW 5 Anal:080401sa
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080311-080325\fc200325

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98983864	0.98913786	0.10769181	1491.94273

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	8358.98737	393.639068	100.187610	0.51596343
2	Pearson VII Area	45.7169721	451.950975	44.0933291	25.6546179
3	Pearson VII Area	5.52451157	494.696263	19.2375823	167.595402
4	Pearson VII Area	8.91433902	517.281144	19.7244133	2.29738091
5	Pearson VII Area	55.3033015	644.130503	80.7998190	5.21781115

Measured Values

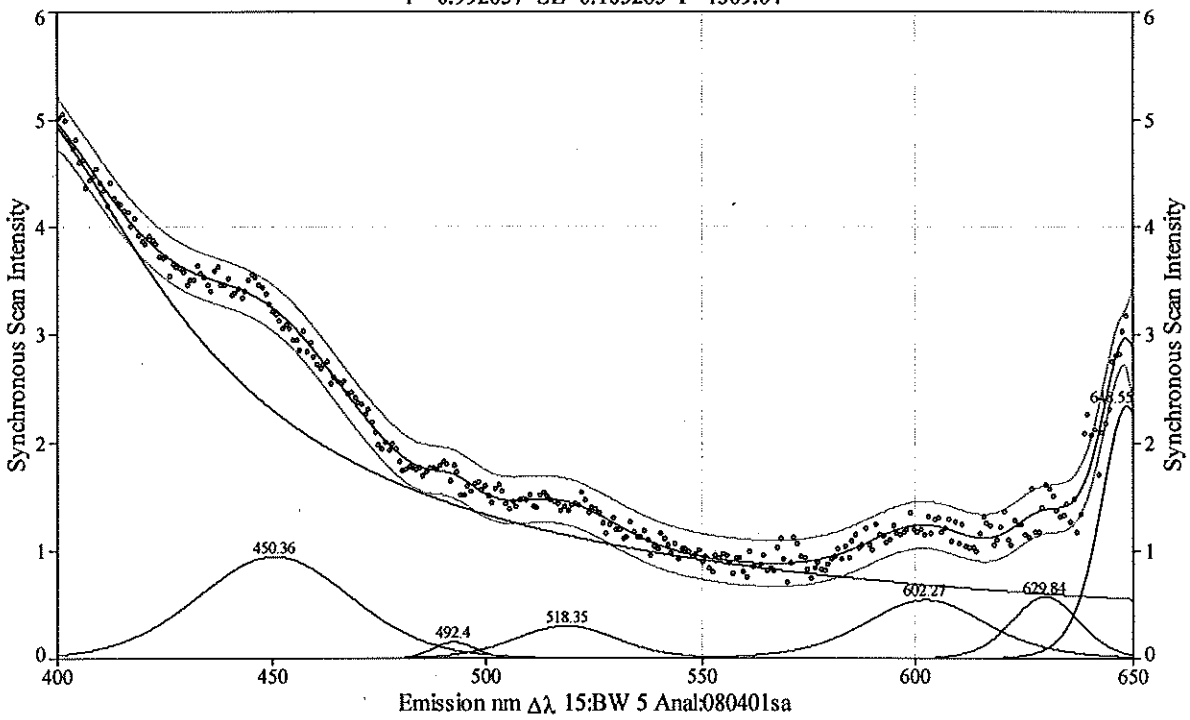
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	4.38645411	393.692661	100.187830	0.99786261	0.00000000	0.00000000
2	Pearson VII Area	0.96623008	451.950975	44.0933291	0.99999999	89.7174562	0.99999999
3	Pearson VII Area	0.26945528	494.696263	19.2375823	1.00000000	38.6038040	1.00000000
4	Pearson VII Area	0.37878573	517.281144	19.7244133	0.99999995	48.2025464	0.99999998
5	Pearson VII Area	0.61578893	644.130503	80.7998190	1.00000001	175.789854	1.00000001

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace

Frego Creek, Carbon, 23:A631, In:080311 1200, Out:080325 1340

Pk=Pearson VII Area 7 Peaks
r^2=0.992057 SE=0.105265 F=1309.04



Description: Frego Creek, Carbon, 23:A631, In:080311 1200, Out:080325 1340
X Variable: Emission nm Δλ 15:BW 5 Anal:080401sa
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080311-080325\fc310325

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99205662	0.99126792	0.10526512	1309.04346

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	5487.97693	388.637005	104.031864	0.53181274
2	Pearson VII Area	44.0353525	450.358182	42.4272789	7.32948085
3	Pearson VII Area	1.98570250	492.404600	11.8515454	167.816944
4	Pearson VII Area	9.60204405	518.345699	28.2478729	4.91298804
5	Pearson VII Area	21.0568980	602.273300	33.4098277	3.06555701
6	Pearson VII Area	11.7691092	629.835326	18.3621132	5.35606503
7	Pearson VII Area	38.1596256	648.547457	14.3627846	3.67593080

Measured Values

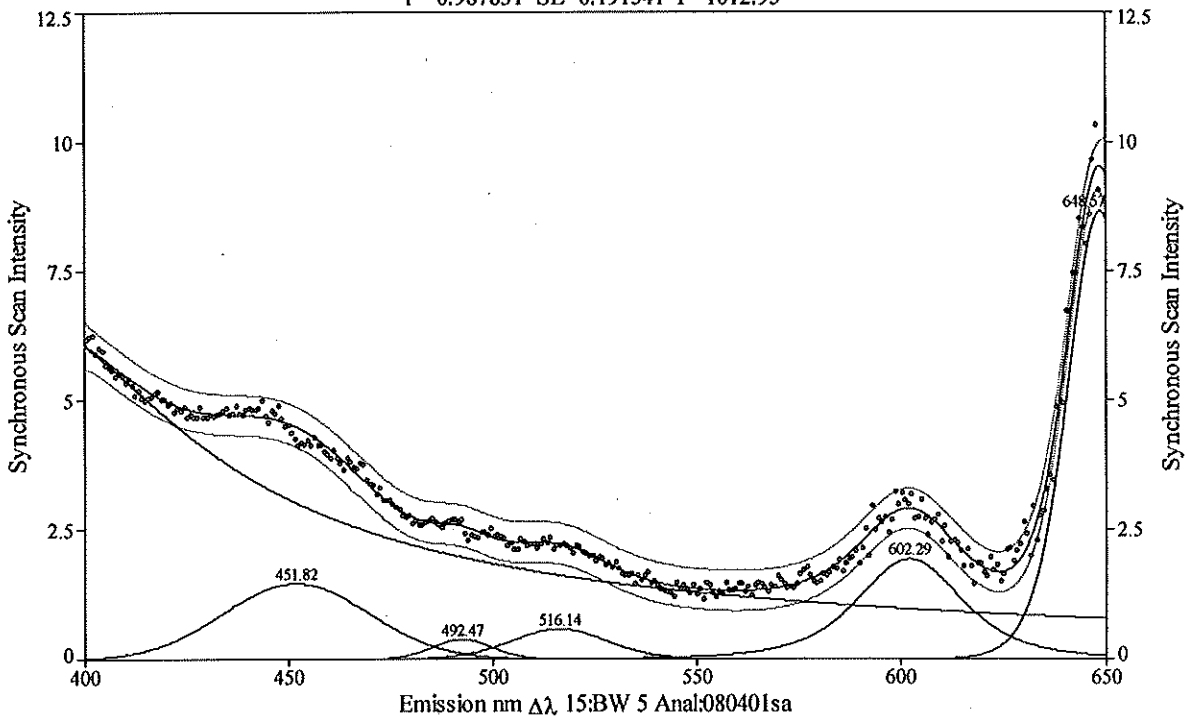
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	5.26756636	388.818807	104.034203	0.99303425	0.00000000	0.00000000
2	Pearson VII Area	0.94642931	450.358183	42.4272789	0.99999997	90.0494689	0.99999998
3	Pearson VII Area	0.15721110	492.404600	11.8515454	1.00000000	23.7822625	1.00000000
4	Pearson VII Area	0.30490302	518.345701	28.2478729	0.99999973	61.7899199	0.99999986
5	Pearson VII Area	0.54664377	602.273300	33.4098277	0.99999999	77.3977894	0.99999999
6	Pearson VII Area	0.57736544	629.835325	18.3621132	1.00000014	39.8595667	1.00000007
7	Pearson VII Area	2.34021203	648.547457	14.3627846	1.00000000	32.4288812	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace

Frego Creek, Carbon, 23:A445, In:080311 1200, Out:080325 1410

Pk=Pearson VII Area 6 Peaks
r^2=0.987831 SE=0.191541 F=1012.95



Description: Frego Creek, Carbon, 23:A445, In:080311 1200, Out:080325 1410
X Variable: Emission nm Δλ 15:BW 5 Anal:080401sa
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080311-080325\fc450325

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98783111	0.98680995	0.19154135	1012.94505

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	8648.71476	386.412980	119.794438	0.52828989
2	Pearson VII Area	66.1608803	451.817904	42.3440308	167.863602
3	Pearson VII Area	7.28621126	492.467553	17.1644090	12.9805602
4	Pearson VII Area	17.7607491	516.140015	27.5960412	8.32580376
5	Pearson VII Area	71.0556088	602.285255	30.1993799	2.01196833
6	Pearson VII Area	180.359344	648.587373	18.8129071	5.54030240

Measured Values

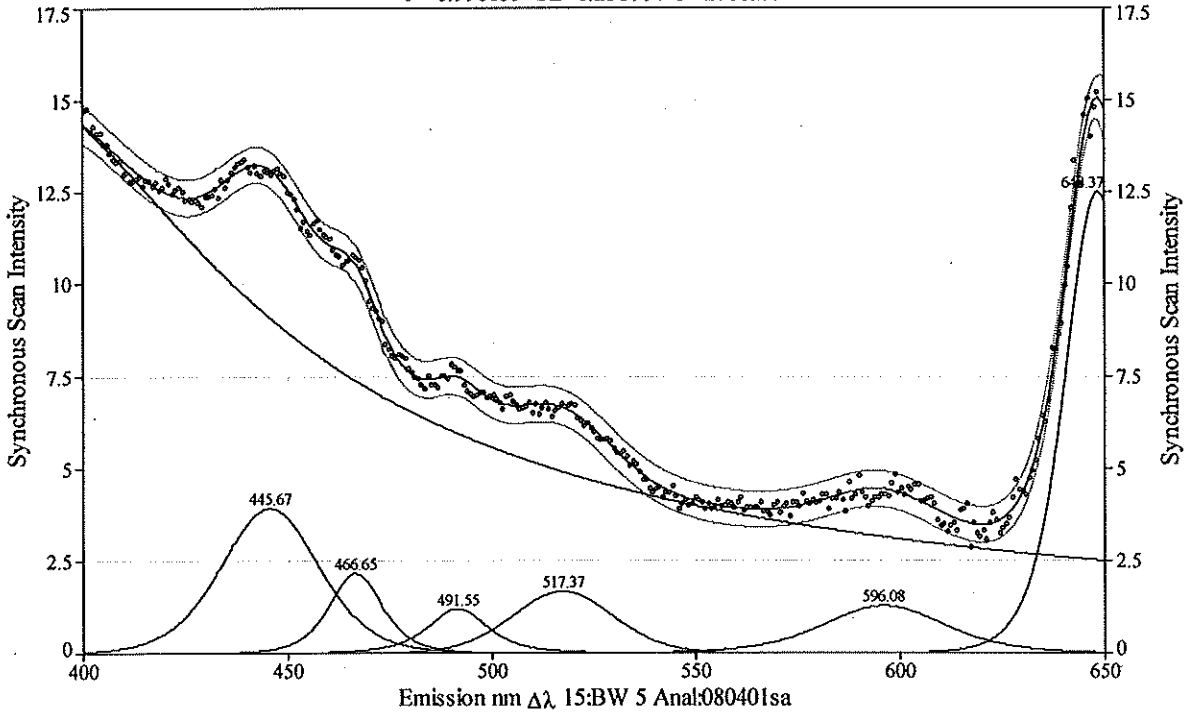
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	6.47821291	386.811927	119.804306	0.98676818	0.00000000	0.00000000
2	Pearson VII Area	1.46606499	451.817904	42.3440308	1.00000000	84.9708733	1.00000000
3	Pearson VII Area	0.39236113	492.467553	17.1644090	1.00000000	35.4972596	1.00000000
4	Pearson VII Area	0.58911929	516.140015	27.5960412	1.00000000	58.1506745	1.00000000
5	Pearson VII Area	1.93014195	602.285255	30.1993799	1.00000000	76.1434736	1.00000000
6	Pearson VII Area	8.64933413	648.566514	18.8129595	1.00444500	40.7237022	1.00225810

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace

Frego Creek, Carbon, 23:X111, In:080311 1200, Out:080325 1400

Pk=Pearson VII Area 7 Peaks
r^2=0.996159 SE=0.238704 F=2718.24



Description: Frego Creek, Carbon, 23:X111, In:080311 1200, Out:080325 1400
X Variable: Emission nm Δλ 15:BW 5 Anal:080401sa
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080311-080325\fcx10325

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99615883	0.99577744	0.23870436	2718.23834

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	33222.1885	383.035581	160.772978	0.52283465
2	Pearson VII Area	124.085460	445.666272	28.2079666	4.21736879
3	Pearson VII Area	39.4413416	466.646562	15.5268380	2.47831110
4	Pearson VII Area	26.1463501	491.552267	17.3605987	1.79917617
5	Pearson VII Area	53.3154463	517.371895	29.3238695	10.1916930
6	Pearson VII Area	51.7969554	596.079240	35.1976065	3.26772787
7	Pearson VII Area	268.194587	648.373964	18.9150013	3.69310094

Measured Values

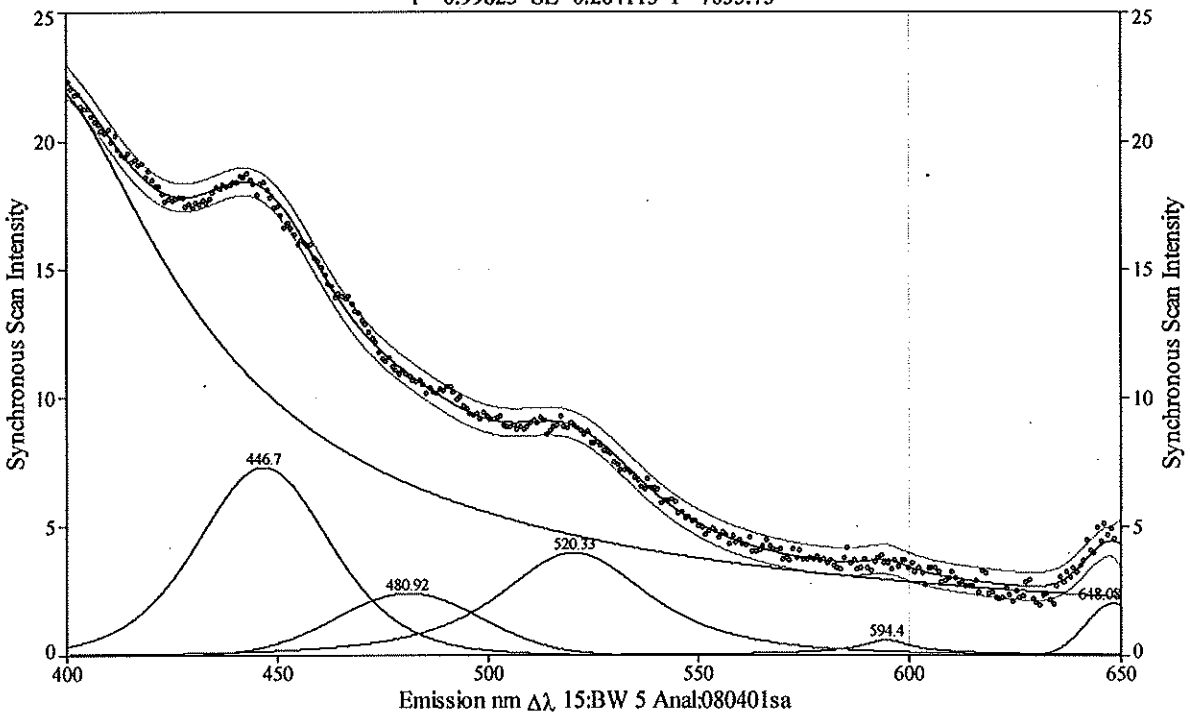
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	15.2131670	383.944954	160.811705	0.97763339	0.00000000	0.00000000
2	Pearson VII Area	3.91149259	445.666273	28.2079666	0.99999980	62.6612413	0.99999990
3	Pearson VII Area	2.15135277	466.646562	15.5268380	1.00000000	37.3495875	1.00000000
4	Pearson VII Area	1.20862972	491.552268	17.3605987	0.99999968	45.1230802	0.99999986
5	Pearson VII Area	1.67264343	517.371895	29.3238695	0.99999999	61.2001480	1.00000000
6	Pearson VII Area	1.28387803	596.079242	35.1976065	0.99999975	80.7570083	0.99999988
7	Pearson VII Area	12.4935233	648.373963	18.9150013	1.00000007	42.6817297	1.00000004

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace

Frego Creek, Carbon, 23:X112, In:080311 1200, Out:080325 1415

Pk=Pearson VII Area 6 Peaks
r^2=0.99823 SE=0.264113 F=7035.73



Description: Frego Creek, Carbon, 23:X112, In:080311 1200, Out:080325 1415
X Variable: Emission nm Δλ 15:BW 5 Anal:080401sa
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080311-080325\fcx20325

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99822958	0.99808102	0.26411269	7035.73010

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	36488.2881	393.222011	95.3804014	0.51801865
2	Pearson VII Area	310.351517	446.695843	37.0330622	3.26948092
3	Pearson VII Area	104.776573	480.918817	40.6637413	161.755384
4	Pearson VII Area	222.606765	520.328918	42.3791740	1.45583470
5	Pearson VII Area	332.620248	594.400031	18.1871560	0.51000000
6	Pearson VII Area	33.2803666	648.078346	15.2893941	78.8037563

Measured Values

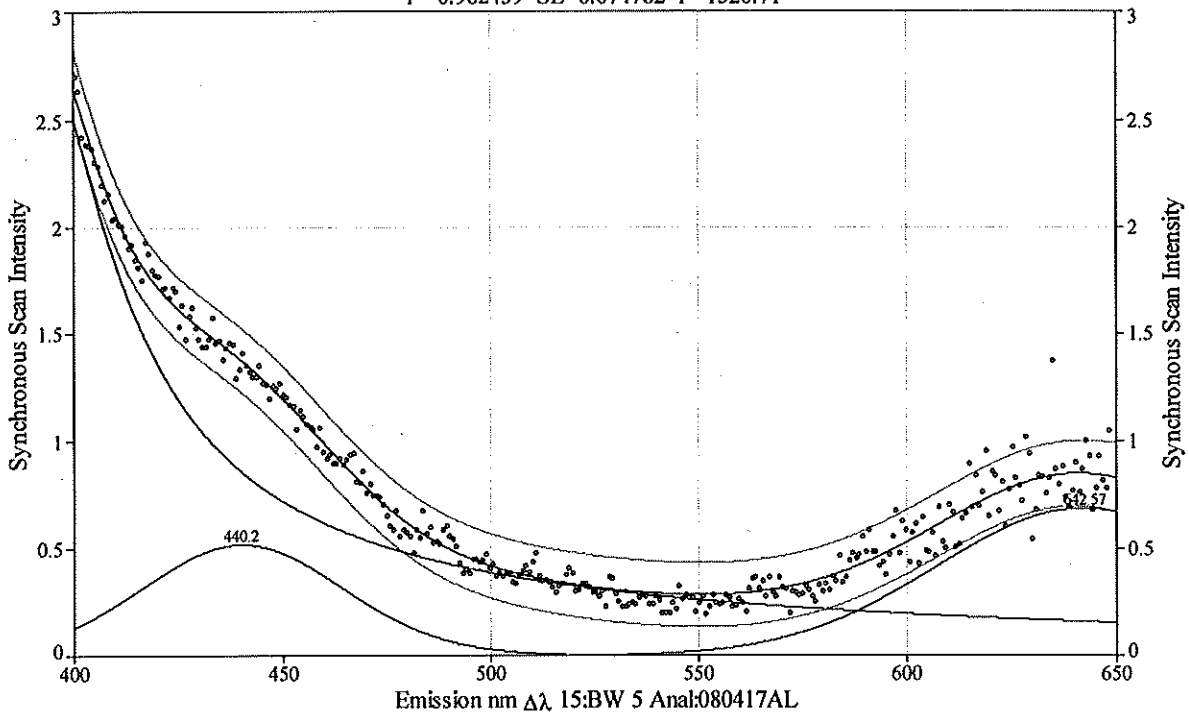
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	22.5583999	393.222012	95.3804014	0.99999997	0.00000000	0.00000000
2	Pearson VII Area	7.31168355	446.695843	37.0330622	1.00000001	84.9616249	1.00000000
3	Pearson VII Area	2.41758167	480.918817	40.6637413	1.00000000	81.6067257	1.00000000
4	Pearson VII Area	3.98934076	520.328918	42.3791740	1.00000000	118.136100	1.00000000
5	Pearson VII Area	0.61364621	594.400031	18.1871560	1.00000000	113.717369	1.00000000
6	Pearson VII Area	2.03960408	648.078346	15.2893941	0.99999996	30.7672826	0.99999998

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

LCCMR, Water, Eluent, Sampled:080417 1430

Pk=Pearson VII Area 3 Peaks
r^2=0.982439 SE=0.074782 F=1520.71



Description: LCCMR, Water, Eluent, Sampled:080417 1430
X Variable: Emission nm Δλ 15:BW 5 Anal:080417AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080325-080402\bl080417

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98243947	0.98173233	0.07478199	1520.71100

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	1866.35383	390.700069	53.9025533	0.52630966
2	Pearson VII Area	31.8773877	440.200151	56.7780485	13.1218952
3	Pearson VII Area	60.9031137	642.566762	83.1865120	167.872778

Measured Values

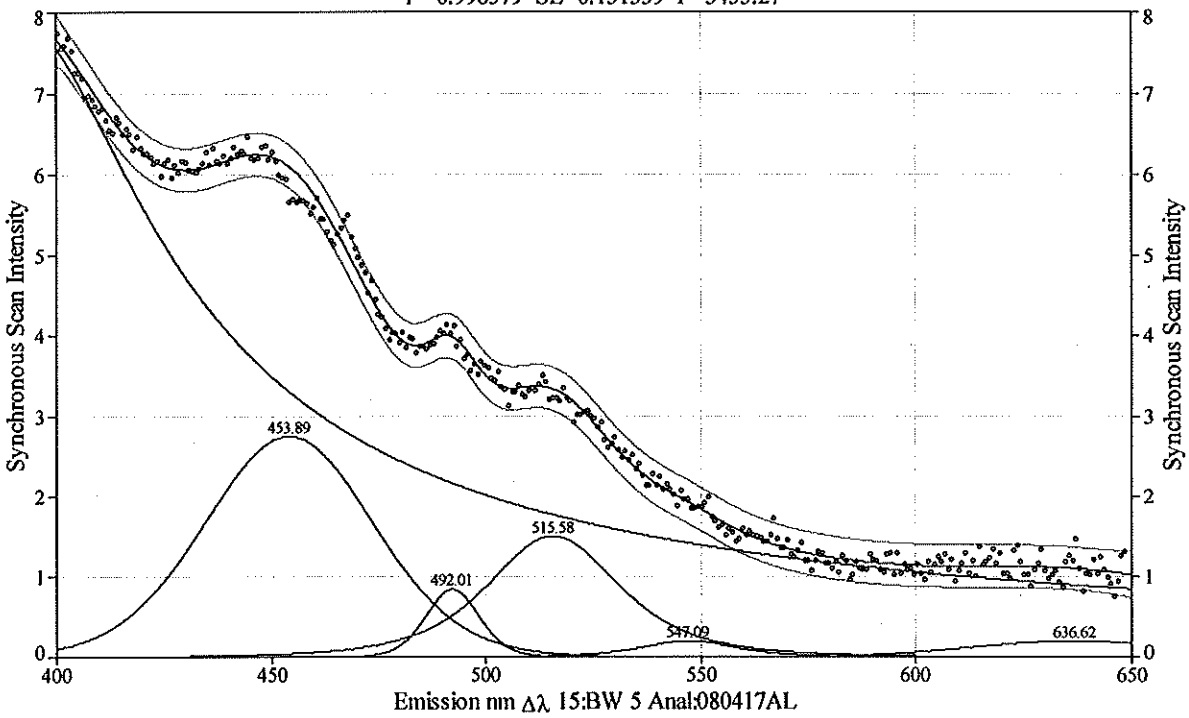
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	2.89756910	391.972477	54.1262898	0.91018998	0.00000000	0.00000000
2	Pearson VII Area	0.51903265	440.200151	56.7780485	1.00000000	117.379198	1.00000000
3	Pearson VII Area	0.68695890	642.566756	83.1865120	1.00000031	166.928596	1.00000017

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A400, In:080325 1408, Out:080402 0945

Pk=Pearson VII Area 6 Peaks
r^2=0.996379 SE=0.131339 F=3433.27



Description: Frego Creek, Carbon, 23:A400, In:080325 1408, Out:080402 0945
X Variable: Emission nm Δλ 15:BW 5 Anal:080417AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080325-080402\fc000402

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99637865	0.99607476	0.13133889	3433.27034

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	15979.9588	390.700243	100.680856	0.51514628
2	Pearson VII Area	138.210525	453.886897	46.1243376	8.84347123
3	Pearson VII Area	13.8239328	492.006764	14.8621509	5.77815692
4	Pearson VII Area	66.8038609	515.582769	36.3641922	1.96555505
5	Pearson VII Area	6.49771237	547.091774	25.7700506	1.90782579
6	Pearson VII Area	12.2775355	636.624659	57.1941970	167.916939

Measured Values

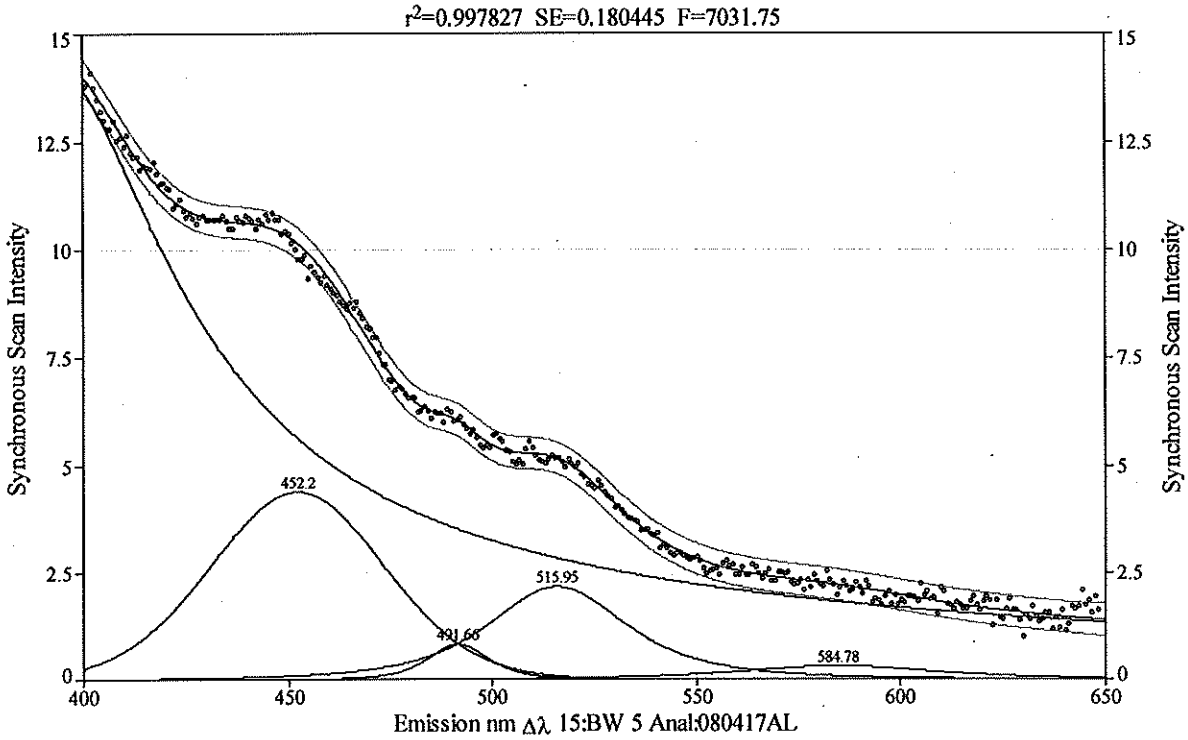
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	7.93742525	390.825688	100.682057	0.99502857	0.00000000	0.00000000
2	Pearson VII Area	2.74728474	453.886897	46.1243376	0.99999999	96.8942813	1.00000000
3	Pearson VII Area	0.84071525	492.006764	14.8621509	1.00000000	32.0640568	1.00000000
4	Pearson VII Area	1.50060163	515.582769	36.3641922	1.00000000	92.2405958	1.00000000
5	Pearson VII Area	0.20479279	547.091774	25.7700506	0.99999994	65.8882698	0.99999997
6	Pearson VII Area	0.20142044	636.624659	57.1941970	1.00000000	114.770298	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A403, In:080325 1402, Out:080402 0948

Pk=Pearson VII Area 5 Peaks
r^2=0.997827 SE=0.180445 F=7031.75



Description: Frego Creek, Carbon, 23:A403, In:080325 1402, Out:080402 0948
X Variable: Emission nm Δλ 15:BW 5 Anal:080417AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080325-080402\fc030402

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99782664	0.99767676	0.18044453	7031.74966

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	20725.1021	392.941241	89.4463504	0.51877365
2	Pearson VII Area	238.992580	452.204085	50.3702220	15.0553283
3	Pearson VII Area	17.9493522	491.662143	17.5024792	1.93823938
4	Pearson VII Area	110.338226	515.946411	40.0618886	1.66122390
5	Pearson VII Area	23.9082844	584.777450	57.9310372	1.53526502

Measured Values

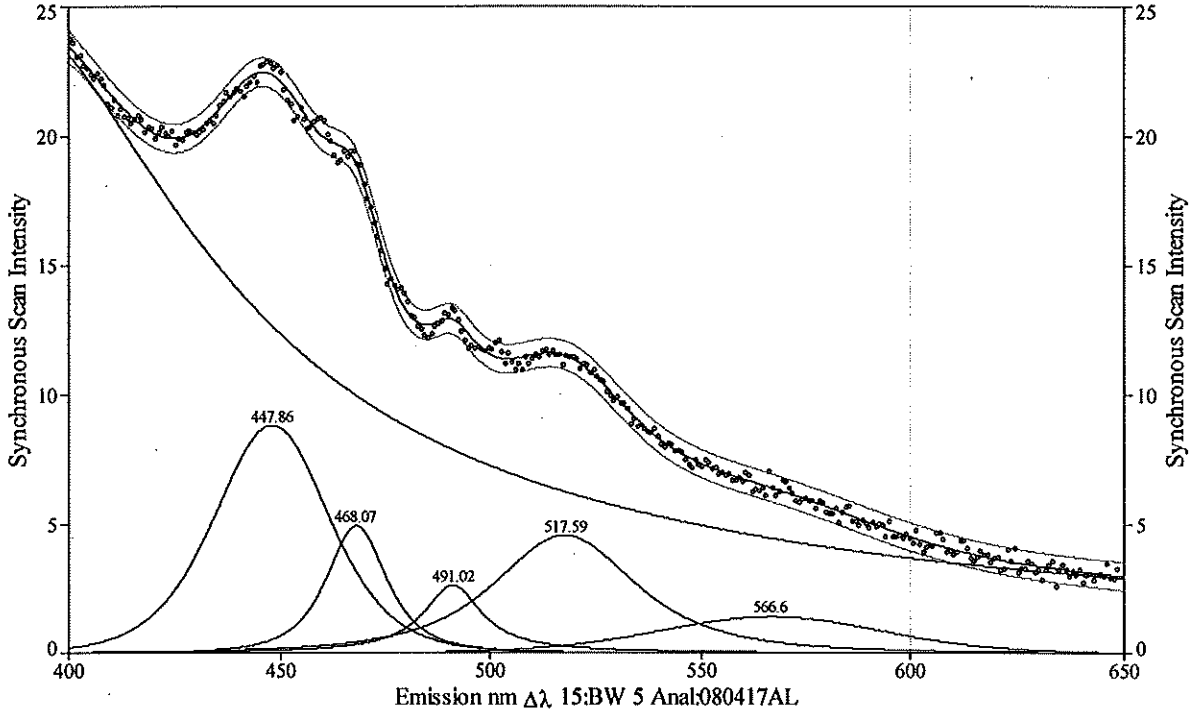
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	14.2025243	392.941241	89.4463504	0.99999996	0.00000000	0.00000000
2	Pearson VII Area	4.39575200	452.204085	50.3702220	1.00000000	103.694892	1.00000000
3	Pearson VII Area	0.83549359	491.662143	17.5024792	1.00000001	44.5604667	1.00000000
4	Pearson VII Area	2.16997285	515.946412	40.0618886	0.99999989	106.688734	0.99999995
5	Pearson VII Area	0.31844233	584.777449	57.9310372	1.00000006	158.405999	1.00000002

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A420, In:080325 1315, Out:080402 1030

Pk=Pearson VII Area 6 Peaks
r^2=0.998552 SE=0.268988 F=8604.41



Description: Frego Creek, Carbon, 23:A420, In:080325 1315, Out:080402 1030
X Variable: Emission nm Δλ 15:BW 5 Anal:080417AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080325-080402\fc200402

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99855188	0.99843036	0.26898776	8604.41284

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	15027.7440	385.404935	128.938357	0.57668524
2	Pearson VII Area	327.541910	447.862683	32.3898012	3.34996534
3	Pearson VII Area	109.736976	468.065418	17.1576145	1.55190785
4	Pearson VII Area	77.3042763	491.019859	17.0460919	0.90157742
5	Pearson VII Area	236.066019	517.591474	39.7188920	1.53461021
6	Pearson VII Area	99.9693157	566.604343	63.4624450	7.04196128

Measured Values

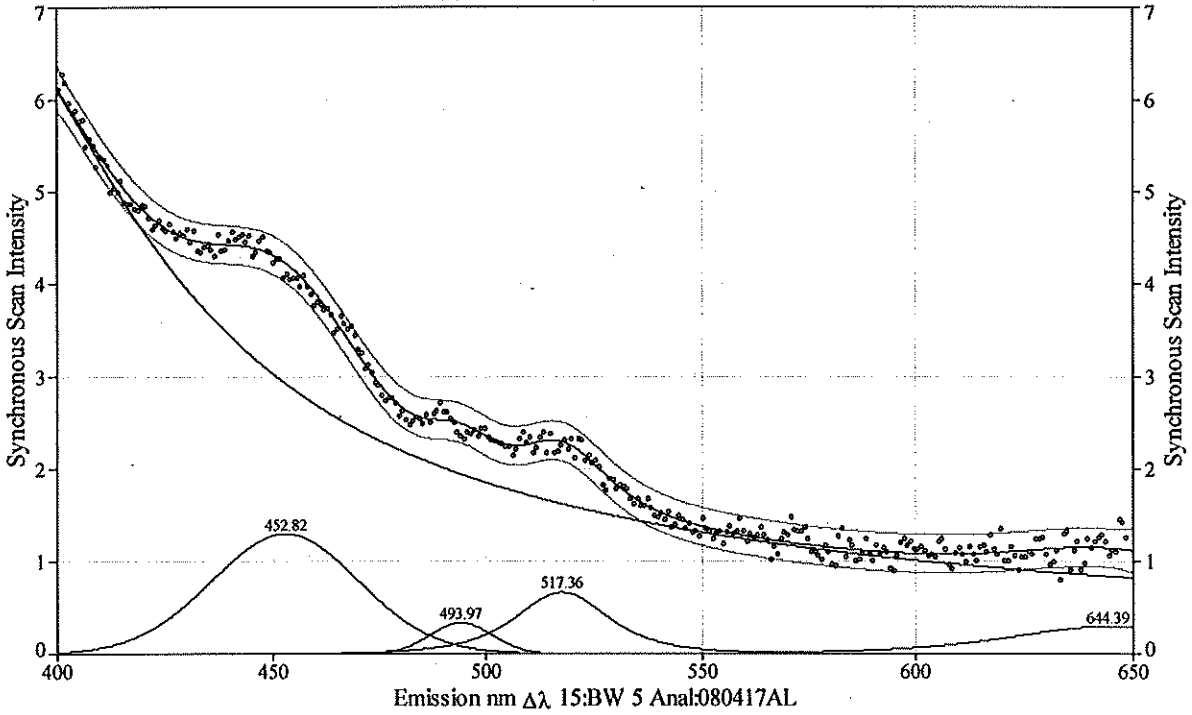
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	24.6988436	387.385321	129.140570	0.94048486	0.00000000	0.00000000
2	Pearson VII Area	8.84147162	447.862682	32.3898012	1.00000005	74.0500570	1.00000003
3	Pearson VII Area	4.95001024	468.065419	17.1576145	0.99999966	46.7394125	0.99999986
4	Pearson VII Area	2.65955321	491.019857	17.0460919	1.00000042	60.6891836	1.00000013
5	Pearson VII Area	4.58540199	517.591474	39.7188920	1.00000000	108.623185	1.00000000
6	Pearson VII Area	1.43452895	566.604343	63.4624450	1.00000000	135.028440	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A631, In:080325 1340, Out:080402 1025

Pk=Pearson VII Area 5 Peaks
r^2=0.995402 SE=0.102393 F=3315.32



Description: Frego Creek, Carbon, 23:A631, In:080325 1340, Out:080402 1025
X Variable: Emission nm Δλ 15:BW 5 Anal:080417AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080325-080402\fc310402

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99540154	0.99508440	0.10239284	3315.31742

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	22936.2959	382.657930	114.143117	0.51023554
2	Pearson VII Area	56.8785919	452.817677	40.7780419	21.8948438
3	Pearson VII Area	6.19944541	493.974498	17.1635976	167.913899
4	Pearson VII Area	21.1657472	517.357259	25.5939841	1.81186727
5	Pearson VII Area	20.6674475	644.391303	55.3720034	1.92369631

Measured Values

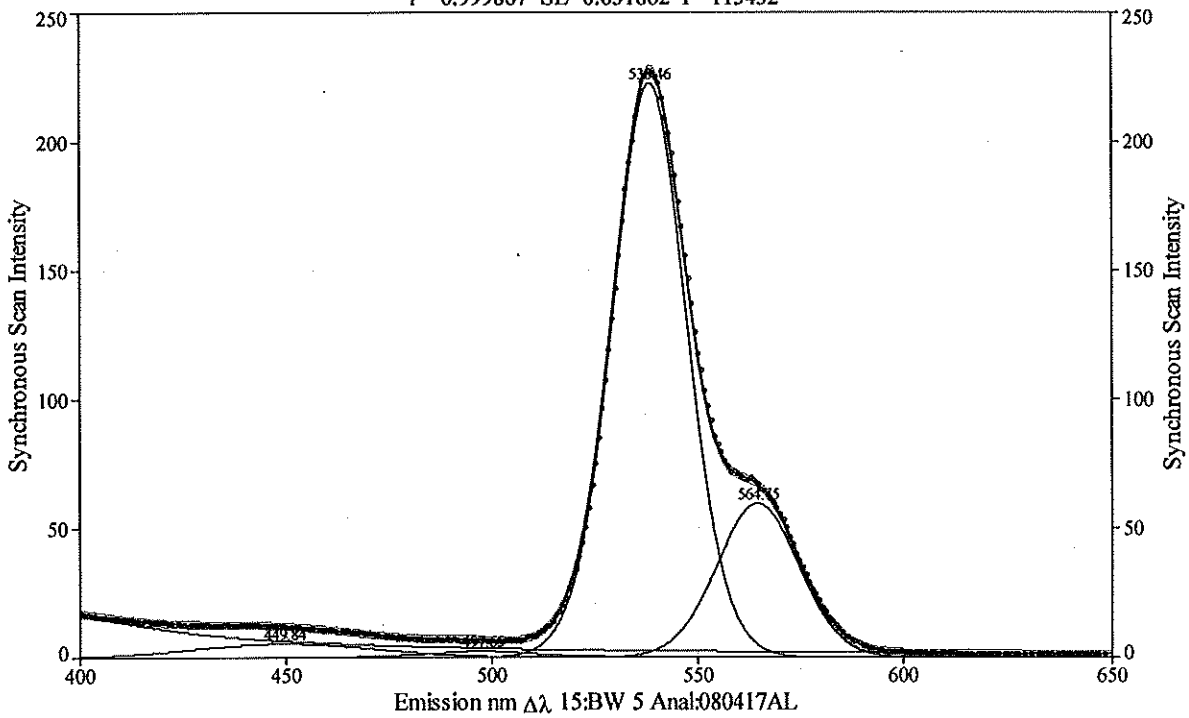
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	6.89592883	382.798165	114.144458	0.99509773	0.00000000	0.00000000
2	Pearson VII Area	1.29802494	452.817675	40.7780419	1.00000015	83.2076742	1.00000008
3	Pearson VII Area	0.33891346	493.974498	17.1635976	1.00000000	34.4418035	1.00000000
4	Pearson VII Area	0.66465437	517.357261	25.5939841	0.99999967	66.3879681	0.99999986
5	Pearson VII Area	0.30364355	644.391303	55.3720034	1.00000000	141.258173	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A445, In:080325 1410, Out:080402 1000

Pk=Pearson VII Area 5 Peaks
r^2=0.999867 SE=0.631862 F=115432



Description: Frego Creek, Carbon, 23:A445, In:080325 1410, Out:080402 1000
X Variable: Emission nm Δλ 15:BW 5 Anal:080417AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080325-080402\fc450402

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99986734	0.99985819	0.63186229	1.1543e+05

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	34420.2359	390.755835	80.1917536	0.51269433
2	Pearson VII Area	311.088249	449.841539	52.7704906	167.917066
3	Pearson VII Area	111.468266	497.652903	31.1373750	1.26021279
4	Pearson VII Area	5032.36563	538.455606	20.7590468	9.84953412
5	Pearson VII Area	1498.61881	564.749303	23.4063785	20.2614254

Measured Values

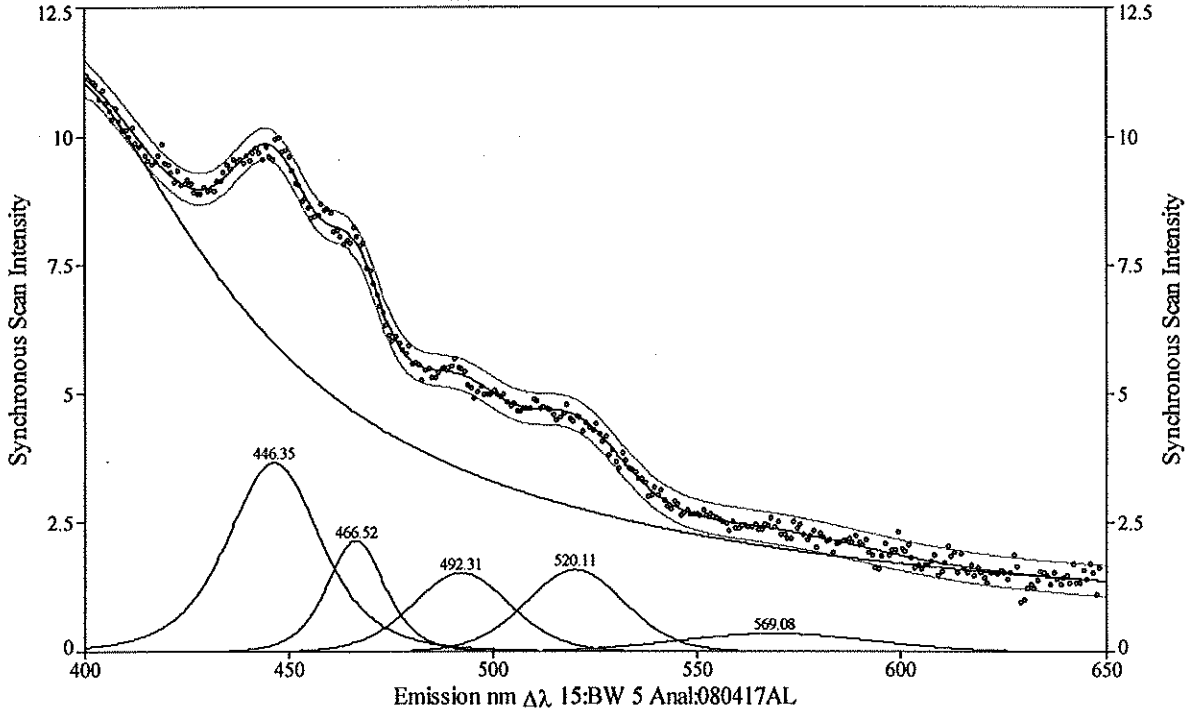
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	18.1283678	390.755834	80.1917536	1.00000005	0.00000000	0.00000000
2	Pearson VII Area	5.53142190	449.841539	52.7704906	0.99999999	105.893346	1.00000000
3	Pearson VII Area	2.58094054	497.652903	31.1373750	1.00000000	92.0837762	1.00000000
4	Pearson VII Area	222.844349	538.455607	20.7590468	0.99999982	43.3893672	0.99999991
5	Pearson VII Area	59.5356333	564.749300	23.4063785	1.00000042	47.8355881	1.00000023

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:X111, In:080325 1400, Out:080402 1015

Pk=Pearson VII Area 6 Peaks
r^2=0.997921 SE=0.147964 F=5988.64



Description: Frego Creek, Carbon, 23:X111, In:080325 1400, Out:080402 1015
X Variable: Emission nm Δλ 15:BW 5 Anal:080417AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080325-080402\fcx10402

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99792068	0.99774619	0.14796360	5988.63929

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	14575.7266	392.441481	116.125490	0.52843105
2	Pearson VII Area	118.672672	446.347046	27.0796651	2.25305473
3	Pearson VII Area	42.1815180	466.515946	16.9059833	2.84946905
4	Pearson VII Area	47.2046173	492.311961	28.0931476	6.21120203
5	Pearson VII Area	49.6801100	520.114263	28.5597035	6.80834892
6	Pearson VII Area	21.9322588	569.082922	57.5372323	167.881880

Measured Values

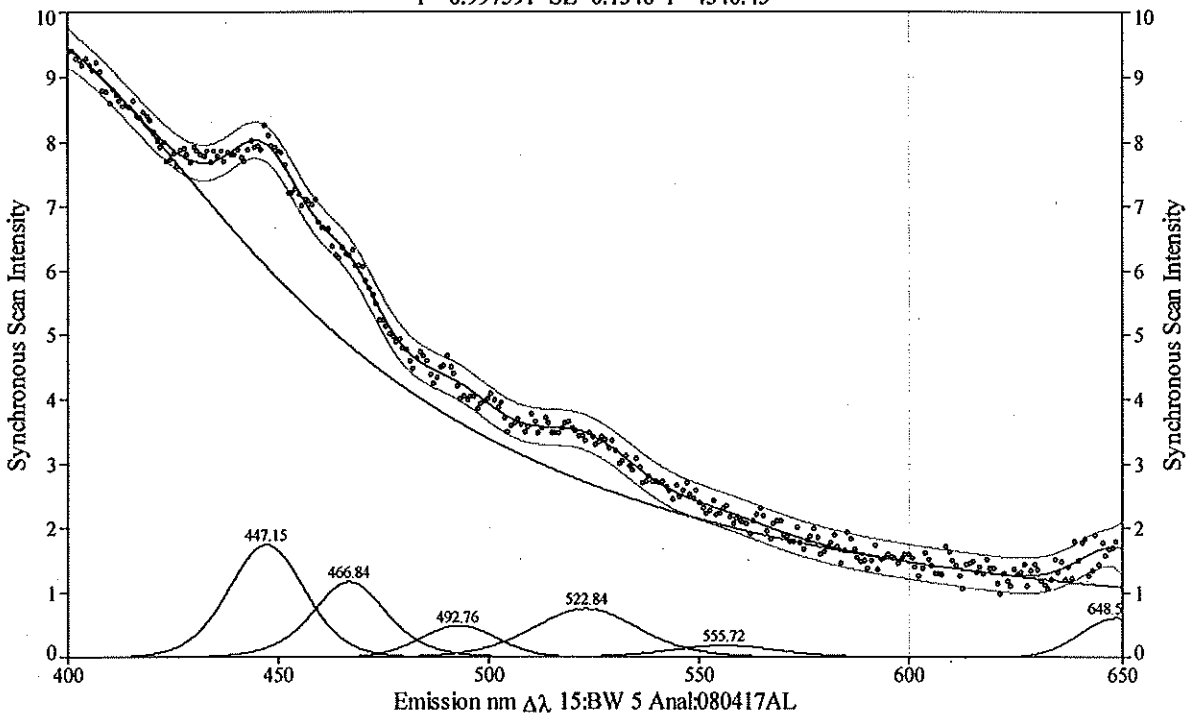
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	11.3148399	392.441480	116.125490	1.00000001	0.00000000	0.00000000
2	Pearson VII Area	3.66238783	446.347046	27.0796651	1.00000007	66.4618890	1.00000003
3	Pearson VII Area	2.14812047	466.515946	16.9059833	0.99999997	39.6344923	0.99999999
4	Pearson VII Area	1.52322338	492.311961	28.0931476	1.00000000	60.2817030	1.00000000
5	Pearson VII Area	1.58228412	520.114263	28.5597035	1.00000000	60.8979137	1.00000000
6	Pearson VII Area	0.35766677	569.082922	57.5372323	1.00000000	115.458719	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:X112, In:080325 1415, Out:080402 1010

Pk=Pearson VII Area 7 Peaks
r^2=0.997591 SE=0.1346 F=4340.45



Description: Frego Creek, Carbon, 23:X112, In:080325 1415, Out:080402 1010
X Variable: Emission nm Δλ 15:BW 5 Anal:080417AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080325-080402\fcx20402

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99759098	0.99735179	0.13460015	4340.44910

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	3108.70908	383.782009	162.761118	0.80149509
2	Pearson VII Area	41.1166565	447.148994	21.3014354	5.81806841
3	Pearson VII Area	27.6364181	466.841957	20.6164481	3.24738880
4	Pearson VII Area	11.2402054	492.756267	21.2753674	26.1119303
5	Pearson VII Area	24.7025957	522.841160	29.5648754	5.20449916
6	Pearson VII Area	6.14146607	555.715043	30.1031935	5.58917308
7	Pearson VII Area	13.1823363	648.504940	20.1001036	65.3372945

Measured Values

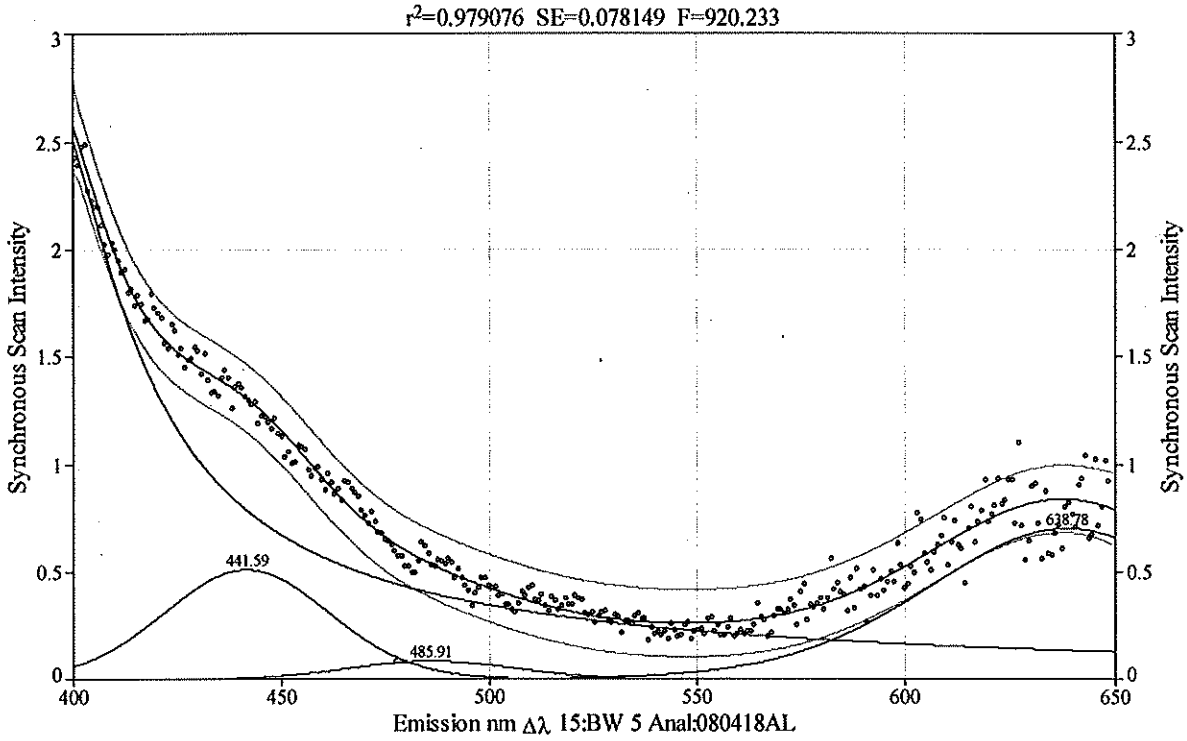
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	9.87076701	383.782009	162.761118	1.00000000	0.00000000	0.00000000
2	Pearson VII Area	1.74515776	447.148995	21.3014354	0.99999972	45.9318282	0.99999986
3	Pearson VII Area	1.16885635	466.841957	20.6164481	1.00000000	47.3453292	1.00000000
4	Pearson VII Area	0.49241998	492.756267	21.2753674	1.00000000	43.2768457	1.00000000
5	Pearson VII Area	0.75163016	522.841160	29.5648754	0.99999999	64.3362952	1.00000000
6	Pearson VII Area	0.18413272	555.715041	30.1031935	1.00000031	65.1169952	1.00000016
7	Pearson VII Area	0.61419932	648.504940	20.1001036	1.00000001	40.4923088	1.00000001

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

LCCMR, Water, Eluent, Sampled:080418 0115

Pk=Pearson VII Area 4 Peaks
r^2=0.979076 SE=0.078149 F=920.233



Description: LCCMR, Water, Eluent, Sampled:080418 0115
X Variable: Emission nm Δλ 15:BW 5 Anal:080418AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080402-080409\bl080418

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.97907579	0.97793706	0.07814901	920.233495

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	804.246049	391.891208	52.8823803	0.56492718
2	Pearson VII Area	25.7771869	441.594845	46.7581279	16.5286727
3	Pearson VII Area	4.31291682	485.910285	47.5188506	167.864167
4	Pearson VII Area	60.7373725	638.781754	78.8023099	7.46576540

Measured Values

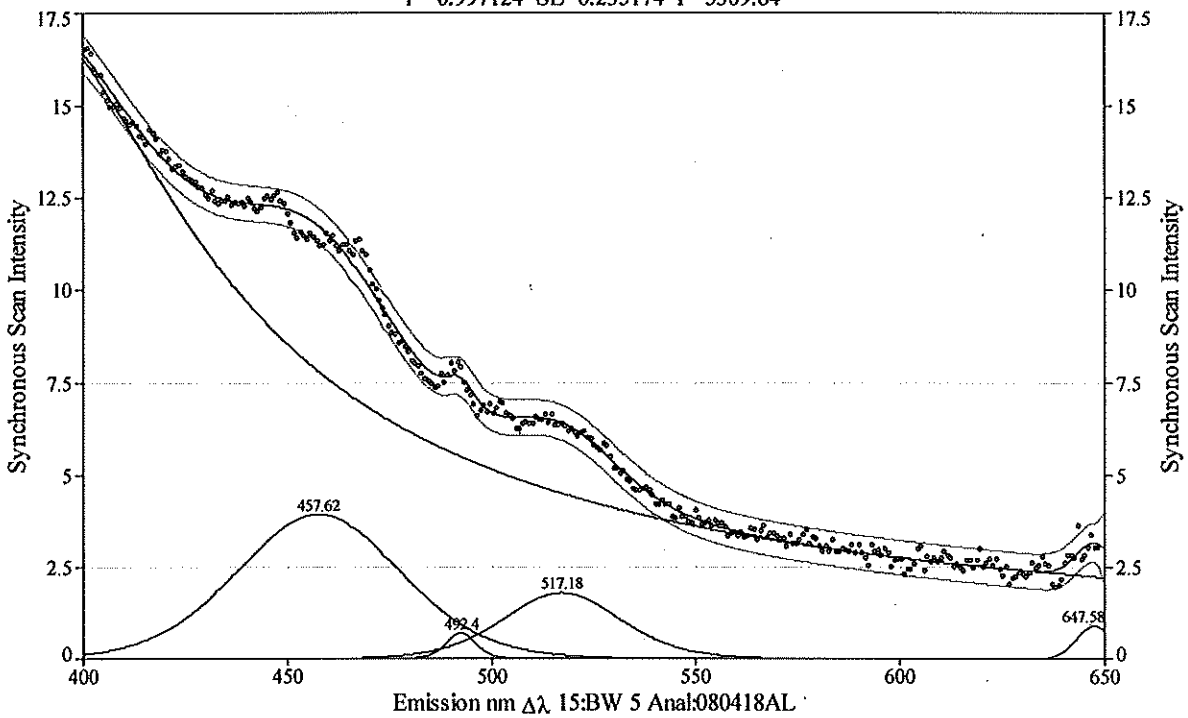
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	2.82018669	391.972477	52.8832323	0.99387177	0.00000000	0.00000000
2	Pearson VII Area	0.51139766	441.594846	46.7581279	0.99999988	96.0150310	0.99999994
3	Pearson VII Area	0.08516268	485.910285	47.5188506	1.00000000	95.3550743	1.00000000
4	Pearson VII Area	0.70324022	638.781757	78.8023099	0.99999987	167.069160	0.99999993

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A400, In:080402 0945, Out:080409 1026

Pk=Pearson VII Area 5 Peaks
r^2=0.997124 SE=0.235174 F=5309.64



Description: Frego Creek, Carbon, 23:A400, In:080402 0945, Out:080409 1026
X Variable: Emission nm Δλ 15:BW 5 Anal:080418AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080402-080409\fc000409

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99712377	0.99692541	0.23517366	5309.63815

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	32540.7451	387.071572	124.011288	0.52026433
2	Pearson VII Area	204.135959	457.616884	47.2795225	7.08867026
3	Pearson VII Area	7.05271019	492.397576	8.52080431	3.26492203
4	Pearson VII Area	68.7323544	517.181163	34.2826510	4.95736942
5	Pearson VII Area	10.1951985	647.580713	10.4821966	167.255006

Measured Values

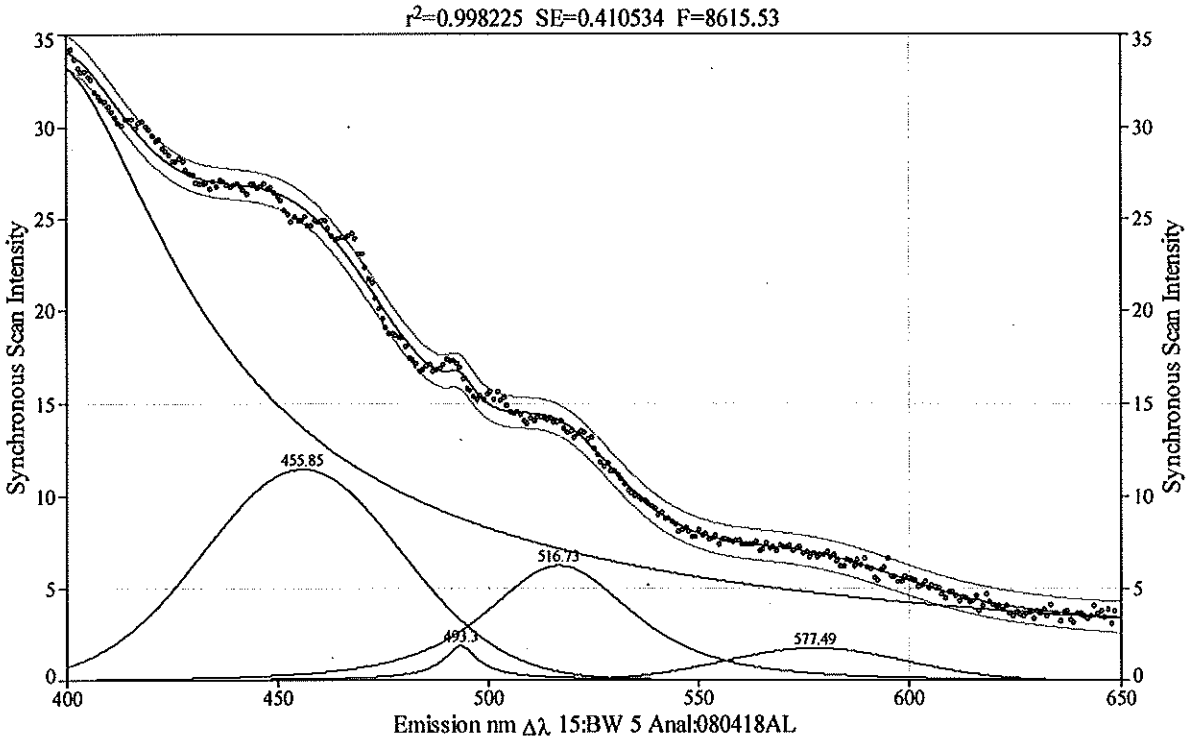
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	17.2820410	387.098624	124.011332	0.99912782	0.00000000	0.00000000
2	Pearson VII Area	3.93280350	457.616884	47.2795225	1.00000000	100.554428	1.00000000
3	Pearson VII Area	0.72206333	492.397575	8.52080431	1.00000077	19.5524880	1.00000037
4	Pearson VII Area	1.79916972	517.181163	34.2826510	0.99999997	74.9282529	0.99999998
5	Pearson VII Area	0.91261083	647.580714	10.4821966	0.99999990	21.0345928	0.99999995

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A403, In:080402 0948, Out:080409 1024

Pk=Pearson VII Area 5 Peaks
r^2=0.998225 SE=0.410534 F=8615.53



Description: Frego Creek, Carbon, 23:A403, In:080402 0948, Out:080409 1024
X Variable: Emission nm Δλ 15:BW 5 Anal:080418AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080402-080409\fc030409

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99822546	0.99810308	0.41053374	8615.52531

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	58594.0914	395.862597	93.1007259	0.51623778
2	Pearson VII Area	682.229056	455.850787	55.5953948	27.4851307
3	Pearson VII Area	50.8614918	493.302007	10.8596006	0.68895702
4	Pearson VII Area	330.050632	516.725599	41.5240029	1.63422450
5	Pearson VII Area	94.6619013	577.493243	50.2955286	167.909341

Measured Values

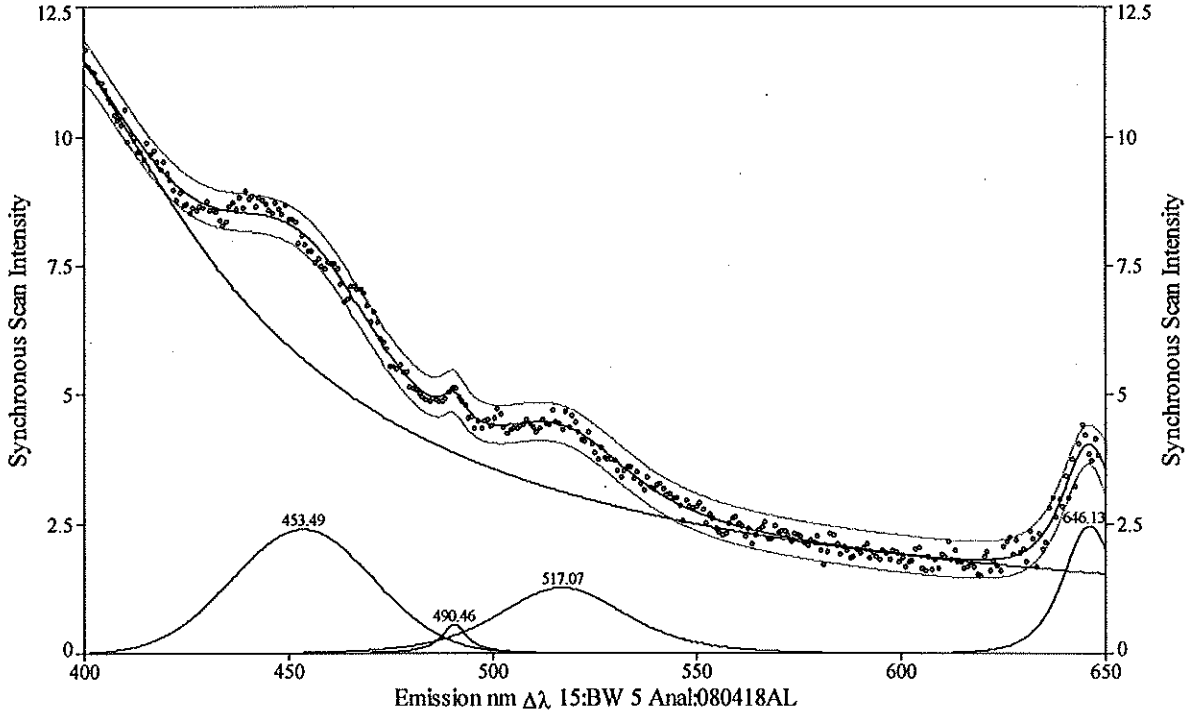
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	33.6284730	395.862597	93.1007259	1.00000000	0.00000000	0.00000000
2	Pearson VII Area	11.4420752	455.850784	55.5953948	1.00000019	112.996691	1.00000010
3	Pearson VII Area	1.87890012	493.302007	10.8596006	1.00000001	48.0262421	1.00000000
4	Pearson VII Area	6.23677149	516.725599	41.5240029	1.00000000	111.168503	1.00000000
5	Pearson VII Area	1.76599770	577.493244	50.2955286	0.99999992	100.926908	0.99999996

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A420, In:080402 1030, Out:080409 1106

Pk=Pearson VII Area 5 Peaks
r^2=0.996183 SE=0.179404 F=3997.17



Description: Frego Creek, Carbon, 23:A420, In:080402 1030, Out:080409 1106
X Variable: Emission nm Δλ 15:BW 5 Anal:080418AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080402-080409\fc200409

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99618297	0.99591972	0.17940384	3997.16834

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	22648.4615	386.616848	121.743575	0.52024081
2	Pearson VII Area	103.519945	453.488862	40.4004040	167.914094
3	Pearson VII Area	7.57293581	490.456911	7.88848433	0.91212924
4	Pearson VII Area	55.6805686	517.066496	37.2825063	2.59866567
5	Pearson VII Area	45.3474140	646.134065	15.3334347	2.22251687

Measured Values

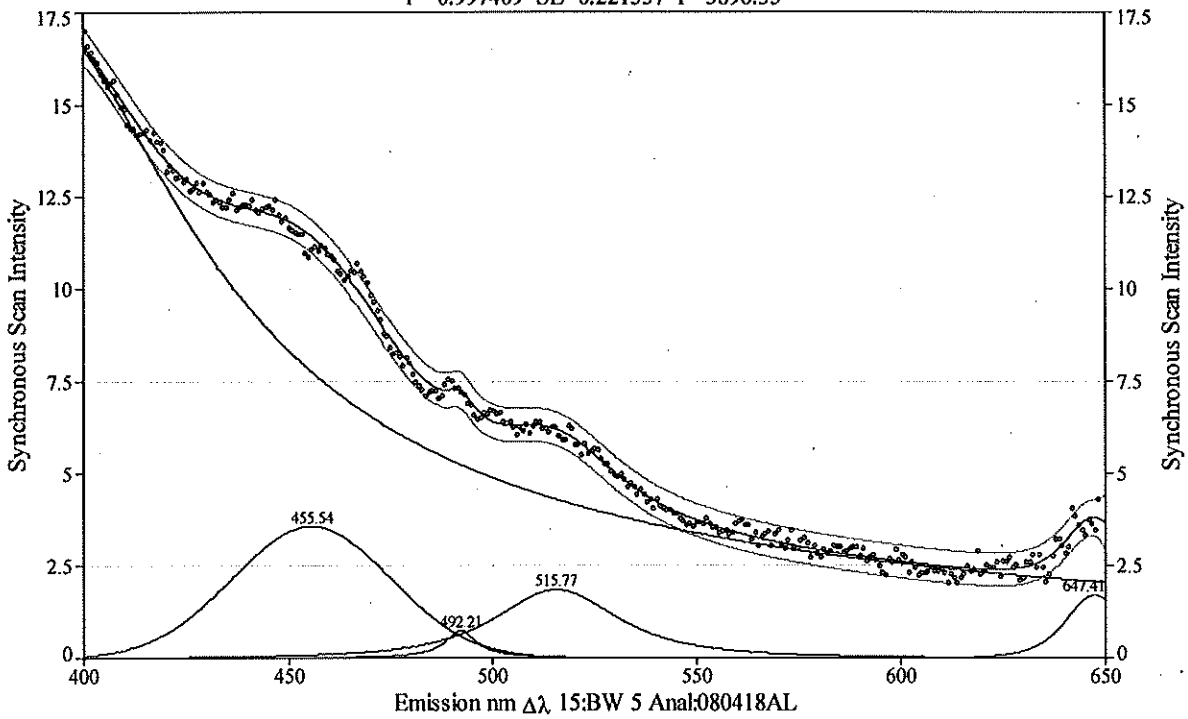
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	12.2379575	387.098624	121.758025	0.98429695	0.00000000	0.00000000
2	Pearson VII Area	2.40426662	453.488862	40.4004040	1.00000000	81.0705778	1.00000000
3	Pearson VII Area	0.56885339	490.456911	7.88848433	1.00000015	27.8662957	1.00000005
4	Pearson VII Area	1.27241606	517.066496	37.2825063	1.00000000	88.8608154	1.00000000
5	Pearson VII Area	2.46644124	646.134065	15.3334347	1.00000002	37.7484853	1.00000001

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A631, In:080402 1025, Out:080409 1100

Pk=Pearson VII Area 5 Peaks
r^2=0.997409 SE=0.221337 F=5896.35



Description: Frego Creek, Carbon, 23:A631, In:080402 1025, Out:080409 1100
X Variable: Emission nm Δλ 15:BW 5 Anal:080418AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080402-080409\fc310409

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99740923	0.99723055	0.22133745	5896.35206

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	21621.2804	389.380989	115.509542	0.52920909
2	Pearson VII Area	173.176317	455.540962	45.6881471	147.692621
3	Pearson VII Area	13.0538981	492.207841	9.46101879	0.84329302
4	Pearson VII Area	88.5250047	515.774766	36.0213978	1.40507197
5	Pearson VII Area	33.9518855	647.409784	16.7146018	2.33454033

Measured Values

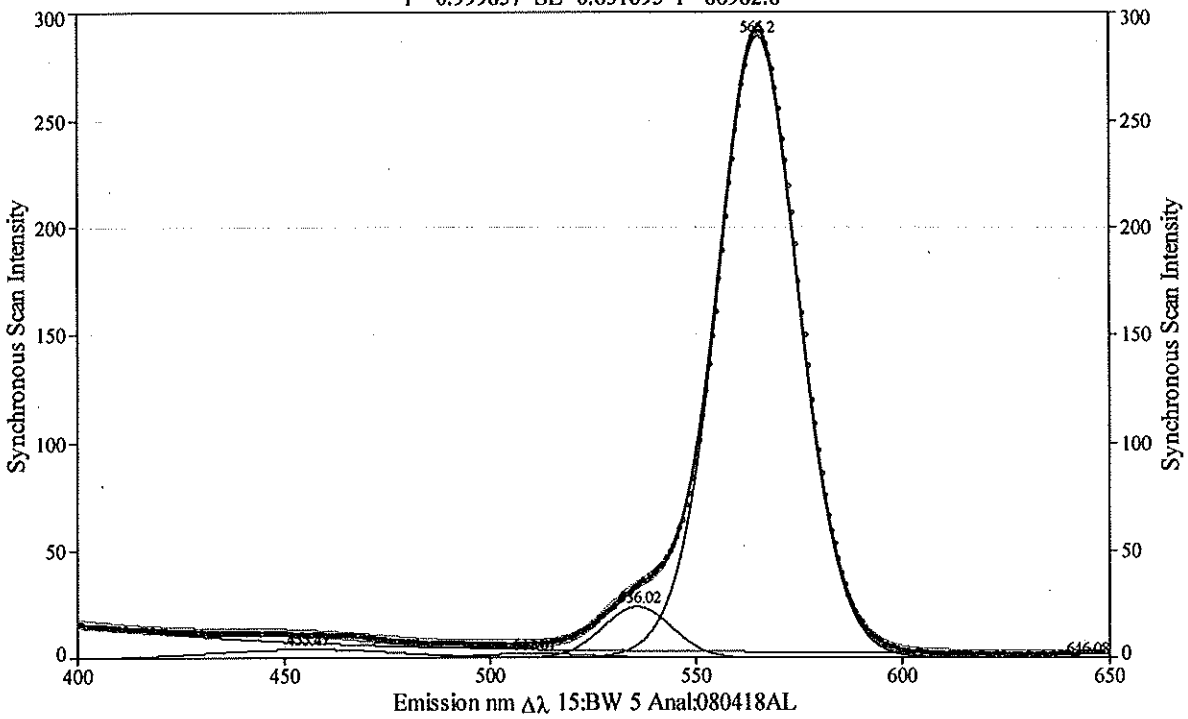
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	17.2925536	389.965596	115.531467	0.97996215	0.00000000	0.00000000
2	Pearson VII Area	3.55596359	455.540962	45.6881471	0.99999999	91.7125509	1.00000000
3	Pearson VII Area	0.75714400	492.207840	9.46101879	1.00000065	35.3140775	1.00000019
4	Pearson VII Area	1.84514837	515.774766	36.0213978	1.00000000	101.786734	1.00000000
5	Pearson VII Area	1.70639571	647.409781	16.7146018	1.00000063	40.7060146	1.00000029

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A445, In:080402 1000, Out:080409 1041

Pk=Pearson VII Area 6 Peaks
r^2=0.999857 SE=0.851095 F=86982.8



Description: Frego Creek, Carbon, 23:A445, In:080402 1000, Out:080409 1041
X Variable: Emission nm Δλ 15:BW 5 Anal:080418AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080402-080409\fc450409

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99985656	0.99984453	0.85109505	86982.7927

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	20510.0635	384.630786	109.076178	0.53005432
2	Pearson VII Area	243.074492	455.469718	51.7817265	22.1455214
3	Pearson VII Area	78.5281886	511.012084	31.4069299	3.77690391
4	Pearson VII Area	497.081969	536.019149	19.4493145	37.4934051
5	Pearson VII Area	7112.46625	565.195887	22.5320921	8.54797710
6	Pearson VII Area	24.9034841	646.083580	6.00812293	0.51261596

Measured Values

Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	17.8315271	384.632771	109.076178	0.99992718	0.00000000	0.00000000
2	Pearson VII Area	4.36889022	455.469718	51.7817265	0.99999999	105.637514	1.00000000
3	Pearson VII Area	2.20677592	511.012085	31.4069299	0.99999996	70.6706196	0.99999998
4	Pearson VII Area	23.8791628	536.019149	19.4493145	1.00000000	39.3687199	1.00000000
5	Pearson VII Area	289.148352	565.195887	22.5320921	1.00000000	47.4148081	1.00000000
6	Pearson VII Area	0.17402550	646.083580	6.00812293	1.00000056	37.3034684	1.00000010

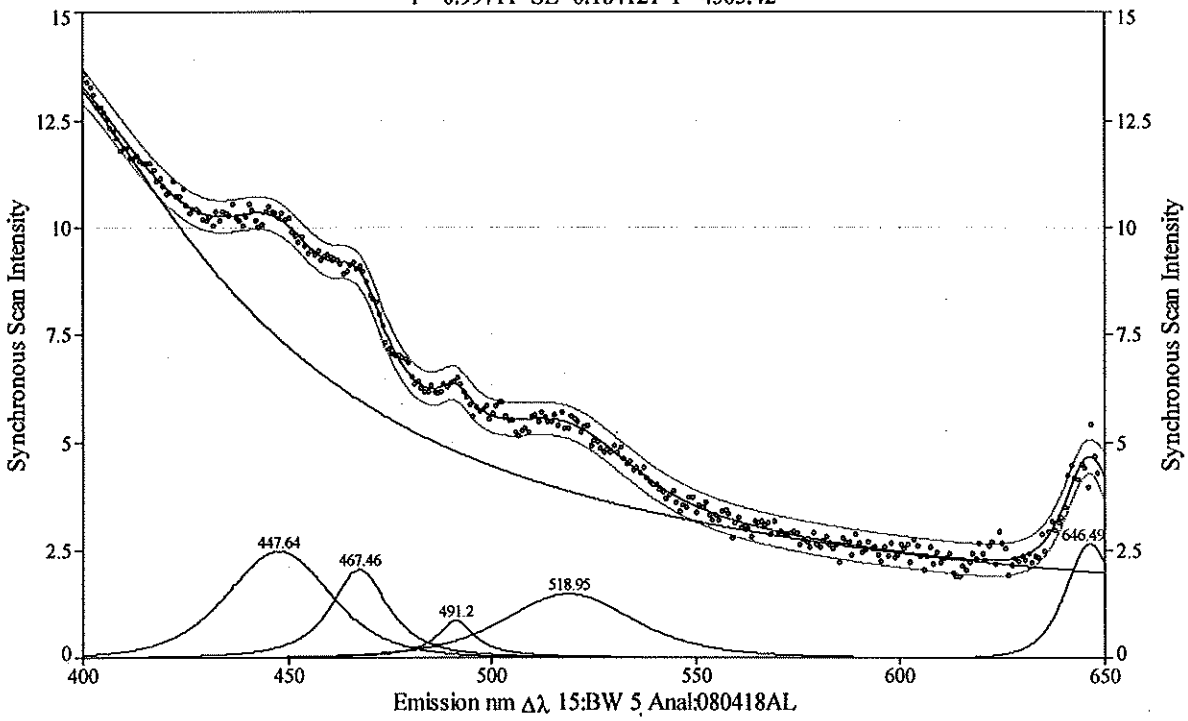
Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:X111, In:080402 1015, Out:080409 1050

Pk=Pearson VII Area 6 Peaks

r^2=0.99711 SE=0.184121 F=4305.42



Description: Frego Creek, Carbon, 23:X111, In:080402 1015, Out:080409 1050
X Variable: Emission nm Δλ 15:BW 5 Anal:080418AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080402-080409\fcx10409

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99711011	0.99686760	0.18412086	4305.41874

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	48314.5221	385.012232	133.212237	0.51169867
2	Pearson VII Area	87.9532083	447.637232	30.0768018	2.52098340
3	Pearson VII Area	47.9513612	467.462448	16.9432899	1.27633703
4	Pearson VII Area	18.6633698	491.199937	11.6788890	0.84488483
5	Pearson VII Area	67.9097235	518.949453	37.8638879	2.17477960
6	Pearson VII Area	44.4255492	646.492542	14.2018502	2.53339030

Measured Values

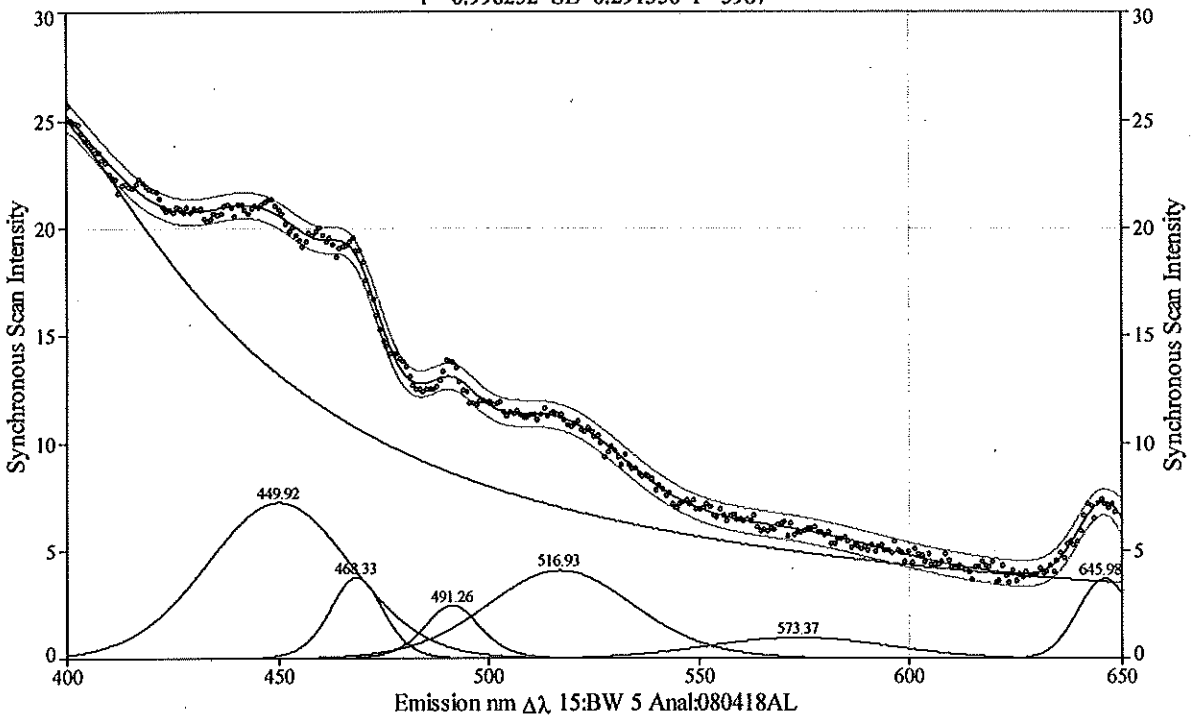
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	14.1500660	386.525229	133.345356	0.95562125	0.00000000	0.00000000
2	Pearson VII Area	2.48207780	447.637232	30.0768018	1.00000000	72.1057816	1.00000000
3	Pearson VII Area	2.05103124	467.462447	16.9432899	1.00000016	49.8253437	1.00000006
4	Pearson VII Area	0.87873258	491.199937	11.6788890	0.99999999	43.5319846	1.00000000
5	Pearson VII Area	1.49071354	518.949453	37.8638879	1.00000000	93.6799540	1.00000000
6	Pearson VII Area	2.65676238	646.492545	14.2018502	0.99999917	34.0147714	0.99999962

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:X112, In:080402 1010, Out:080409 1036

Pk=Pearson VII Area 7 Peaks
r^2=0.998252 SE=0.291356 F=5987



Description: Frego Creek, Carbon, 23:X112, In:080402 1010, Out:080409 1036
X Variable: Emission nm Δλ 15:BW 5 Anal:080418AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek\fregocreek080402-080409\fcx20409

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99825235	0.99807883	0.29135575	5987.00064

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	70442.0383	386.459557	124.609948	0.51430347
2	Pearson VII Area	316.681390	449.923911	40.2956408	10.7743003
3	Pearson VII Area	62.7741117	468.334463	14.8662716	4.74990565
4	Pearson VII Area	44.3144205	491.261163	15.6553836	3.57341529
5	Pearson VII Area	184.793246	516.930349	41.1895957	7.36905878
6	Pearson VII Area	52.8579097	573.370648	50.6906497	167.913505
7	Pearson VII Area	59.1431869	645.979860	14.9502367	50.2075021

Measured Values

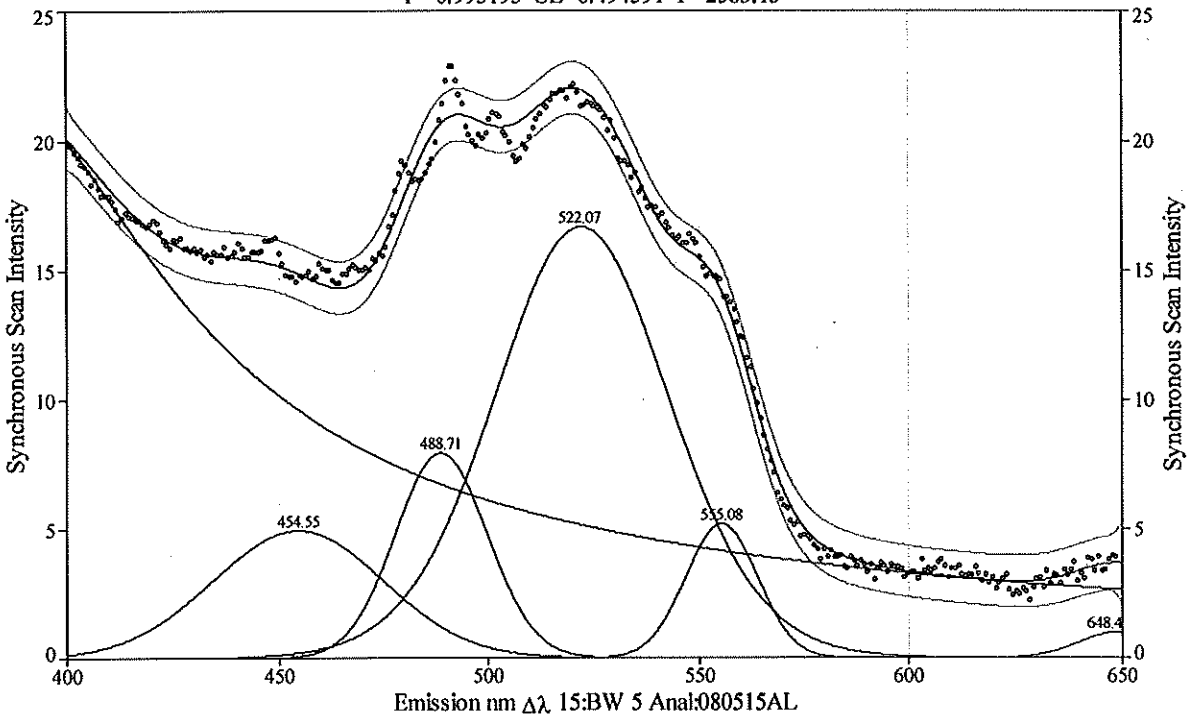
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	26.7673981	386.525229	124.610214	0.99789413	0.00000000	0.00000000
2	Pearson VII Area	7.23859939	449.923911	40.2956408	1.00000000	83.9049704	1.00000000
3	Pearson VII Area	3.78081511	468.334463	14.8662716	1.00000000	32.6226894	1.00000000
4	Pearson VII Area	2.48788901	491.261163	15.6553836	1.00000001	35.4772573	1.00000000
5	Pearson VII Area	4.09171601	516.930349	41.1895957	0.99999998	87.3942032	0.99999999
6	Pearson VII Area	0.97842249	573.370648	50.6906497	1.00000000	101.719782	1.00000000
7	Pearson VII Area	3.70134572	645.979859	14.9502367	1.00000021	30.1760263	1.00000012

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A400, In:080409 1026, Out:080424 1229

Pk=Pearson VII Area 7 Peaks
r^2=0.995193 SE=0.494591 F=2583.13



Description: Frego Creek, Carbon, 23:A400, In:080409 1026, Out:080424 1229
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080409-080424\fc000424

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99519254	0.99478912	0.49459053	2583.12598

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	42687.0785	386.041119	118.899765	0.51836235
2	Pearson VII Area	254.387003	454.553094	48.0952543	92.6286491
3	Pearson VII Area	220.943539	488.710530	25.9643979	46.3931238
4	Pearson VII Area	883.909146	522.072513	48.6207861	9.05820299
5	Pearson VII Area	112.203390	555.081642	20.1222947	55.4521527
6	Pearson VII Area	24.7885480	649.396155	22.4700854	167.907061

Measured Values

Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	21.5493363	386.525229	118.914778	0.98384724	0.00000000	0.00000000
2	Pearson VII Area	4.95802708	454.553094	48.0952543	1.00000000	96.7068452	1.00000000
3	Pearson VII Area	7.95901195	488.710530	25.9643979	1.00000000	52.4433989	1.00000000
4	Pearson VII Area	16.6780490	522.072513	48.6207861	1.00000000	102.018800	1.00000000
5	Pearson VII Area	5.21915400	555.081642	20.1222947	1.00000000	40.5833863	1.00000000
6	Pearson VII Area	1.02948308	648.399991	22.5586019	1.19374694	45.1173205	1.10188481

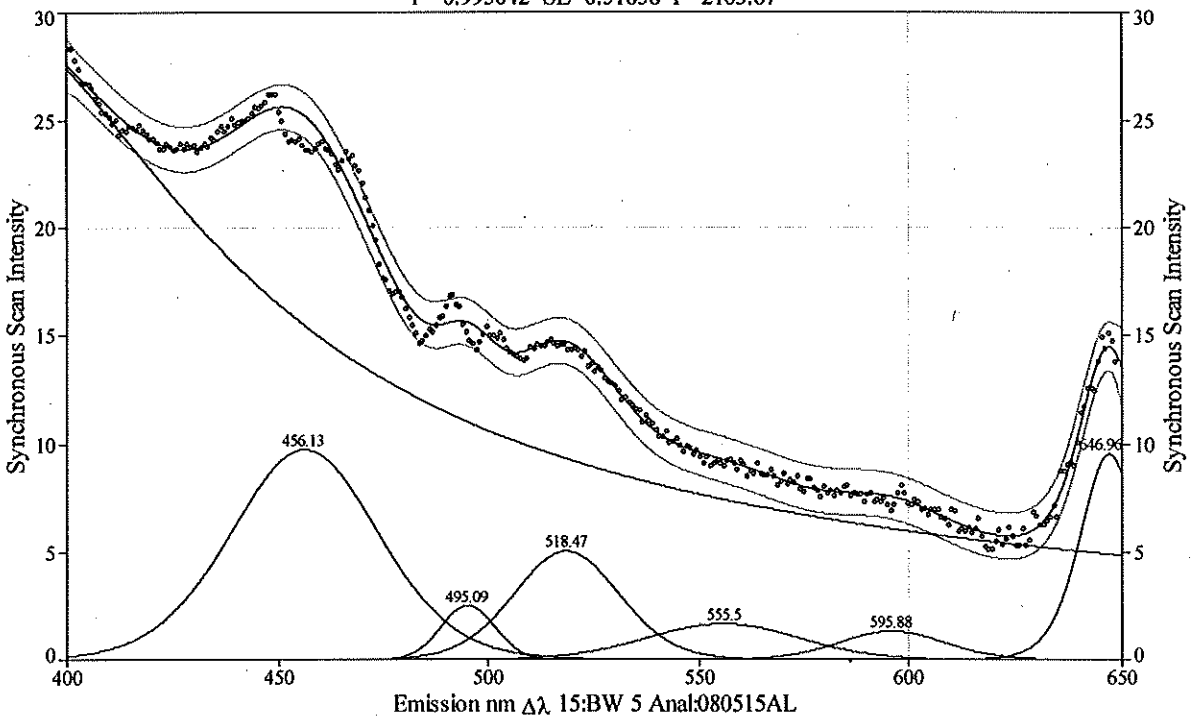
Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A420, In:080409 1106, Out:080424 1300

Pk=Pearson VII Area 7 Peaks

r^2=0.995042 SE=0.51838 F=2103.67



Description: Frego Creek, Carbon, 23:A420, In:080409 1106, Out:080424 1300
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080409-080424\fc200424

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99504224	0.99454998	0.51837967	2103.67429

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	1.0274e+05	380.605414	159.377618	0.51390990
2	Pearson VII Area	444.519575	456.129235	41.6094174	7.60799628
3	Pearson VII Area	41.0288363	495.089152	15.1937618	167.820690
4	Pearson VII Area	161.802027	518.465176	29.3584739	9.21827926
5	Pearson VII Area	77.5314832	555.504592	42.8390350	23.9939398
6	Pearson VII Area	43.4337023	595.879380	29.7915118	10.1920401
7	Pearson VII Area	173.716284	646.957139	16.2097655	4.37361545

Measured Values

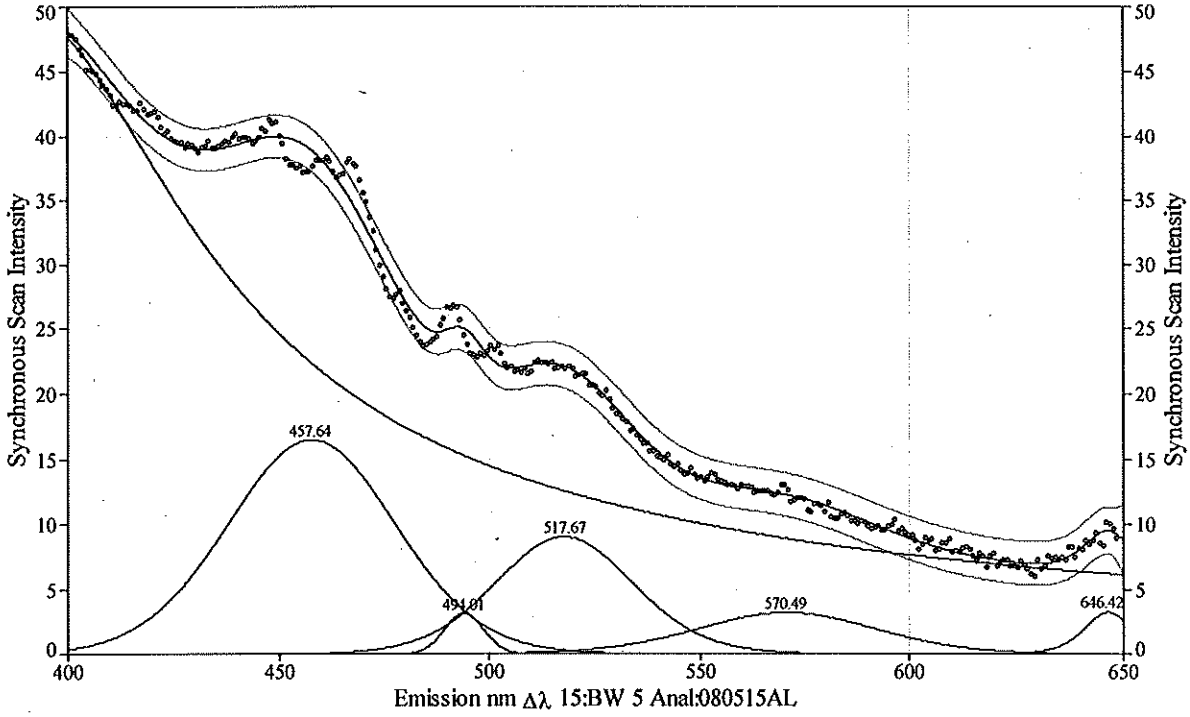
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	29.7210396	380.791284	159.379288	0.99534601	0.00000000	0.00000000
2	Pearson VII Area	9.75306953	456.129237	41.6094174	0.99999982	88.1187395	0.99999990
3	Pearson VII Area	2.53377412	495.089153	15.1937618	0.99999971	30.4890206	0.99999984
4	Pearson VII Area	5.05825178	518.465177	29.3584739	0.99999999	61.5499242	0.99999999
5	Pearson VII Area	1.68564812	555.504593	42.8390350	0.99999992	87.2650262	0.99999996
6	Pearson VII Area	1.34123919	595.879380	29.7915118	1.00000000	62.1760467	1.00000000
7	Pearson VII Area	9.55053226	646.957139	16.2097655	0.99999996	35.8678720	0.99999998

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A631, In:080409 1100, Out:080424 1300

Pk=Pearson VII Area 6 Peaks
r^2=0.996223 SE=0.823934 F=3291.26



Description: Frego Creek, Carbon, 23:A631, In:080409 1100, Out:080424 1300
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080409-080424\fc310424

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99622299	0.99590604	0.82393414	3291.26327

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	96753.3562	391.188991	117.737993	0.51831916
2	Pearson VII Area	841.782784	457.643939	47.3338431	15.5213687
3	Pearson VII Area	36.8965018	494.006552	10.9704225	167.794359
4	Pearson VII Area	379.041253	517.668232	38.3013375	7.52664986
5	Pearson VII Area	177.878629	570.486989	50.7671246	9.23754975
6	Pearson VII Area	52.0928406	646.421465	13.5036640	2.48921334

Measured Values

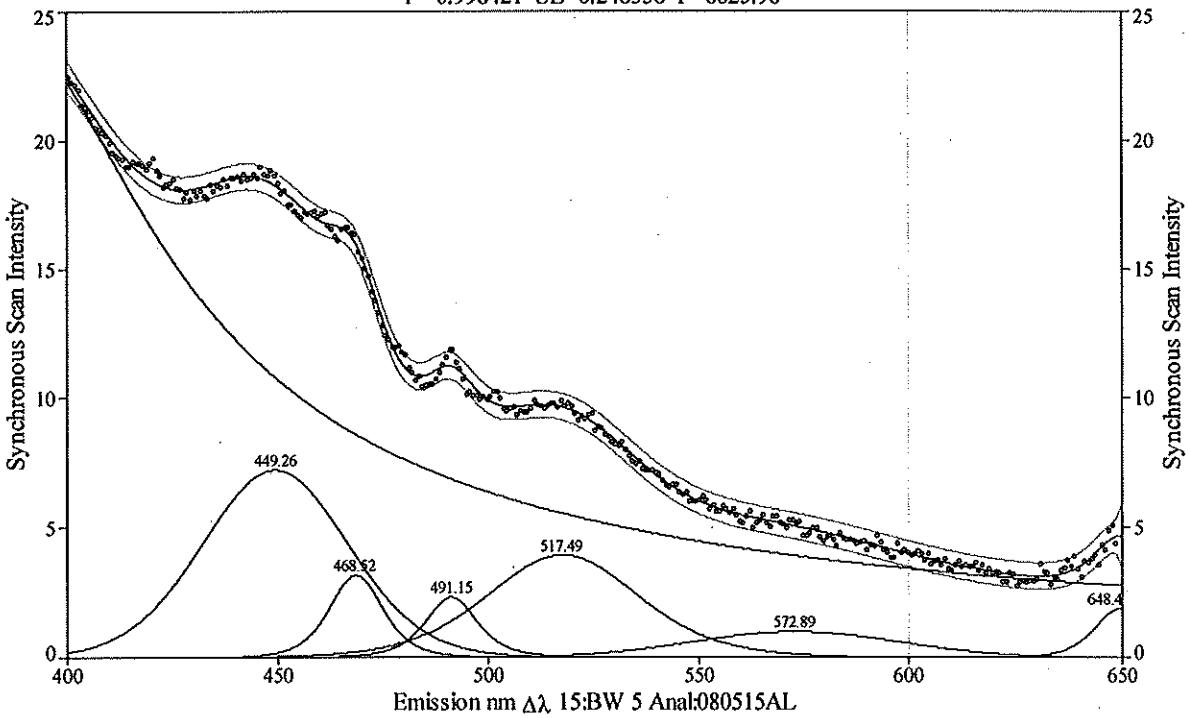
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	49.2203705	391.188991	117.737993	0.99999998	0.00000000	0.00000000
2	Pearson VII Area	16.4831110	457.643939	47.3338431	0.99999998	97.3607551	0.99999999
3	Pearson VII Area	3.15577307	494.006551	10.9704225	1.00000002	22.0141380	1.00000001
4	Pearson VII Area	9.03170614	517.668232	38.3013375	0.99999999	81.1639581	1.00000000
5	Pearson VII Area	3.21598205	570.486989	50.7671246	1.00000000	106.422545	1.00000000
6	Pearson VII Area	3.26901234	646.421466	13.5036640	0.99999971	32.4545167	0.99999987

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:X112, In:080409 1036, Out:080424 1239

Pk=Pearson VII Area 7 Peaks
r^2=0.998421 SE=0.248556 F=6625.96



Description: Frego Creek, Carbon, 23:X112, In:080409 1036, Out:080424 1239
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080409-080424\fcx20424

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99842062	0.99826380	0.24855626	6625.95700

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	55524.5408	386.357001	108.305539	0.51432392
2	Pearson VII Area	320.690620	449.262238	40.9430546	11.1500551
3	Pearson VII Area	56.0661396	468.523110	15.1043698	2.63118406
4	Pearson VII Area	40.8596574	491.148235	14.5080874	2.10840293
5	Pearson VII Area	187.762722	517.490370	42.3814635	4.23571227
6	Pearson VII Area	61.8872654	572.891502	57.9400863	167.511784
7	Pearson VII Area	31.5938001	649.517112	14.4478450	2.99670971

Measured Values

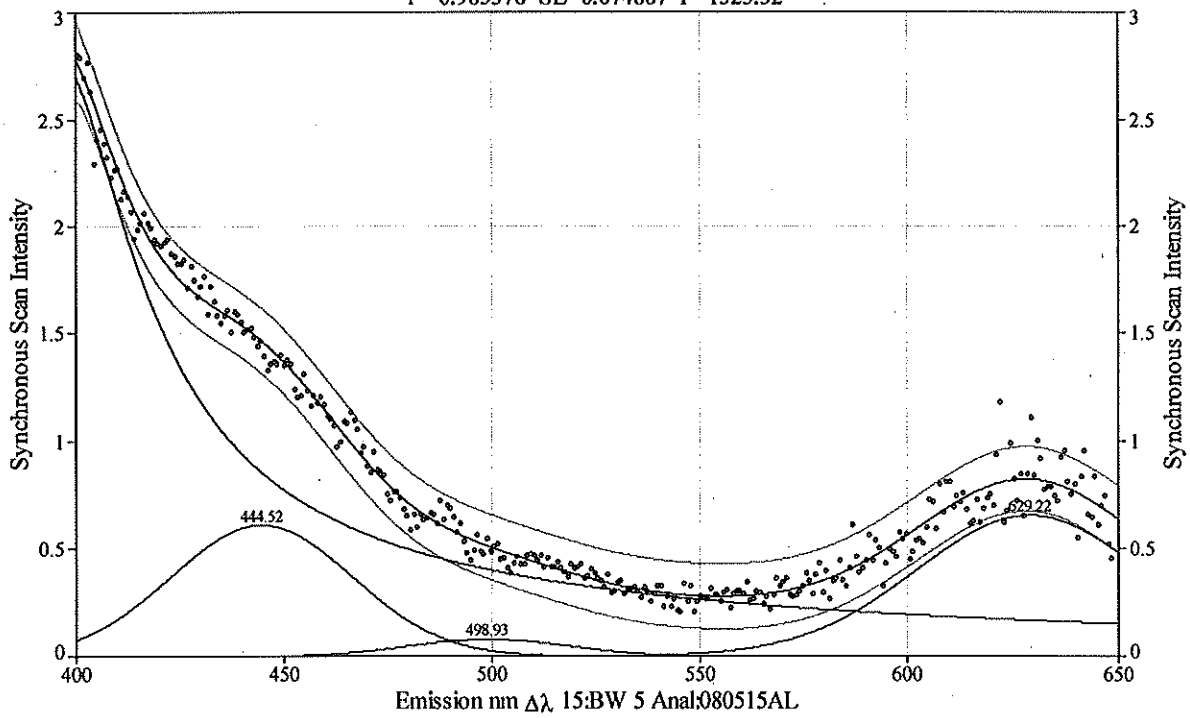
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	24.3083120	386.357002	108.305539	0.99999998	0.00000000	0.00000000
2	Pearson VII Area	7.21938579	449.262238	40.9430546	1.00000000	85.1374328	1.00000000
3	Pearson VII Area	3.16721859	468.523110	15.1043698	1.00000000	35.9165836	1.00000000
4	Pearson VII Area	2.32908474	491.148235	14.5080874	1.00000000	36.1587791	1.00000000
5	Pearson VII Area	3.94044222	517.490370	42.3814635	0.99999998	94.1015903	0.99999999
6	Pearson VII Area	1.00222492	572.891503	57.9400863	0.99999997	116.267755	0.99999998
7	Pearson VII Area	1.85757663	648.399987	14.6639418	1.35950216	33.7312591	1.15736505

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

LCCMR, Water, Eluent Blank, Sampled:080515 1045

Pk=Pearson VII Area 4 Peaks
r^2=0.985378 SE=0.074867 F=1325.32



Description: LCCMR, Water, Eluent Blank, Sampled:080515 1045
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080409-080424\eb080515

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98537778	0.98458202	0.07486700	1325.31876

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	1308.47356	395.316338	56.0314785	0.53915724
2	Pearson VII Area	33.4554083	444.520704	51.4380283	66.0349044
3	Pearson VII Area	3.87348533	498.929293	45.5331986	167.482266
4	Pearson VII Area	45.2625380	629.224810	64.0521137	13.9481380

Measured Values

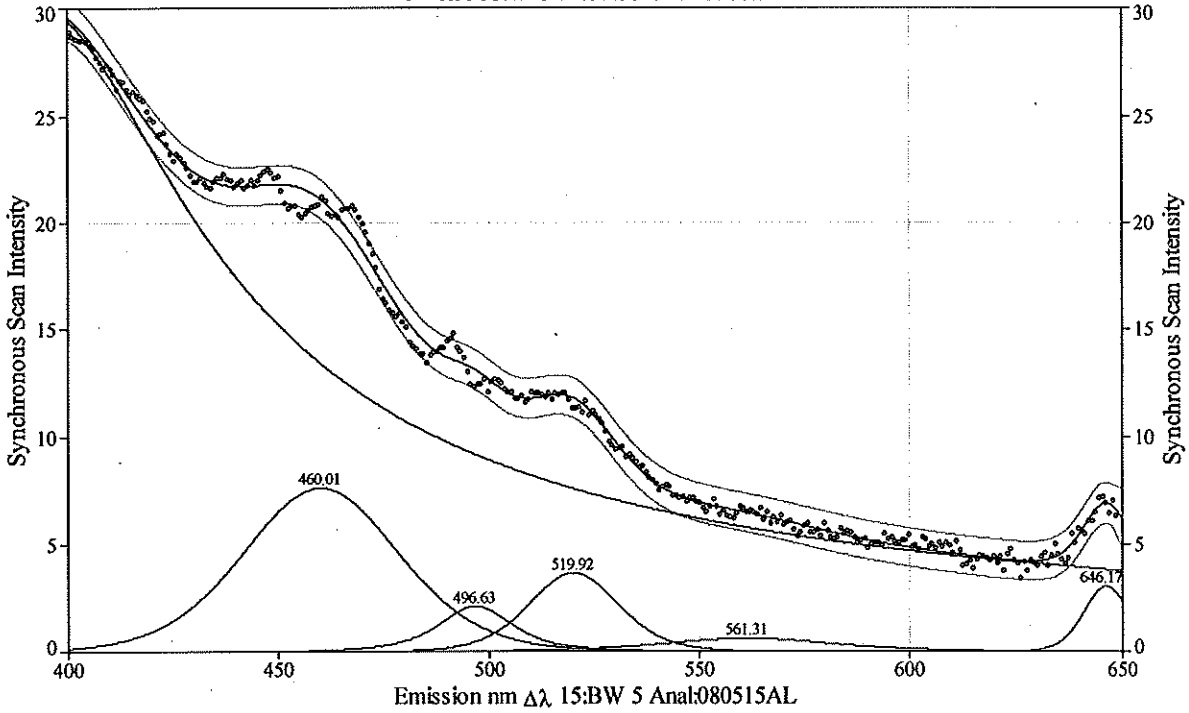
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	2.80810730	395.699541	56.0504332	0.97302186	0.00000000	0.00000000
2	Pearson VII Area	0.60913236	444.520704	51.4380283	1.00000000	103.616556	1.00000000
3	Pearson VII Area	0.07982092	498.929293	45.5331986	1.00000000	91.3710258	1.00000000
4	Pearson VII Area	0.65392543	629.224810	64.0521137	1.00000000	132.160082	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A400, In:080424 1221, Out:080507 1010

Pk=Pearson VII Area 7 Peaks
r^2=0.996872 SE=0.443519 F=3977.32



Description: Frego Creek, Carbon, 23:A400, In:080424 1221, Out:080507 1010
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080424-080507\fc000507

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99687246	0.99661001	0.44351863	3977.31934

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	97936.2720	392.986524	116.157082	0.51064112
2	Pearson VII Area	368.355151	460.009365	43.5722133	5.43526437
3	Pearson VII Area	55.9407632	496.633740	20.7859688	1.68351348
4	Pearson VII Area	103.451295	519.915197	25.1661012	4.41499276
5	Pearson VII Area	37.0763945	561.311404	48.6309880	2.16924880
6	Pearson VII Area	43.3952964	646.174757	12.7835424	5.33111579

Measured Values

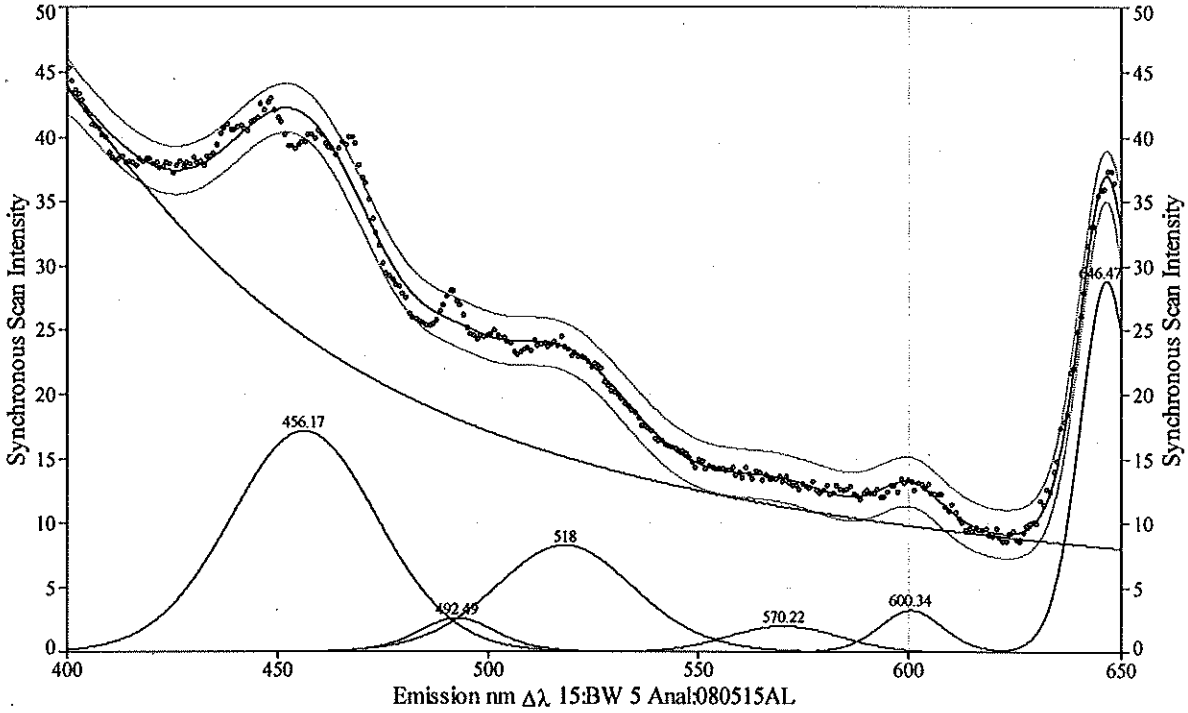
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	30.0430431	392.986524	116.157082	1.00000000	0.00000000	0.00000000
2	Pearson VII Area	7.62047223	460.009364	43.5722133	1.00000016	94.4680734	1.00000008
3	Pearson VII Area	2.12730420	496.633740	20.7859688	1.00000000	55.1217998	1.00000000
4	Pearson VII Area	3.66545366	519.915197	25.1661012	0.99999991	55.6309091	0.99999996
5	Pearson VII Area	0.63342640	561.311404	48.6309880	1.00000002	120.390340	1.00000001
6	Pearson VII Area	3.05721782	646.174757	12.7835424	1.00000000	27.7608604	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A420, In:080424 1300, Out:080507 1116

Pk=Pearson VII Area 7 Peaks
r^2=0.994146 SE=0.916896 F=1780.09



Description: Frego Creek, Carbon, 23:A420, In:080424 1300, Out:080507 1116
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080424-080507\fc200507

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99414629	0.99356507	0.91689597	1780.08984

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	1.8467e+05	374.517787	159.594865	0.51298256
2	Pearson VII Area	763.821888	456.173595	41.1438488	12.6519066
3	Pearson VII Area	65.9059141	492.492093	21.7734328	3.62326364
4	Pearson VII Area	353.981986	518.002928	38.9656109	7.48497167
5	Pearson VII Area	67.6802586	570.222818	31.2145174	167.893751
6	Pearson VII Area	63.6948927	600.336466	17.7004073	6.34646626
7	Pearson VII Area	472.758540	646.470220	15.0208917	8.77820846

Measured Values

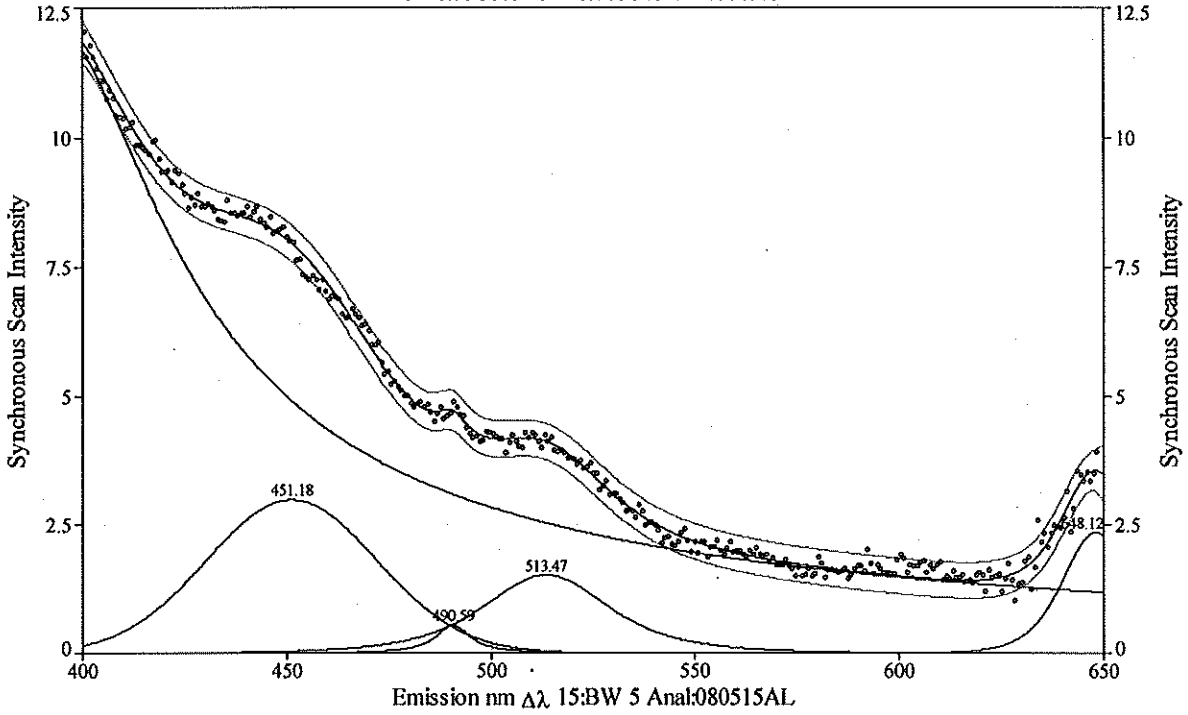
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	49.9363981	374.517787	159.594865	1.00000000	0.00000000	0.00000000
2	Pearson VII Area	17.1517554	456.173594	41.1438488	1.00000007	85.1619629	1.00000004
3	Pearson VII Area	2.66325021	492.492093	21.7734328	0.99999998	49.2523242	0.99999999
4	Pearson VII Area	8.28936809	518.002928	38.9656109	1.00000000	82.5986252	1.00000000
5	Pearson VII Area	2.03446219	570.222818	31.2145174	1.00000002	62.6374857	1.00000001
6	Pearson VII Area	3.26483909	600.336466	17.7004073	1.00000002	37.9229275	1.00000001
7	Pearson VII Area	28.8504436	646.470220	15.0208917	0.99999997	31.5663029	0.99999999

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A631, In:080424 1300, Out:080507 1116

Pk=Pearson VII Area 5 Peaks
r^2=0.996805 SE=0.173828 F=4778.48



Description: Frego Creek, Carbon, 23:A631, In:080424 1300, Out:080507 1116
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080424-080507\fc310507

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99680508	0.99658474	0.17382768	4778.47609

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	28476.0952	391.670812	90.5400362	0.51168714
2	Pearson VII Area	156.921958	451.180714	49.0463556	45.0097693
3	Pearson VII Area	8.84901971	490.594138	10.1984071	0.99701491
4	Pearson VII Area	68.0897673	513.472683	36.7546998	2.01261583
5	Pearson VII Area	52.8520174	648.124120	19.4643677	3.09831187

Measured Values

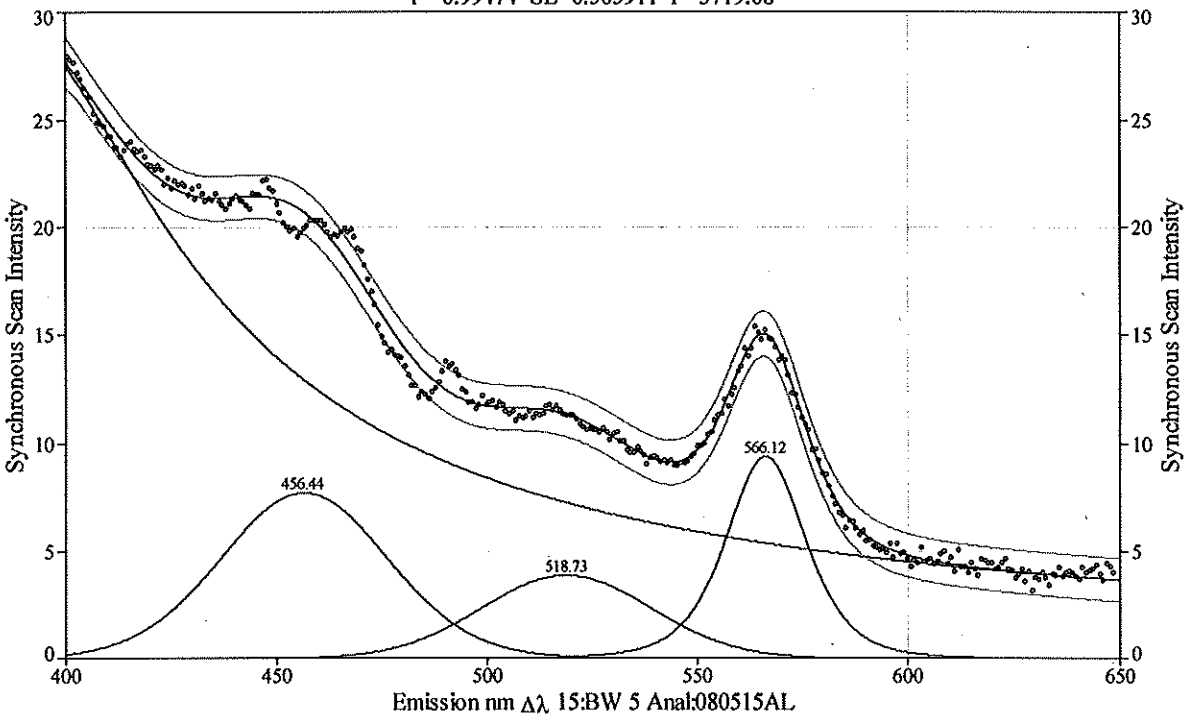
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	12.2682151	391.685780	90.5400554	0.99933894	0.00000000	0.00000000
2	Pearson VII Area	2.99208262	451.180714	49.0463556	1.00000000	99.0923617	1.00000000
3	Pearson VII Area	0.55123870	490.594138	10.1984071	0.99999998	34.0553748	0.99999999
4	Pearson VII Area	1.51978768	513.472683	36.7546998	0.99999991	92.6642056	0.99999996
5	Pearson VII Area	2.35746510	648.124119	19.4643677	1.00000016	45.0170185	1.00000008

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A445, In:080424 1242, Out:080507 1057

Pk=Pearson VII Area 5 Peaks
r^2=0.99474 SE=0.505911 F=3719.08



Description: Frego Creek, Carbon, 23:A445, In:080424 1242, Out:080507 1057
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080424-080507\fc450507

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99473977	0.99445350	0.50591051	3719.08338

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	71920.9333	386.595814	118.240865	0.51468733
2	Pearson VII Area	388.988217	456.440652	46.5280213	15.0493060
3	Pearson VII Area	197.137082	518.730425	47.4997379	167.864696
4	Pearson VII Area	246.577351	566.124506	22.3857350	2.63658568

Measured Values

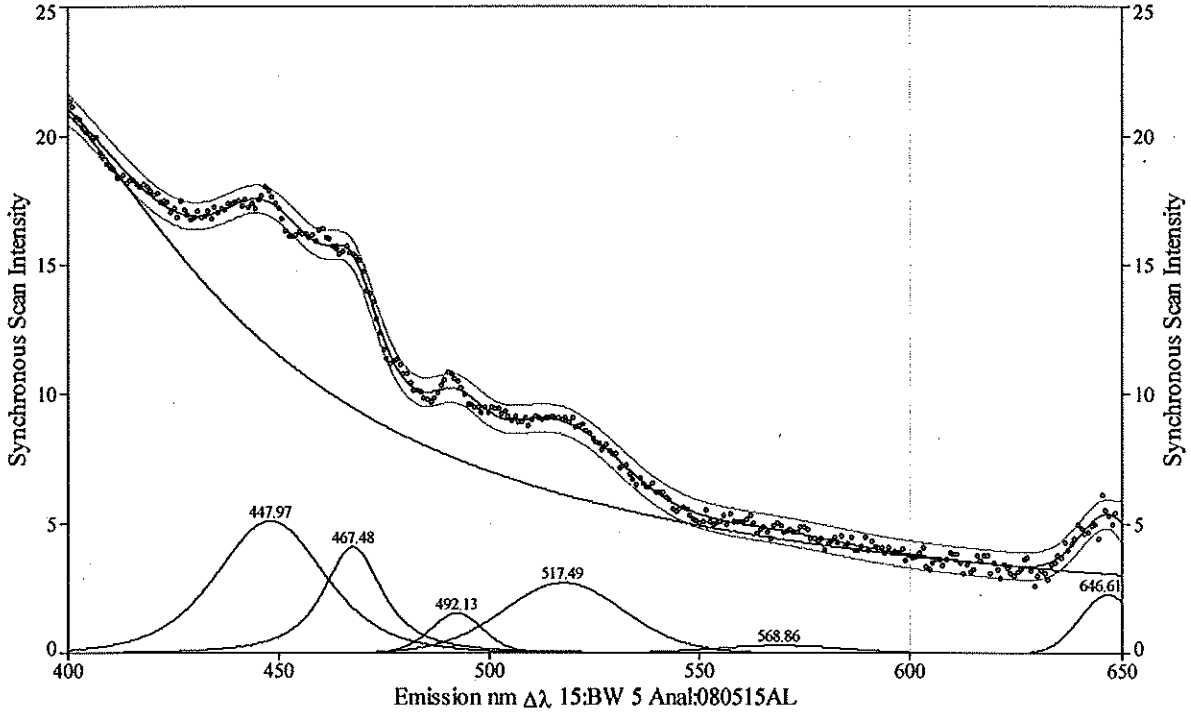
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	29.5391739	386.595814	118.240865	0.99999999	0.00000000	0.00000000
2	Pearson VII Area	7.74536664	456.440652	46.5280213	1.00000000	95.7862194	1.00000000
3	Pearson VII Area	3.89422696	518.730425	47.4997379	1.00000000	95.3167204	1.00000000
4	Pearson VII Area	9.40086449	566.124506	22.3857350	1.00000000	53.2105970	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:X111, In:080424 1250, Out:080507 1106

Pk=Pearson VII Area 7 Peaks
r^2=0.998004 SE=0.260824 F=5241.38



Description: Frego Creek, Carbon, 23:X111, In:080424 1250, Out:080507 1106
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080424-080507\fcx10507

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99800423	0.99780607	0.26082398	5241.37713

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	38755.3888	386.500885	133.785644	0.52370719
2	Pearson VII Area	182.704243	447.966937	30.4442138	2.61220901
3	Pearson VII Area	94.2563876	467.484596	16.6328471	1.28008353
4	Pearson VII Area	24.8796348	492.127656	14.5508634	7.04476153
5	Pearson VII Area	100.668036	517.489708	33.9412814	10.0000000
6	Pearson VII Area	12.2039017	568.864679	36.6972477	10.0000000
7	Pearson VII Area	38.0200349	646.609857	15.5587960	167.895540

Measured Values

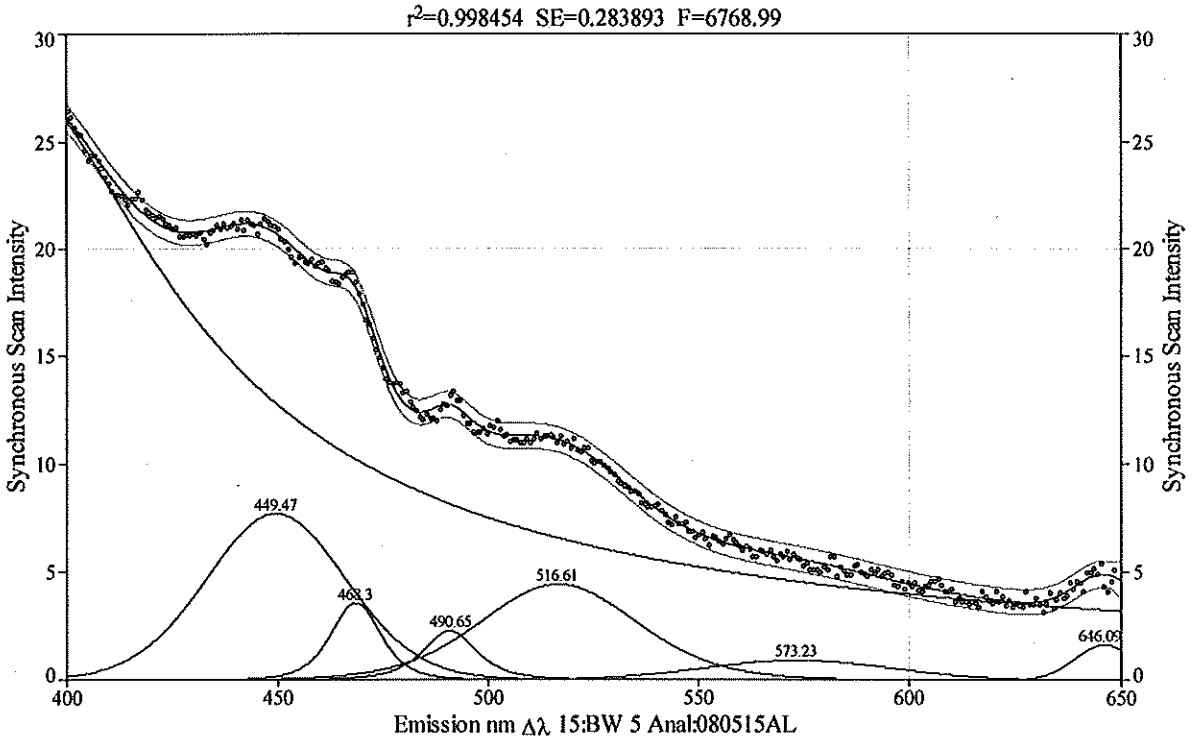
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	22.0872580	386.525229	133.785677	0.99927240	0.00000000	0.00000000
2	Pearson VII Area	5.11619786	447.966937	30.4442138	1.00000000	72.4911285	1.00000000
3	Pearson VII Area	4.11174499	467.484598	16.6328471	0.99999945	48.8494938	0.99999979
4	Pearson VII Area	1.55711416	492.127655	14.5508634	1.00000003	30.9589579	1.00000001
5	Pearson VII Area	2.72740984	517.489708	33.9412814	1.00000000	70.8949121	1.00000000
6	Pearson VII Area	0.30581040	568.864679	36.6972477	1.00000000	76.6514417	1.00000000
7	Pearson VII Area	2.29287705	646.609858	15.5587960	0.99999977	31.2214930	0.99999988

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:X112, In:080424 1237, Out:080507 1054

Pk=Pearson VII Area 7 Peaks
r^2=0.998454 SE=0.283893 F=6768.99



Description: Frego Creek, Carbon, 23:X112, In:080424 1237, Out:080507 1054
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080424-080507\fcx20507

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99845394	0.99830043	0.28389295	6768.99122

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	41487.5376	387.869000	111.502864	0.52310168
2	Pearson VII Area	326.351485	449.469021	39.0662086	10.0661329
3	Pearson VII Area	58.6593013	468.299368	13.9424414	2.44979155
4	Pearson VII Area	43.0445609	490.654769	15.1532788	1.78980137
5	Pearson VII Area	216.333795	516.610638	44.1526191	5.46797281
6	Pearson VII Area	51.4756132	573.225804	52.4707813	167.704825
7	Pearson VII Area	29.2093426	646.089975	16.5419318	61.2501114

Measured Values

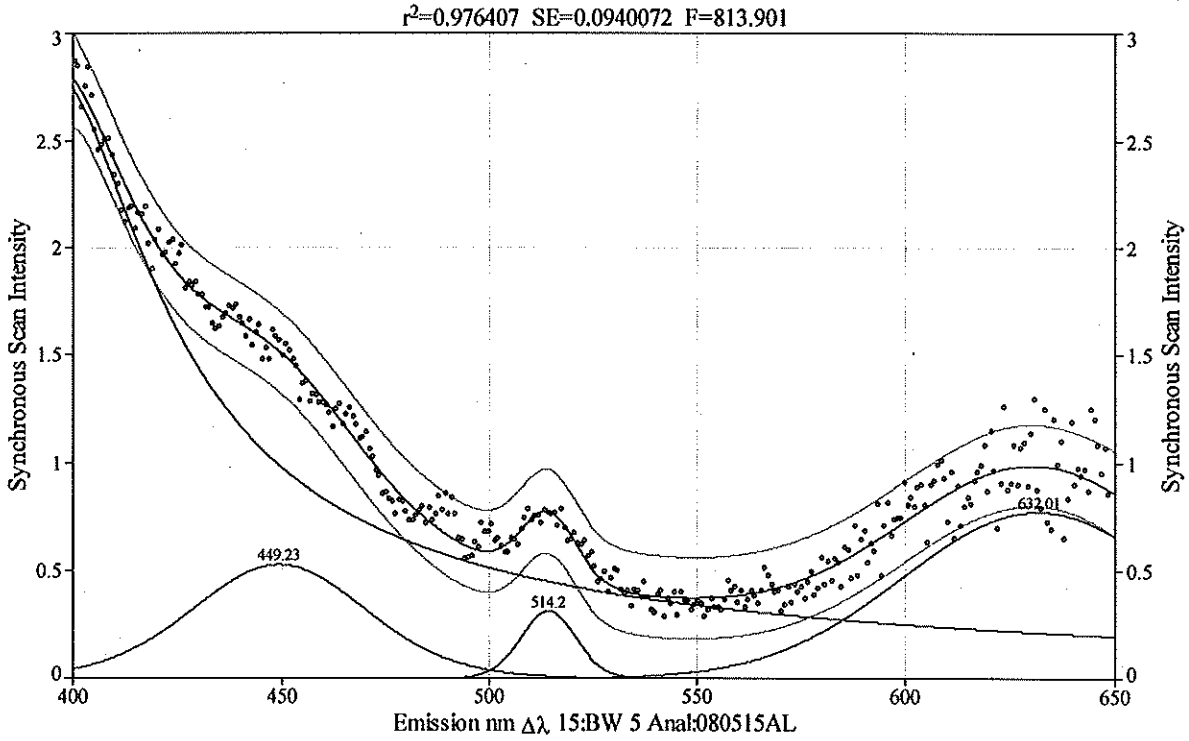
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	27.6956345	387.958716	111.503407	0.99678676	0.00000000	0.00000000
2	Pearson VII Area	7.68308926	449.469021	39.0662086	1.00000000	81.5762694	1.00000000
3	Pearson VII Area	3.55779986	468.299366	13.9424414	1.00000065	33.6163804	1.00000030
4	Pearson VII Area	2.27702615	490.654769	15.1532788	1.00000001	39.4458578	1.00000000
5	Pearson VII Area	4.41785739	516.610638	44.1526191	0.99999999	95.6788334	1.00000000
6	Pearson VII Area	0.92050816	573.225804	52.4707813	1.00000000	105.292258	1.00000000
7	Pearson VII Area	1.65333057	646.089975	16.5419318	0.99999996	33.3385158	0.99999998

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

LCCMR, Water, Eluent Blank, Sampled:080515 1445

Pk=Pearson VII Area 4 Peaks
r^2=0.976407 SE=0.0940072 F=813.901



Description: LCCMR, Water, Eluent Blank, Sampled:080515 1445
X Variable: Emission nm Δλ 15:BW 5 Anal:080515AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080424-080507\eb80515b

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.97640663	0.97512263	0.09400718	813.900760

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	1500.63895	394.859658	72.0070094	0.54483347
2	Pearson VII Area	28.4542884	449.228674	49.1403022	7.27760803
3	Pearson VII Area	5.32069305	514.201056	15.6727545	10.0000000
4	Pearson VII Area	63.1675875	632.006741	76.6179181	167.892432

Measured Values

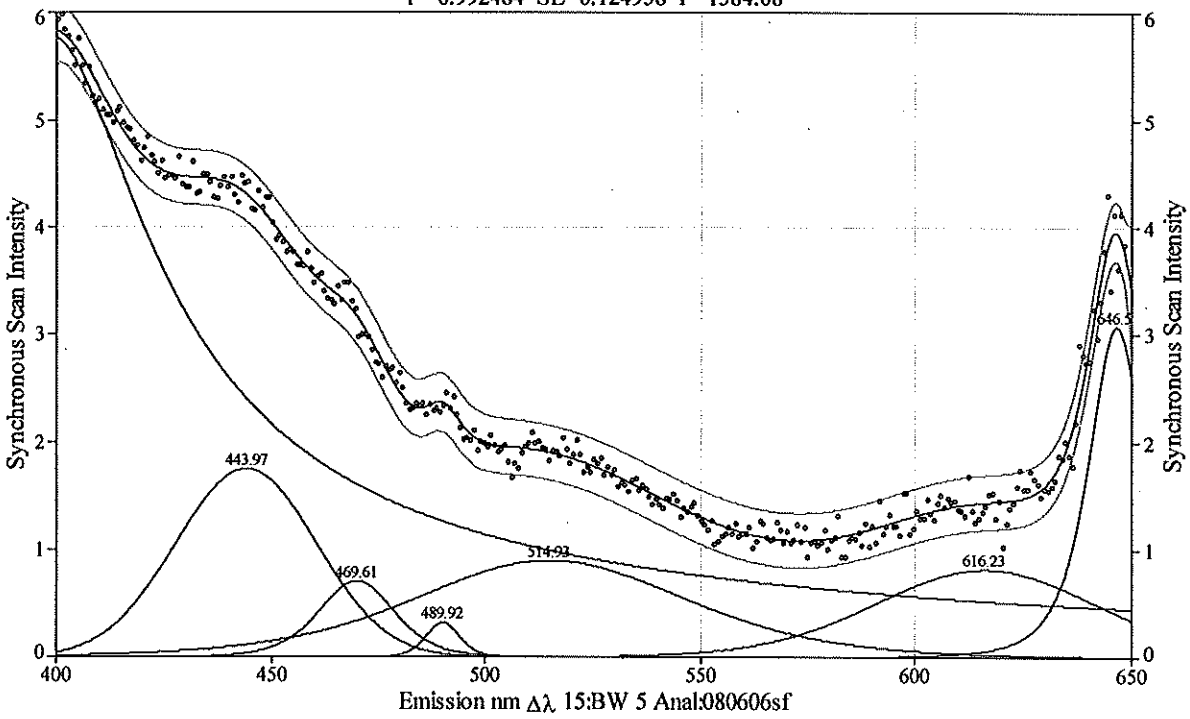
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	2.82111463	395.699541	72.0768969	0.95445113	0.00000000	0.00000000
2	Pearson VII Area	0.52788839	449.228674	49.1403022	1.00000000	104.342403	1.00000000
3	Pearson VII Area	0.31218348	514.201056	15.6727545	1.00000000	32.7364940	1.00000000
4	Pearson VII Area	0.77358524	632.006741	76.6179181	1.00000000	153.747494	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A400, In:080507 1010, Out:080530 1250

Pk=Pearson VII Area 7 Peaks
r^2=0.992484 SE=0.124958 F=1384.08



Description: Frego Creek, Carbon, 23:A400, In:080507 1010, Out:080530 1250
X Variable: Emission nm Δλ 15:BW 5 Anal:080606sf
Y Variable: Synchronous Scan Intensity
File Source: e:\fregocreek080507-080530\fc000530.p

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99248404	0.99173777	0.12495824	1384.08150

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	8001.90743	398.385299	72.2628151	0.51588034
2	Pearson VII Area	71.3937708	443.967319	38.2740569	167.838711
3	Pearson VII Area	16.9661411	469.608485	20.9764940	3.46514074
4	Pearson VII Area	3.48404947	489.920994	9.44924075	4.10674090
5	Pearson VII Area	76.8140055	514.927786	75.1979715	3.68962760
6	Pearson VII Area	54.8877674	616.228374	61.2809354	8.00726924
7	Pearson VII Area	58.1212619	646.499105	15.2133382	1.81590064

Measured Values

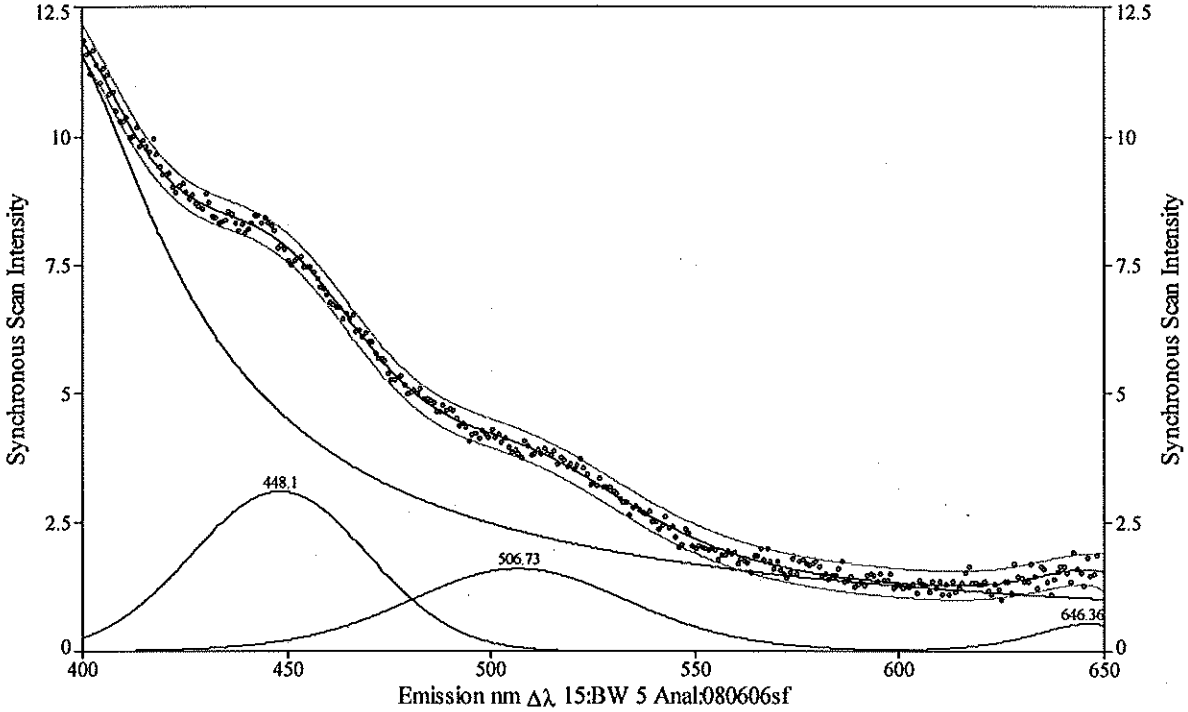
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	5.79293677	398.385301	72.2628151	0.99999992	0.00000000	0.00000000
2	Pearson VII Area	1.75024920	443.967319	38.2740569	0.99999999	76.8037708	1.00000000
3	Pearson VII Area	0.70914694	469.608486	20.9764940	0.99999988	47.7320557	0.99999994
4	Pearson VII Area	0.32729753	489.920994	9.44924075	1.00000000	21.0527463	1.00000000
5	Pearson VII Area	0.90000529	514.927786	75.1979715	1.00000000	169.704626	1.00000000
6	Pearson VII Area	0.81894979	616.228374	61.2809354	1.00000000	129.403612	1.00000000
7	Pearson VII Area	3.07196123	646.499108	15.2133382	0.99999922	39.4364981	0.99999967

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A403, In:080507 1040, Out:080530 1254

Pk=Pearson VII Area 4 Peaks
r^2=0.998011 SE=0.139775 F=9867.81



Description: Frego Creek, Carbon, 23:A403, In:080507 1040, Out:080530 1254
X Variable: Emission nm Δλ 15:BW 5 Anal:080606sf
Y Variable: Synchronous Scan Intensity
File Source: e:\fregocreek080507-080530\fc030530.p

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99801095	0.99790270	0.13977468	9867.80947

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	18358.6700	393.259392	79.8250657	0.51587605
2	Pearson VII Area	169.443521	448.104764	51.1248691	85.1090221
3	Pearson VII Area	114.951129	506.727734	64.4814924	5.54910863
4	Pearson VII Area	22.2096622	646.361131	32.4420511	1.87853067

Measured Values

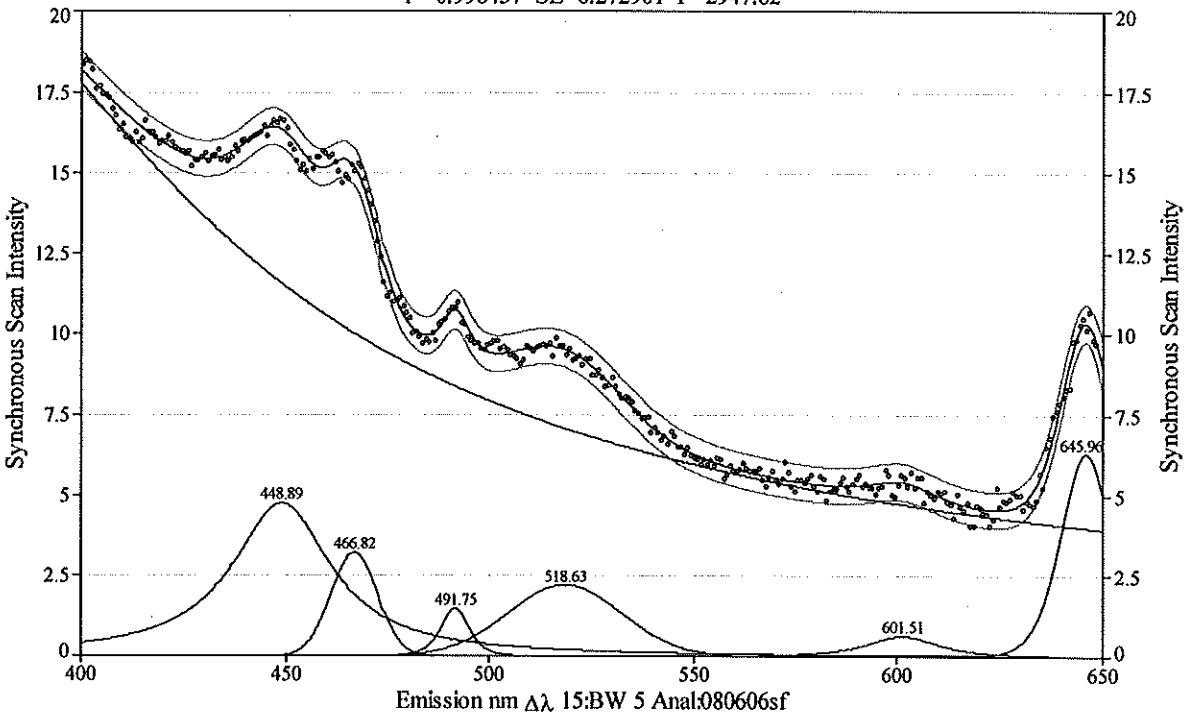
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	12.0284721	393.259393	79.8250657	0.99999997	0.00000000	0.00000000
2	Pearson VII Area	3.10616355	448.104761	51.1248691	1.00000022	102.839592	1.00000012
3	Pearson VII Area	1.60846104	506.727736	64.4814924	0.99999988	139.562908	0.99999994
4	Pearson VII Area	0.55433672	646.361131	32.4420511	1.00000000	83.2986075	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A420, In:080507 1116, Out:080530 0126

Pk=Pearson VII Area 7 Peaks
r^2=0.996457 SE=0.272901 F=2947.62



Description: Frego Creek, Carbon, 23:A420, In:080507 1116, Out:080530 0126
X Variable: Emission nm Δλ 15:BW 5 Anal:080606sf
Y Variable: Synchronous Scan Intensity
File Source: e:\fregocreek080507-080530\fc200530.p

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99645669	0.99610487	0.27290141	2947.62440

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	1.1998e+05	364.955259	191.777025	0.51000000
2	Pearson VII Area	227.447391	448.889686	29.5555966	0.95914629
3	Pearson VII Area	46.5999861	466.816399	13.6029239	76.4553797
4	Pearson VII Area	14.8730505	491.745727	8.26080277	2.13280443
5	Pearson VII Area	77.7141718	518.630435	32.8021296	36.4449577
6	Pearson VII Area	19.1233750	601.510415	21.3050968	1.27215347
7	Pearson VII Area	100.077643	645.963101	14.2268762	4.74769959

Measured Values

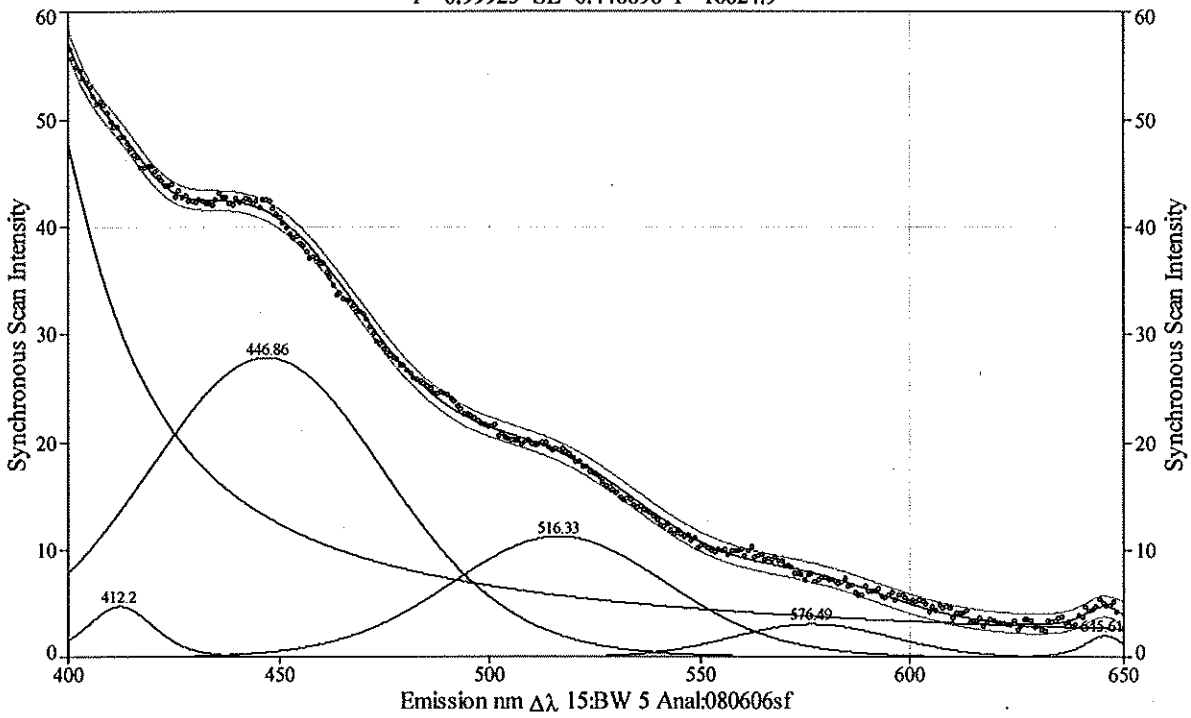
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	20.9918845	365.349370	460.846924	0.00000000	0.00000000	0.00000000
2	Pearson VII Area	4.75219979	448.889686	29.5555966	1.00000000	101.062864	1.00000000
3	Pearson VII Area	3.20971828	466.816397	13.6029239	1.00000061	27.3780139	1.00000033
4	Pearson VII Area	1.49177283	491.745727	8.26080277	1.00000004	20.5319896	1.00000002
5	Pearson VII Area	2.21321826	518.630435	32.8021296	0.99999996	66.4185452	0.99999998
6	Pearson VII Area	0.64963883	601.510415	21.3050968	0.99999991	62.7429193	0.99999997
7	Pearson VII Area	6.29830259	645.963102	14.2268762	0.99999974	31.2209906	0.99999987

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A631, In:080507 1116, Out:080530 0123

Pk=Pearson VII Area 6 Peaks
r^2=0.99925 SE=0.448696 F=16624.9



Description: Frego Creek, Carbon, 23:A631, In:080507 1116, Out:080530 0123
X Variable: Emission nm Δλ 15:BW 5 Anal:080606sf
Y Variable: Synchronous Scan Intensity
File Source: e:\fregocreek080507-080530\fc310530.p

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99924999	0.99918705	0.44869568	16624.9219

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	26569.5939	389.530901	45.9461991	0.53352349
2	Pearson VII Area	102.458071	412.197038	18.7944960	3.26862188
3	Pearson VII Area	2072.12659	446.861719	68.1512837	8.64312130
4	Pearson VII Area	745.705338	516.334660	60.8770972	9.67239158
5	Pearson VII Area	147.995095	576.488316	44.9804017	167.909730
6	Pearson VII Area	29.6012984	645.610235	11.4650874	1.68871623

Measured Values

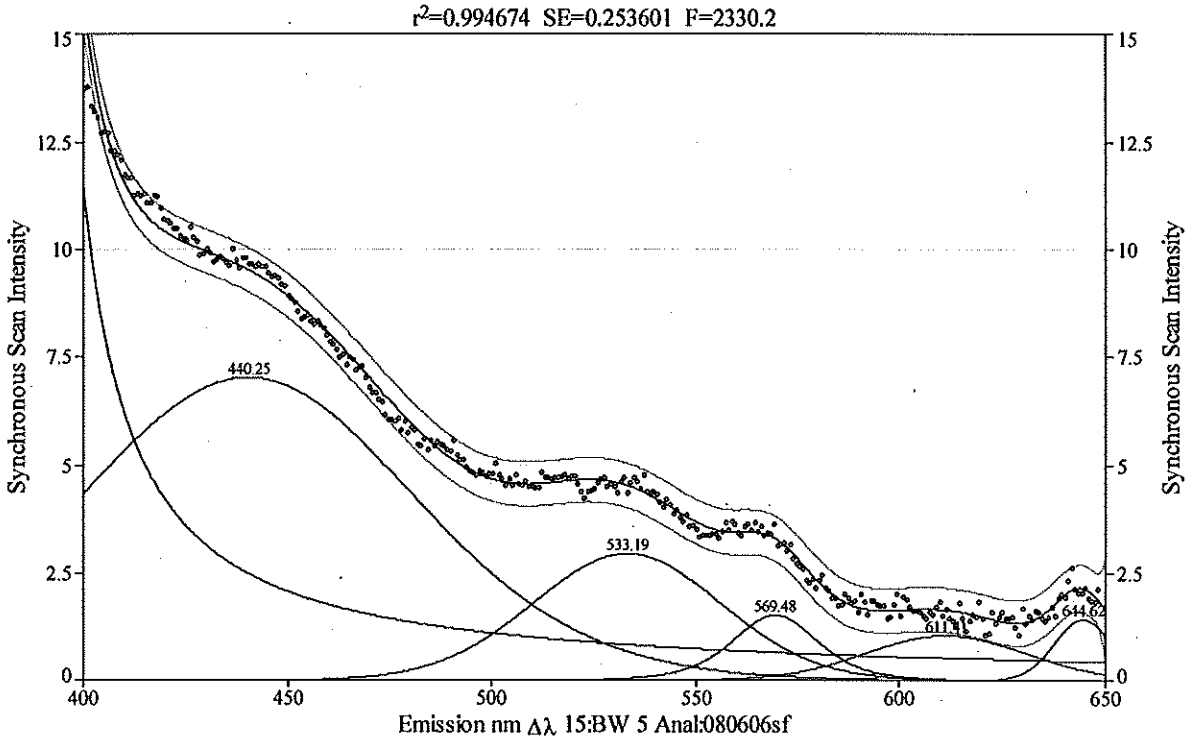
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	60.5414538	389.530899	45.9461991	1.00000013	0.00000000	0.00000000
2	Pearson VII Area	4.75618347	412.197036	18.7944960	1.00000035	43.1201715	1.00000017
3	Pearson VII Area	27.8594902	446.861720	68.1512837	0.99999991	143.331323	0.99999995
4	Pearson VII Area	11.2555572	516.334661	60.8770972	0.99999993	127.345020	0.99999996
5	Pearson VII Area	3.08722497	576.488316	44.9804017	1.00000000	90.2611616	1.00000000
6	Pearson VII Area	2.04233550	645.610235	11.4650874	1.00000000	30.3745641	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:A445, In:080507 1057, Out:080530 0103

Pk=Pearson VII Area 6 Peaks
r^2=0.994674 SE=0.253601 F=2330.2



Description: Frego Creek, Carbon, 23:A445, In:080507 1057, Out:080530 0103
X Variable: Emission nm Δλ 15:BW 5 Anal:080606sf
Y Variable: Synchronous Scan Intensity
File Source: e:\fregocreek080507-080530\fc450530.p

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99467350	0.99422652	0.25360117	2330.19847

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	5009.04644	388.289402	13.3660116	0.53190773
2	Pearson VII Area	742.474011	440.245362	97.2073360	10.1117156
3	Pearson VII Area	173.229299	533.193972	54.4132788	16.3137659
4	Pearson VII Area	44.7392009	569.479014	25.1433261	2.77153011
5	Pearson VII Area	52.6653535	611.406592	46.3954956	17.8198255
6	Pearson VII Area	25.2993490	644.618102	16.3525278	13.8519956

Measured Values

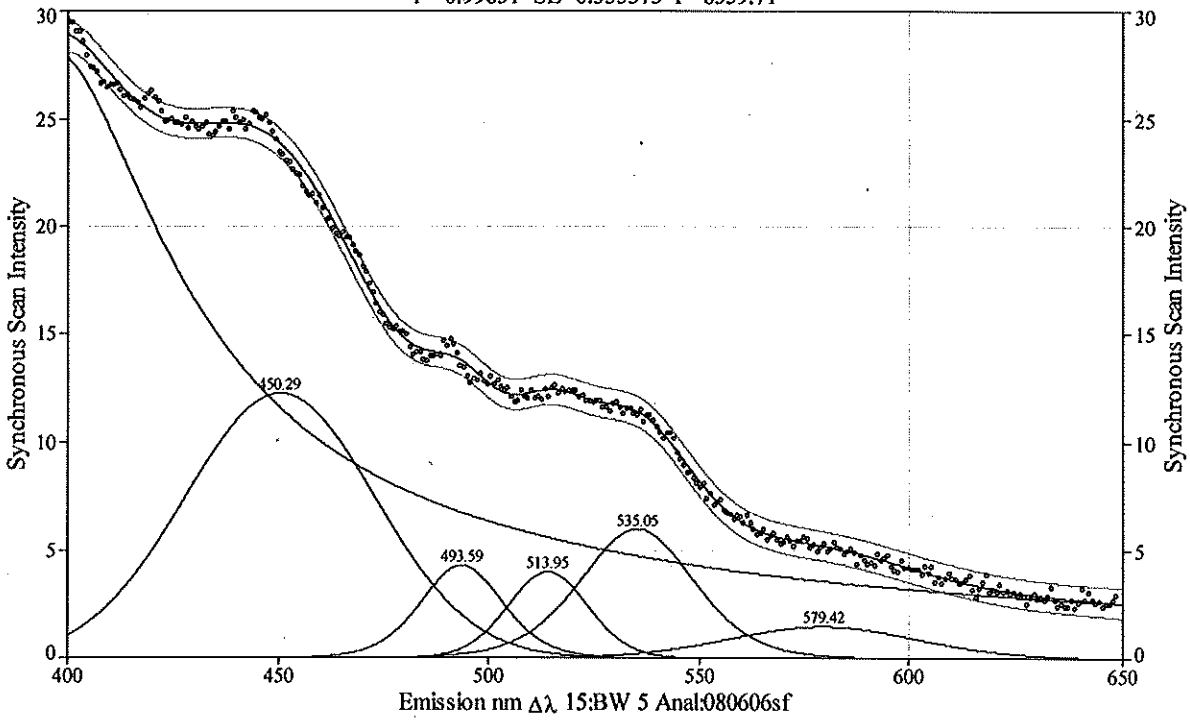
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	35.7978611	389.530903	-1.601e-09	-1.0000000	83.1020209	0.93495861
2	Pearson VII Area	7.02550766	440.245360	97.2073360	1.00000005	202.944337	1.00000003
3	Pearson VII Area	2.95271773	533.193972	54.4132788	1.00000000	111.772533	1.00000000
4	Pearson VII Area	1.52734250	569.479014	25.1433261	1.00000000	59.2291738	1.00000000
5	Pearson VII Area	1.05399853	611.406592	46.3954956	1.00000000	95.0920960	1.00000000
6	Pearson VII Area	1.43152822	644.618102	16.3525278	0.99999999	33.7477374	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:X111, In:080507 1106, Out:080530 0118

Pk=Pearson VII Area 6 Peaks
r^2=0.99851 SE=0.335573 F=8359.71



Description: Frego Creek, Carbon, 23:X111, In:080507 1106, Out:080530 0118
X Variable: Emission nm Δλ 15:BW 5 Anal:080606sf
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080507-080530\fcx10530

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99850956	0.99838449	0.33557341	8359.71021

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	32440.8140	395.555272	85.6222643	0.52318553
2	Pearson VII Area	700.287490	450.292368	53.6668041	167.901224
3	Pearson VII Area	110.897162	493.592957	22.9287478	4.37164104
4	Pearson VII Area	96.7856183	513.954435	22.2750331	10.3460989
5	Pearson VII Area	212.829679	535.052981	31.7693873	4.55479183
6	Pearson VII Area	85.1468358	579.419778	52.7927437	12.3265987

Measured Values

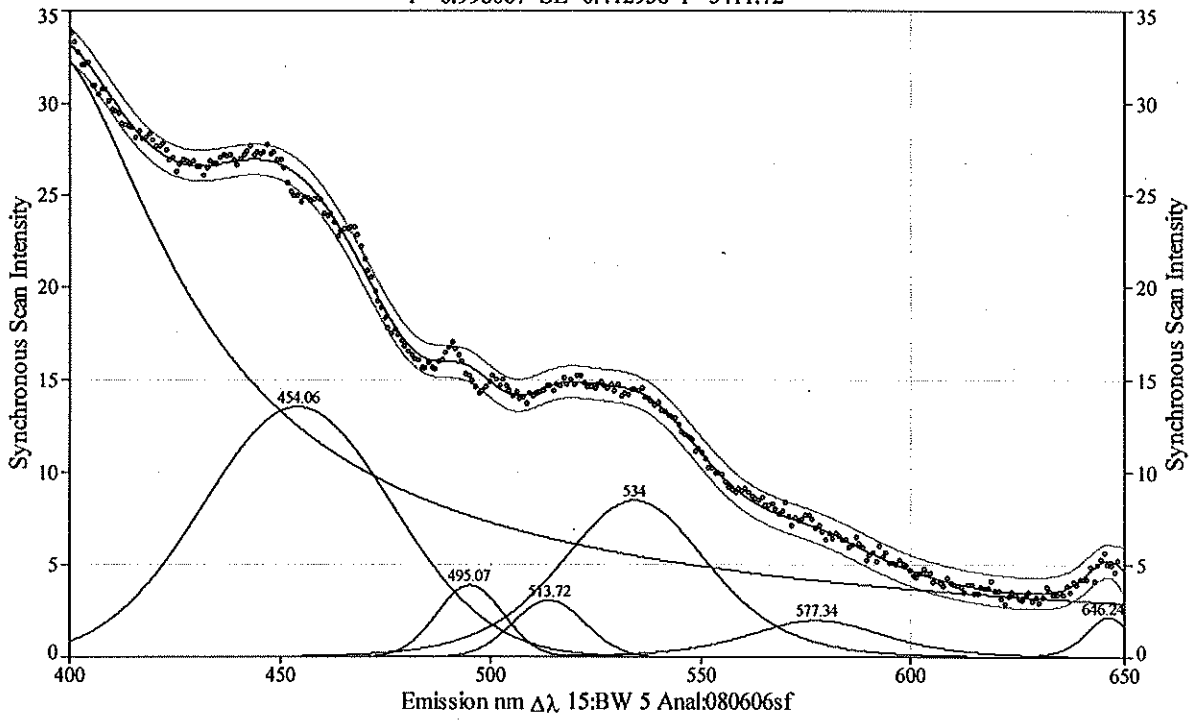
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	28.2970803	395.704467	85.6242201	0.99305444	0.00000000	0.00000000
2	Pearson VII Area	12.2437625	450.292368	53.6668041	1.00000000	107.691984	1.00000000
3	Pearson VII Area	4.31014720	493.592954	22.9287478	1.00000043	50.7375957	1.00000022
4	Pearson VII Area	3.99859556	513.954434	22.2750331	1.00000021	46.4593235	1.00000011
5	Pearson VII Area	5.98436930	535.052981	31.7693873	1.00000007	70.0037089	1.00000003
6	Pearson VII Area	1.48941392	579.419778	52.7927437	0.99999999	109.371958	0.99999999

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23:X112, In:080507 -; Out:080530 -

Pk=Pearson VII Area 7 Peaks
r^2=0.998067 SE=0.412938 F=5411.72



Description: Frego Creek, Carbon, 23:X112, In:080507 -, Out:080530 -
X Variable: Emission nm Δλ 15:BW 5 Anal:080606sf
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080507-080530\fcx20530

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99806693	0.99787500	0.41293840	5411.72312

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	37340.7956	394.836289	84.7099207	0.52323505
2	Pearson VII Area	773.993915	454.057953	53.4126983	28.3192090
3	Pearson VII Area	77.1082433	495.074357	18.6368518	92.4347934
4	Pearson VII Area	65.8507541	513.724154	20.0747813	167.917249
5	Pearson VII Area	401.627921	534.000983	41.2870552	3.15475547
6	Pearson VII Area	93.3097679	577.337583	39.0325735	2.39508135
7	Pearson VII Area	33.2886757	646.240293	12.7665869	2.38214114

Measured Values

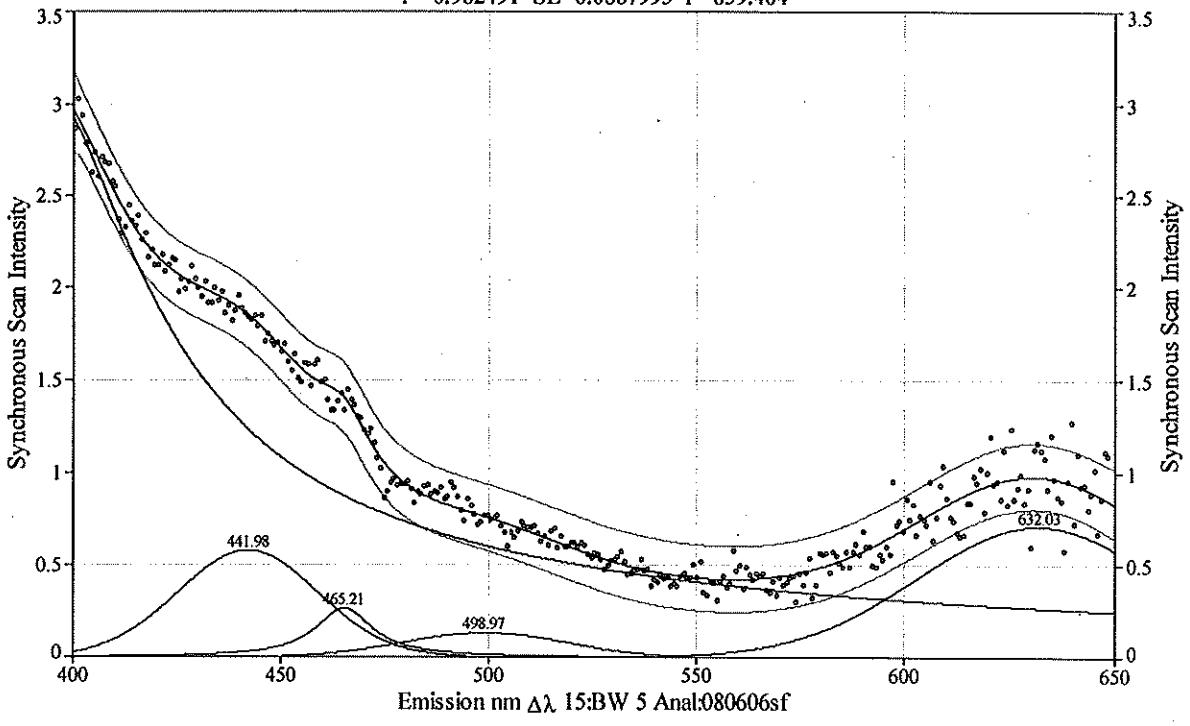
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	32.9855908	395.131730	84.7176714	0.98614721	0.00000000	0.00000000
2	Pearson VII Area	13.5146322	454.057953	53.4126983	1.00000000	108.511218	1.00000000
3	Pearson VII Area	3.87830936	495.074359	18.6368518	0.99999955	37.4741381	0.99999976
4	Pearson VII Area	3.07789813	513.724156	20.0747813	0.99999951	40.2836081	0.99999973
5	Pearson VII Area	8.45992230	534.000985	41.2870552	0.99999977	95.2248826	0.99999989
6	Pearson VII Area	2.01540931	577.337584	39.0325735	0.99999989	94.5470902	0.99999995
7	Pearson VII Area	2.19665433	646.240293	12.7665869	0.99999987	30.9588978	0.99999994

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

blank, Water, Eluent, Sampled:080606 0334

Pk=Pearson VII Area 5 Peaks
r^2=0.982491 SE=0.0887995 F=859.404



Description: blank, Water, Eluent, Sampled:080606 0334
X Variable: Emission nm Δλ 15:BW 5 Anal:080606sf
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080507-080530\eb080606

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98249063	0.98128309	0.08879946	859.403856

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	5323.37630	391.927777	74.7818325	0.51321634
2	Pearson VII Area	24.8703614	441.981194	39.8683612	21.6312840
3	Pearson VII Area	7.47265656	465.212457	16.9409434	0.93651256
4	Pearson VII Area	6.67624842	498.966331	46.7522107	167.918240
5	Pearson VII Area	51.5466612	632.033676	67.7635181	32.3722951

Measured Values

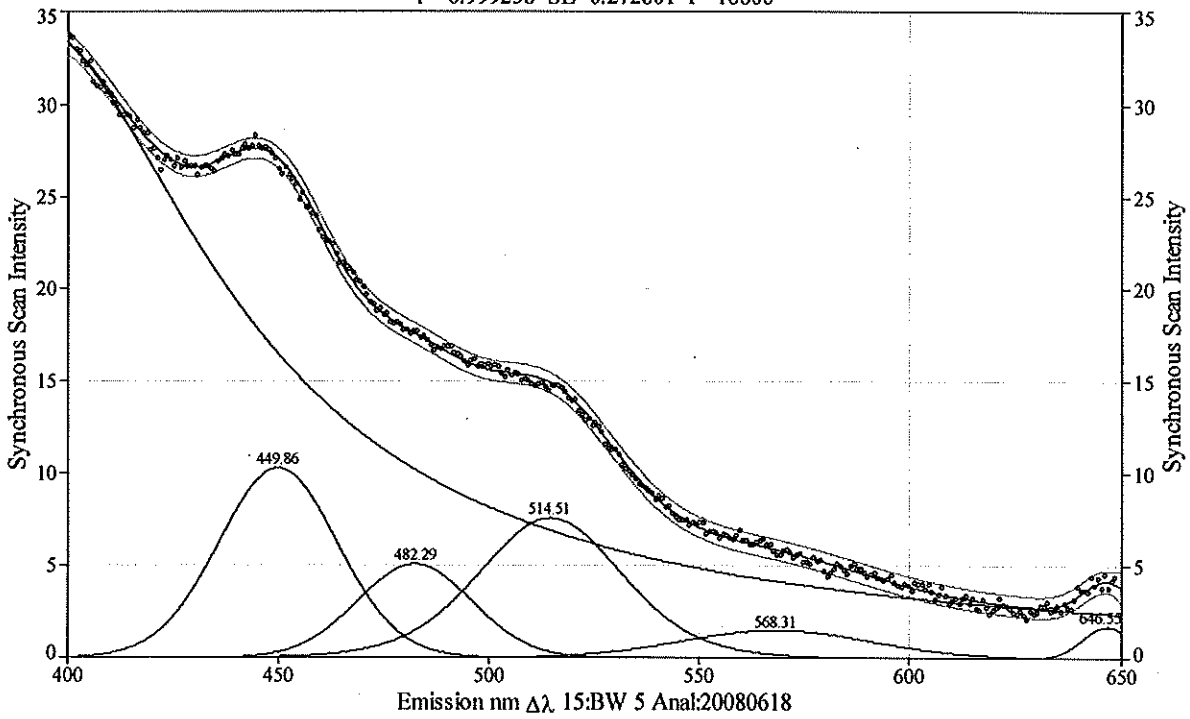
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	3.12505856	391.981672	74.7821324	0.99712137	0.00000000	0.00000000
2	Pearson VII Area	0.58044745	441.981194	39.8683612	1.00000001	81.3707051	1.00000000
3	Pearson VII Area	0.26728036	465.212457	16.9409434	1.00000000	58.8157920	1.00000000
4	Pearson VII Area	0.13399070	498.966331	46.7522107	1.00000000	93.8165991	1.00000000
5	Pearson VII Area	0.71009755	632.033676	67.7635181	1.00000000	137.409008	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23A631, In:080530 1326, Out:080616 1408

Pk=Pearson VII Area 6 Peaks
r^2=0.999258 SE=0.272801 F=16800



Description: Frego Creek, Carbon, 23A631, In:080530 1326, Out:080616 1408
X Variable: Emission nm Δλ 15:BW 5 Anal:20080618
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080530-080616\fca10616

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99925780	0.99919552	0.27280110	16800.0121

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	7879.09975	391.454722	112.262402	0.76715002
2	Pearson VII Area	367.020227	449.856541	33.2353316	18.4922061
3	Pearson VII Area	173.777704	482.287840	32.0909343	42.4406952
4	Pearson VII Area	337.217281	514.507006	40.3051203	5.42628617
5	Pearson VII Area	86.7169842	568.311228	53.3813825	68.0241033
6	Pearson VII Area	25.0145667	646.551545	13.5664544	167.880183

Measured Values

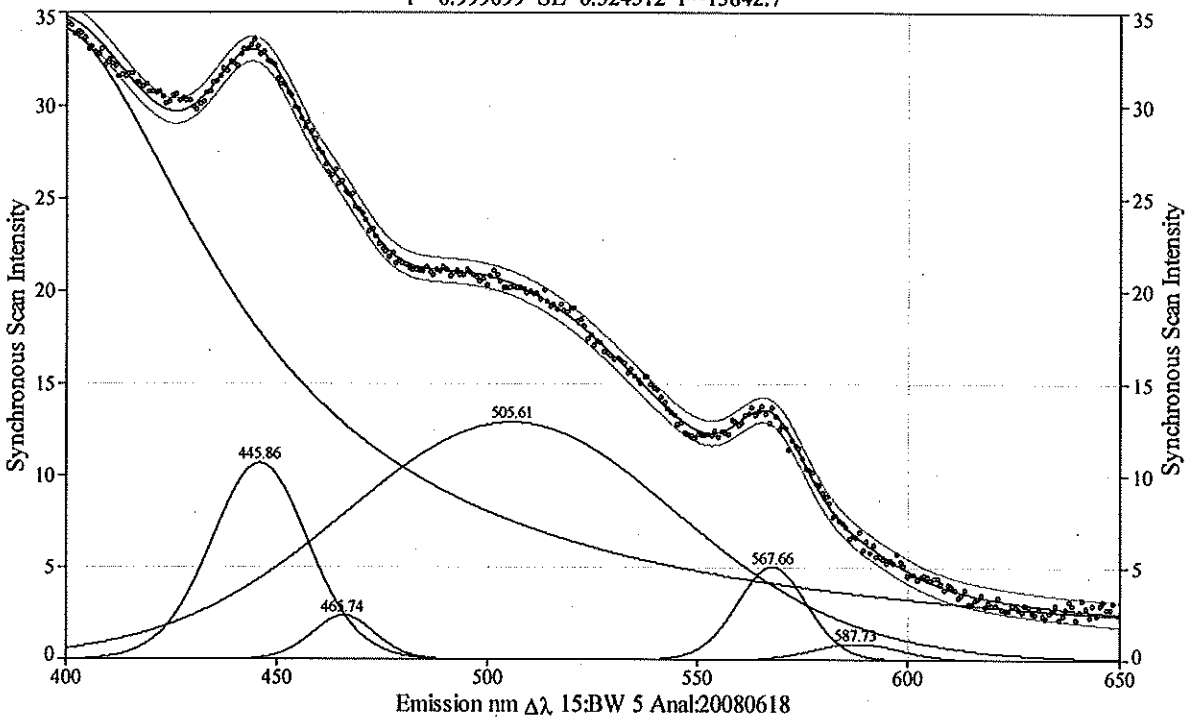
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	34.1591179	391.695304	112.264947	0.99146465	0.00000000	0.00000000
2	Pearson VII Area	10.2582001	449.856541	33.2353316	1.00000001	68.0597769	1.00000001
3	Pearson VII Area	5.06276027	482.287841	32.0909343	0.99999998	64.8725957	0.99999999
4	Pearson VII Area	7.54121645	514.507008	40.3051203	0.99999983	87.3967802	0.99999991
5	Pearson VII Area	1.52154030	568.311228	53.3813825	1.00000000	107.511305	1.00000000
6	Pearson VII Area	1.73009846	646.551546	13.5664544	0.99999963	27.2235111	0.99999980

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Carbon, 23A445, In:080530 1303, Out:080616 1354

Pk=Pearson VII Area 6 Peaks
r^2=0.999099 SE=0.324512 F=13842.7



Description: Frego Creek, Carbon, 23A445, In:080530 1303, Out:080616 1354
X Variable: Emission nm Δλ 15:BW 5 Anal:20080618
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreek080530-080616\fca50616

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99909938	0.99902380	0.32451166	13842.6683

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	8097.80540	395.739133	103.744549	0.72268850
2	Pearson VII Area	313.341000	445.856312	26.9588407	8.93109644
3	Pearson VII Area	46.1168019	465.739861	17.5594215	7.85707901
4	Pearson VII Area	1331.38073	505.608185	95.1176024	10.6212710
5	Pearson VII Area	106.722435	567.656707	19.4812296	10.1218806
6	Pearson VII Area	23.0053841	587.731714	24.0247749	167.870406

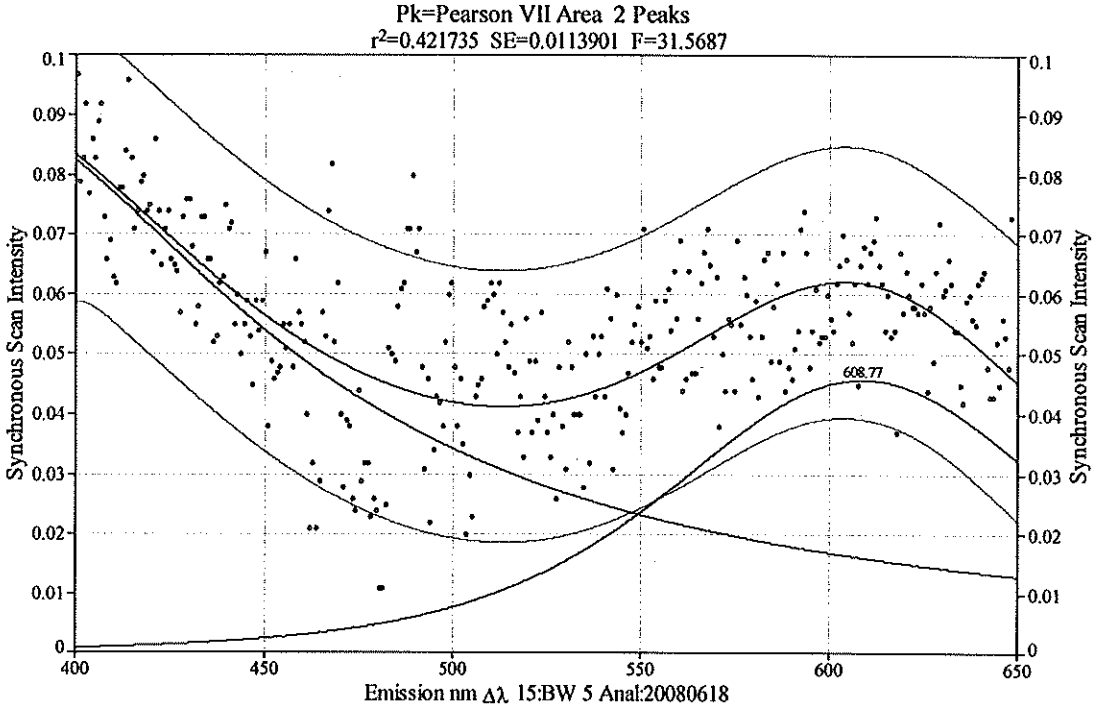
Measured Values

Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	34.4553098	395.739134	103.744549	0.99999998	0.00000000	0.00000000
2	Pearson VII Area	10.6590690	445.856313	26.9588407	0.99999981	56.6054388	0.99999990
3	Pearson VII Area	2.40001762	465.739861	17.5594215	1.00000003	37.1183047	1.00000002
4	Pearson VII Area	12.8884609	505.608183	95.1176024	1.00000009	198.172197	1.00000005
5	Pearson VII Area	5.03900282	567.656706	19.4812296	1.00000013	40.6701229	1.00000007
6	Pearson VII Area	0.89849223	587.731714	24.0247749	1.00000001	48.2100040	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Blank, Water, Eluent Blank, Sampled:080618 1500



Description: Blank, Water, Eluent Blank, Sampled:080618 1500
X Variable: Emission nm Δλ 15:BW 5 Anal:20080618
Y Variable: Synchronous Scan Intensity
File Source: e:\trace data\elbl0618.p

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.42173487	0.40641659	0.01139012	31.5687287

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	38.1065559	372.630098	193.362892	0.73670446
2	Pearson VII Area	6.51116685	608.767242	120.981930	2.55944744

Measured Values

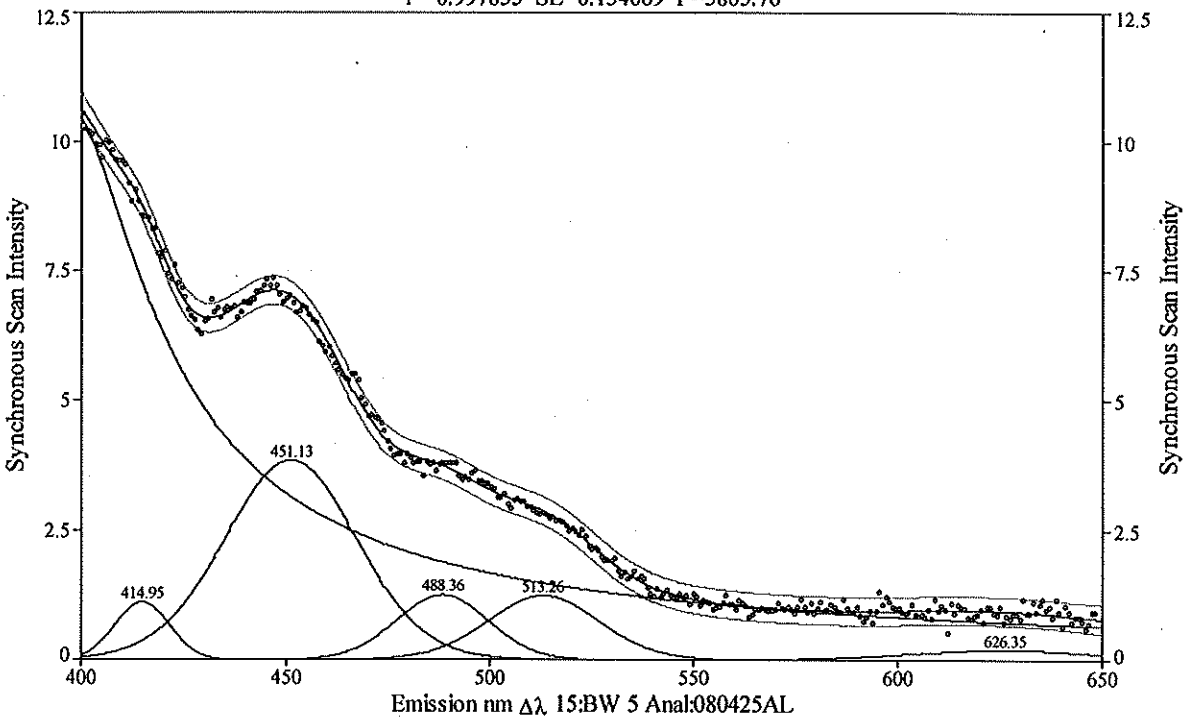
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	0.08797445	386.254296	471.740636	0.00000000	0.00000000	0.00000000
2	Pearson VII Area	0.04576765	608.767242	120.981930	1.00000000	289.190458	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Water, 23:A445, Sampled:080331 1052

Pk=Pearson VII Area 6 Peaks
r^2=0.997855 SE=0.134069 F=5805.76



Description: Frego Creek, Water, 23:A445, Sampled:080331 1052
X Variable: Emission nm Δλ 15:BW 5 Anal:080425AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreekwater080331-080409\fcw50331

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99785532	0.99767535	0.13406890	5805.76033

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	8561.27214	395.924712	59.7998997	0.52329269
2	Pearson VII Area	18.8662768	414.947756	15.7797141	167.694010
3	Pearson VII Area	159.181037	451.129507	38.1555044	11.8082723
4	Pearson VII Area	36.4262869	488.362215	26.8675998	21.3114374
5	Pearson VII Area	43.8848629	513.257722	32.3447528	10.2806818
6	Pearson VII Area	12.9606612	626.345915	57.1304291	117.841925

Measured Values

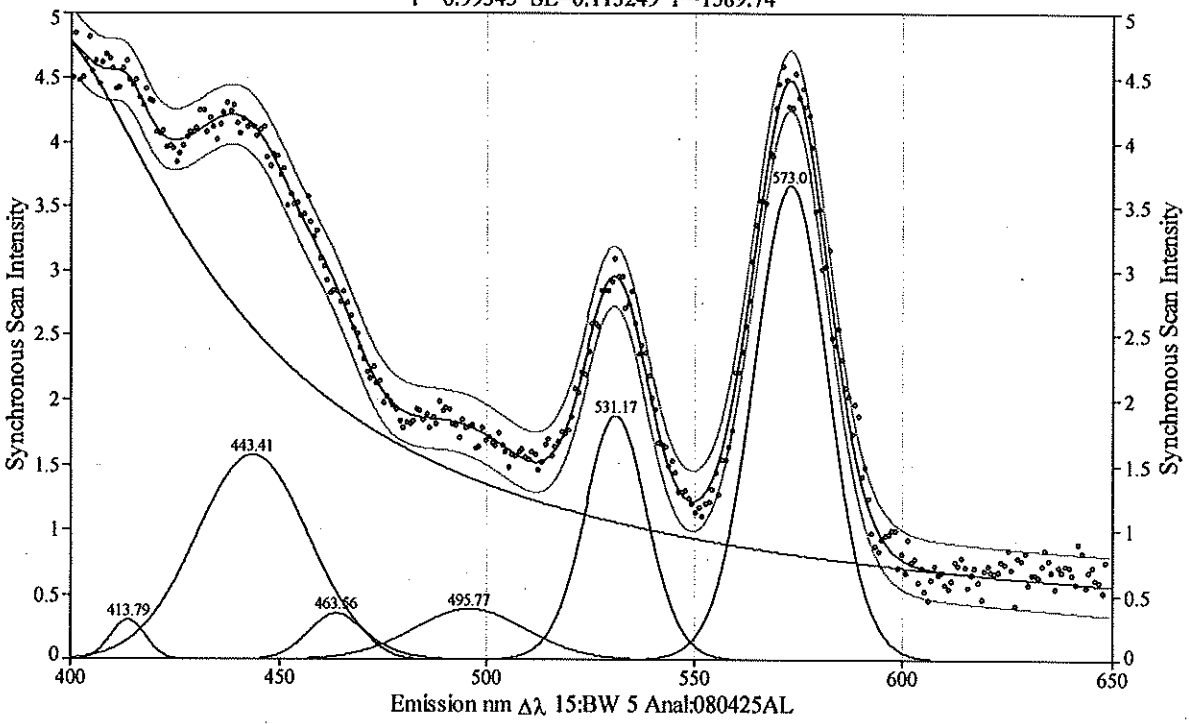
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	10.7384248	395.986239	59.8003758	0.99589302	0.00000000	0.00000000
2	Pearson VII Area	1.12183939	414.947756	15.7799141	1.00000001	31.6648989	1.00000000
3	Pearson VII Area	3.84957037	451.129507	38.1555044	1.00000000	79.1693969	1.00000000
4	Pearson VII Area	1.26133696	488.362216	26.8675998	0.99999981	54.8525248	0.99999990
5	Pearson VII Area	1.24843436	513.257722	32.3447528	1.00000000	67.4799171	1.00000000
6	Pearson VII Area	0.21275533	626.345915	57.1304291	1.00000000	114.763428	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Water, 23:A445, Sampled:080402 1000

Pk=Pearson VII Area 7 Peaks
r^2=0.99345 SE=0.113249 F=1589.74



Description: Frego Creek, Water, 23:A445, Sampled:080402 1000
X Variable: Emission nm Δλ 15:BW 5 Anal:080425AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreekwater080331-080409\fcw50402

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99344999	0.99279963	0.11324866	1589.74111

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	15135.2838	392.024663	107.508652	0.51044719
2	Pearson VII Area	3.26960645	413.790265	9.95697654	166.612850
3	Pearson VII Area	53.7372004	443.407842	31.6672327	18.1250896
4	Pearson VII Area	6.04677013	463.564033	15.8010247	37.0799146
5	Pearson VII Area	13.6539877	495.774626	32.3999767	17.4360584
6	Pearson VII Area	36.2820485	531.165696	17.7868040	10.1441717
7	Pearson VII Area	82.9566623	573.014979	20.9255999	12.9767523

Measured Values

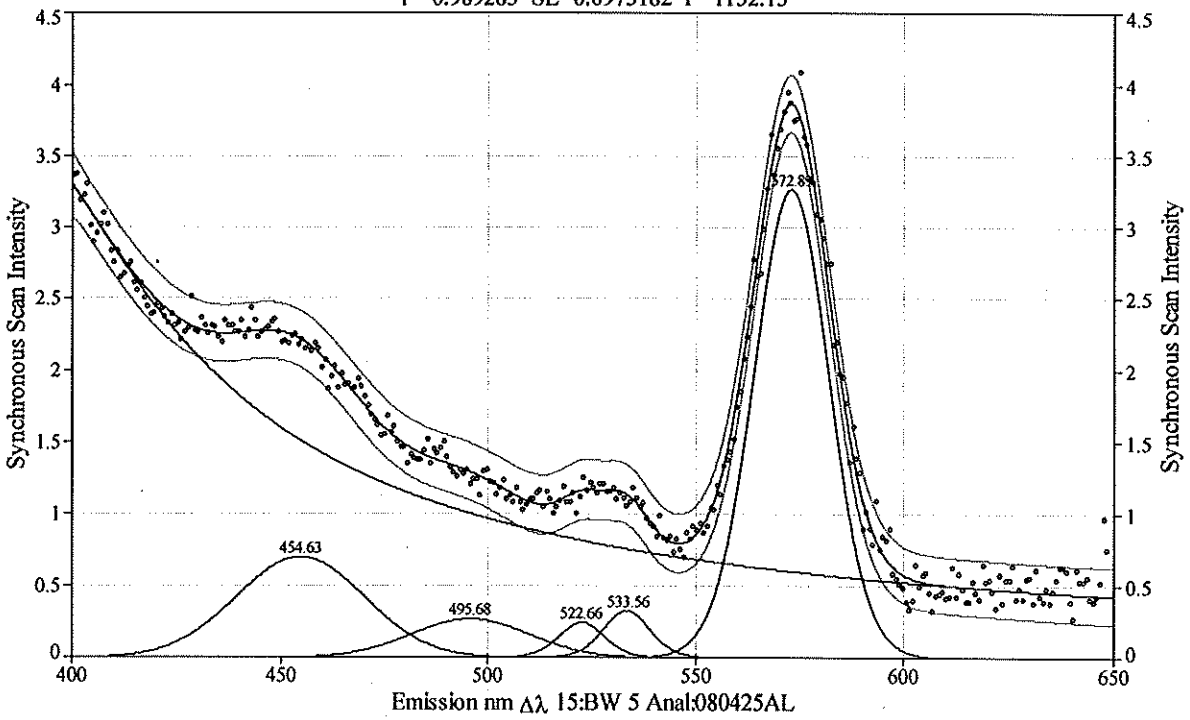
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	4.92798999	392.024663	107.508652	1.00000000	0.00000000	0.00000000
2	Pearson VII Area	0.30811170	413.790264	9.95697653	1.00000010	19.9808273	1.00000005
3	Pearson VII Area	1.57595559	443.407842	31.6672327	1.00000001	64.8789087	1.00000000
4	Pearson VII Area	0.35752526	463.564033	15.8010247	0.99999992	31.9879667	0.99999996
5	Pearson VII Area	0.39119219	495.774626	32.3999767	0.99999998	66.4419464	0.99999999
6	Pearson VII Area	1.87637835	531.165696	17.7868040	0.99999991	37.1292346	0.99999996
7	Pearson VII Area	3.66424294	573.014977	20.9255999	1.00000034	43.2761006	1.00000018

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Water, 23:A445, Sampled:080409 1043

Pk=Pearson VII Area 6 Peaks
r^2=0.989285 SE=0.0975182 F=1152.13



Description: Frego Creek, Water, 23:A445, Sampled:080409 1043
X Variable: Emission nm Δλ 15:BW 5 Anal:080425AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreekwater080331-080409\fcw50409

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98928548	0.98838636	0.09751822	1152.13386

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	11172.3879	383.137913	109.564260	0.51095657
2	Pearson VII Area	27.0136676	454.633745	36.1931795	167.896159
3	Pearson VII Area	9.63899255	495.684823	33.4351058	72.8236556
4	Pearson VII Area	3.55238657	522.664962	13.1181980	7.59602452
5	Pearson VII Area	4.75461534	533.561615	13.2220358	6.47395492
6	Pearson VII Area	74.7067301	572.885266	21.2715351	20.5550933

Measured Values

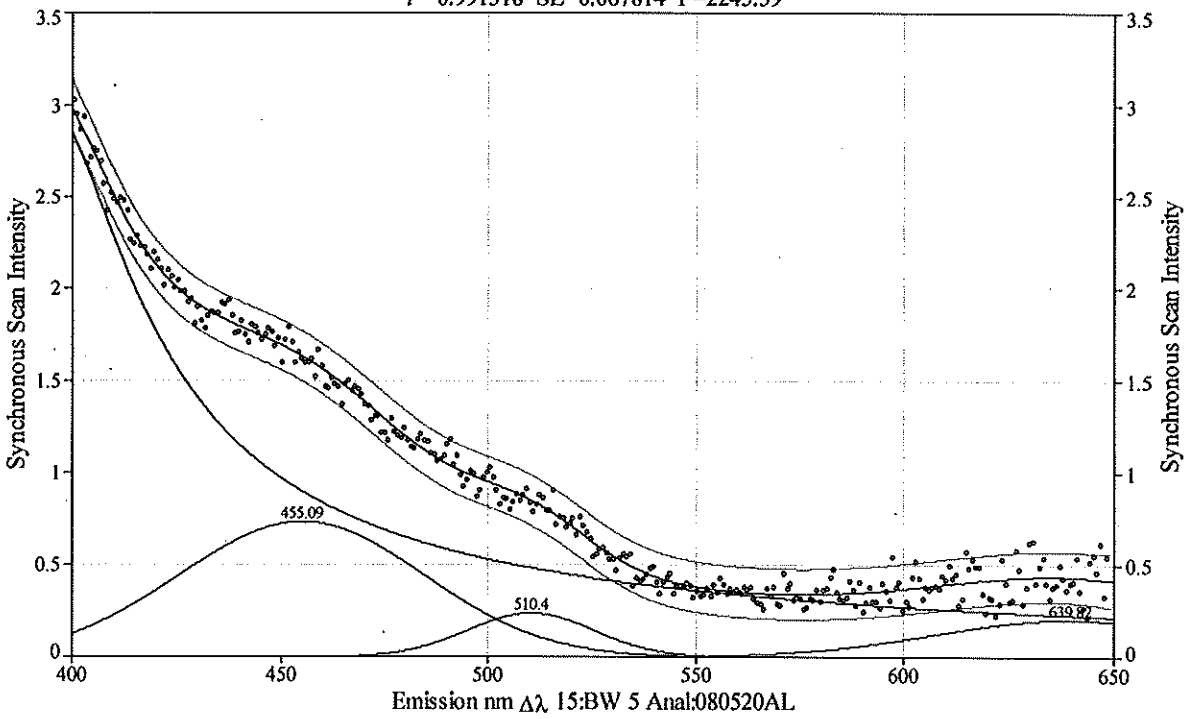
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	3.68521527	388.532110	111.607568	0.82371323	0.00000000	0.00000000
2	Pearson VII Area	0.70032731	454.633745	36.1931795	0.99999999	72.6280547	1.00000000
3	Pearson VII Area	0.27007496	495.684823	33.4351058	1.00000006	67.3117524	1.00000003
4	Pearson VII Area	0.24721055	522.664962	13.1181980	1.00000000	27.7837312	1.00000000
5	Pearson VII Area	0.32649958	533.561615	13.2220358	0.99999991	28.2888362	0.99999996
6	Pearson VII Area	3.26622610	572.885266	21.2715351	1.00000000	43.4595710	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Water, 23:A403, Sampled:080424 1220

Pk=Pearson VII Area 4 Peaks
r^2=0.991318 SE=0.067814 F=2245.59



Description: Frego Creek, Water, 23:A403, Sampled:080424 1220
X Variable: Emission nm Δλ 15:BW 5 Anal:080520AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreekwater080424\fcw30424

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99131811	0.99084563	0.06781400	2245.58562

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	5826.70697	393.064592	67.1264458	0.51040546
2	Pearson VII Area	54.1174971	455.085538	69.3429878	167.917467
3	Pearson VII Area	9.27565960	510.403094	36.4067481	70.5431692
4	Pearson VII Area	16.8439692	639.824423	76.4274867	26.2750997

Measured Values

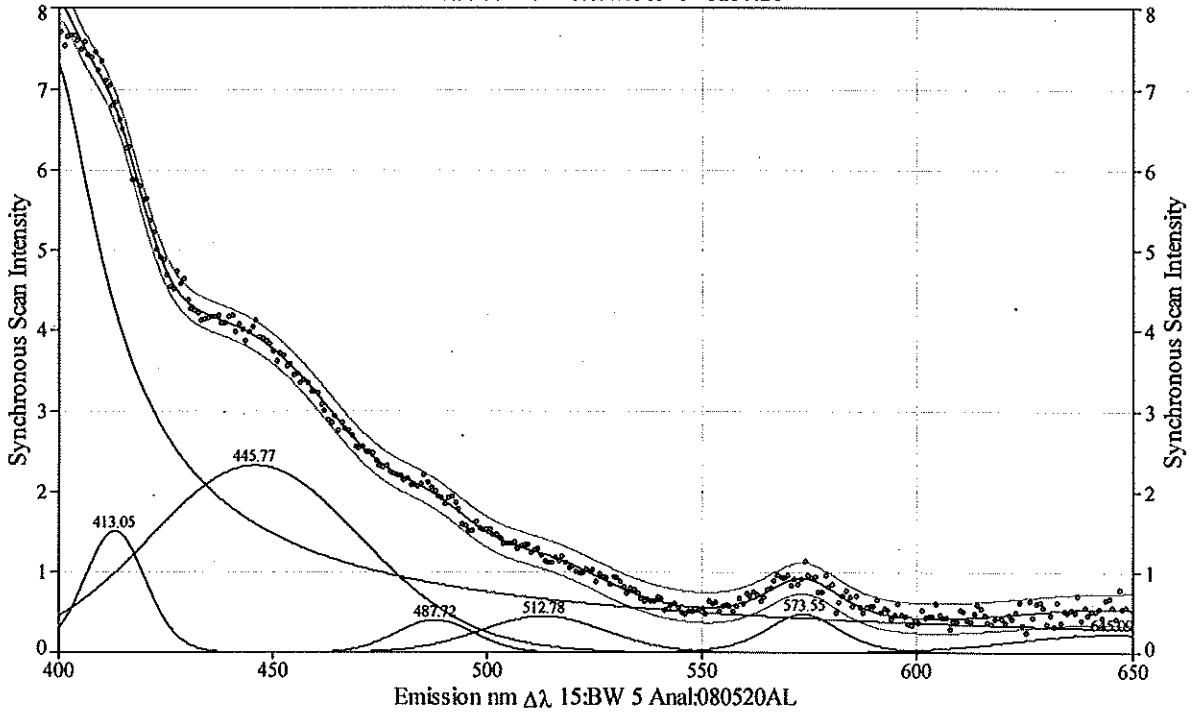
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	3.02515046	393.692661	67.1721325	0.96328599	0.00000000	0.00000000
2	Pearson VII Area	0.73228386	455.085534	69.3429878	1.00000025	139.149000	1.00000014
3	Pearson VII Area	0.23865953	510.403092	36.4067481	1.00000027	73.3078983	1.00000015
4	Pearson VII Area	0.20542586	639.824423	76.4274867	1.00000000	155.447731	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Water, 23:A445, Sampled:080424 1242

Pk=Pearson VII Area 7 Peaks
r^2=0.99801 SE=0.0921583 F=5257.21



Description: Frego Creek, Water, 23:A445, Sampled:080424 1242
X Variable: Emission nm Δλ 15:BW 5 Anal:080520AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreekwater080424\fcw50424

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.99801023	0.99781267	0.09215835	5257.20956

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	6626.24829	397.511751	37.0935227	0.51265366
2	Pearson VII Area	27.6244329	413.046799	16.7886961	9.33184098
3	Pearson VII Area	148.248483	445.774407	58.9398846	13.2725988
4	Pearson VII Area	9.42005394	487.715715	21.7233586	167.898275
5	Pearson VII Area	16.9683096	512.776402	34.3875981	13.7592345
6	Pearson VII Area	11.4498190	573.545595	20.2599404	2.82510893
7	Pearson VII Area	13.9241247	645.089644	52.4268151	6.39505069

Measured Values

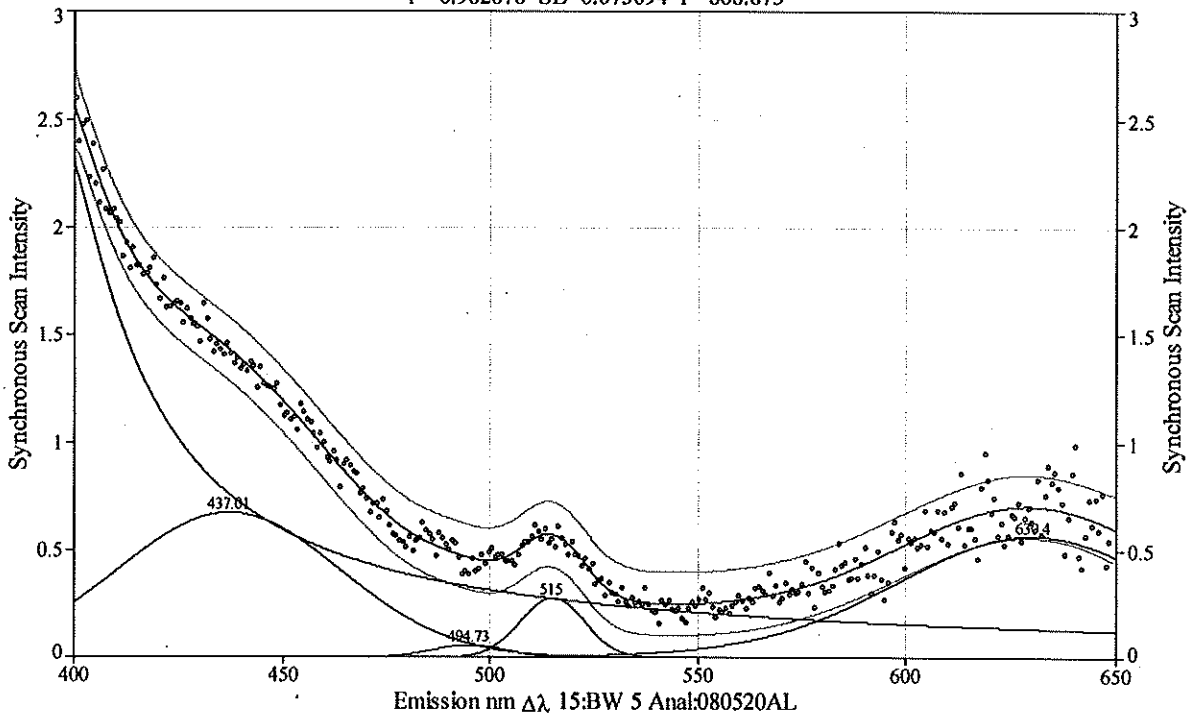
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	7.52031034	397.706422	37.1014201	0.97922998	230.320379	0.99622516
2	Pearson VII Area	1.51062690	413.046799	16.7886961	1.00000001	35.1771304	1.00000001
3	Pearson VII Area	2.32571269	445.774407	58.9398846	1.00000000	121.803025	1.00000000
4	Pearson VII Area	0.40688405	487.715715	21.7233586	0.99999998	43.5917831	0.99999999
5	Pearson VII Area	0.45652638	512.776402	34.3875981	1.00000000	70.9827006	1.00000000
6	Pearson VII Area	0.48611442	573.545594	20.2599404	1.00000007	47.5672431	1.00000003
7	Pearson VII Area	0.24103518	645.089642	52.4268151	1.00000016	112.263813	1.00000008

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

LCCMR, Water, Eluent Blank, Sampled:080520 1550

Pk=Pearson VII Area 5 Peaks
r^2=0.982678 SE=0.073094 F=868.873



Description: LCCMR, Water, Eluent Blank, Sampled:080520 1550
X Variable: Emission nm Δλ 15:BW 5 Anal:080520AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreekwater080424\eb80520b

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98267814	0.98148353	0.07309404	868.872537

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	1519.47676	392.356471	47.6458722	0.52579602
2	Pearson VII Area	45.1968840	437.007809	62.7923199	57.5757445
3	Pearson VII Area	1.30674108	494.725861	20.9539645	167.514672
4	Pearson VII Area	5.38234931	514.997114	18.2129449	129.808566
5	Pearson VII Area	48.4184752	630.400850	78.0181067	8.30309053

Measured Values

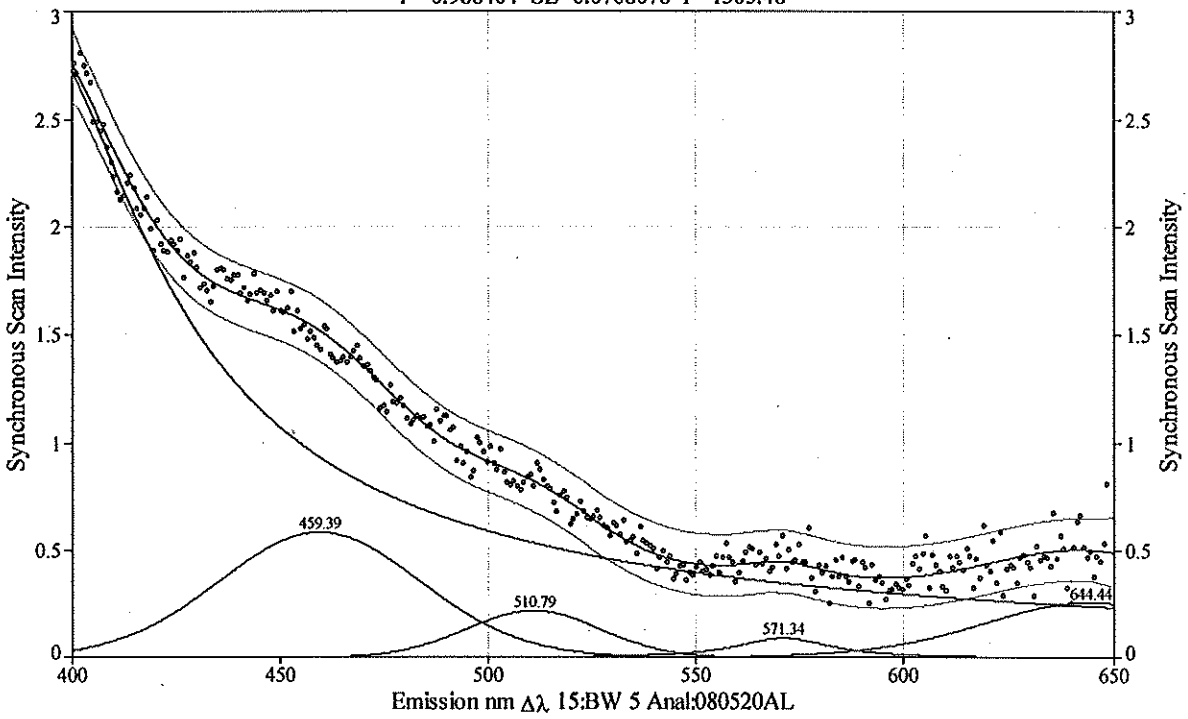
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	2.53232610	396.272936	49.9941157	0.72909114	0.00000000	0.00000000
2	Pearson VII Area	0.67380318	437.007809	62.7923199	0.99999999	126.606557	1.00000000
3	Pearson VII Area	0.05851489	494.725861	20.9539645	1.00000000	42.0480960	1.00000000
4	Pearson VII Area	0.27719262	514.997114	18.2129449	1.00000000	36.5741639	1.00000000
5	Pearson VII Area	0.56803019	630.400850	78.0181067	1.00000000	164.424338	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

Frego Creek, Water, 23:A445, Sampled:080507 1057

Pk=Pearson VII Area 5 Peaks
r^2=0.988404 SE=0.0708076 F=1305.48



Description: Frego Creek, Water, 23:A445, Sampled:080507 1057
X Variable: Emission nm Δλ 15:BW 5 Anal:080520AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreekwater080507\fcw50507

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98840416	0.98760445	0.07080760	1305.48460

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	1742.90427	390.166970	83.1013181	0.54646252
2	Pearson VII Area	35.9140889	459.390093	57.2285097	22.9313795
3	Pearson VII Area	8.89718239	510.786469	38.2632061	167.743040
4	Pearson VII Area	3.51827357	571.335960	27.1021462	1.16338344
5	Pearson VII Area	17.4892745	644.436940	60.9935081	6.35636018

Measured Values

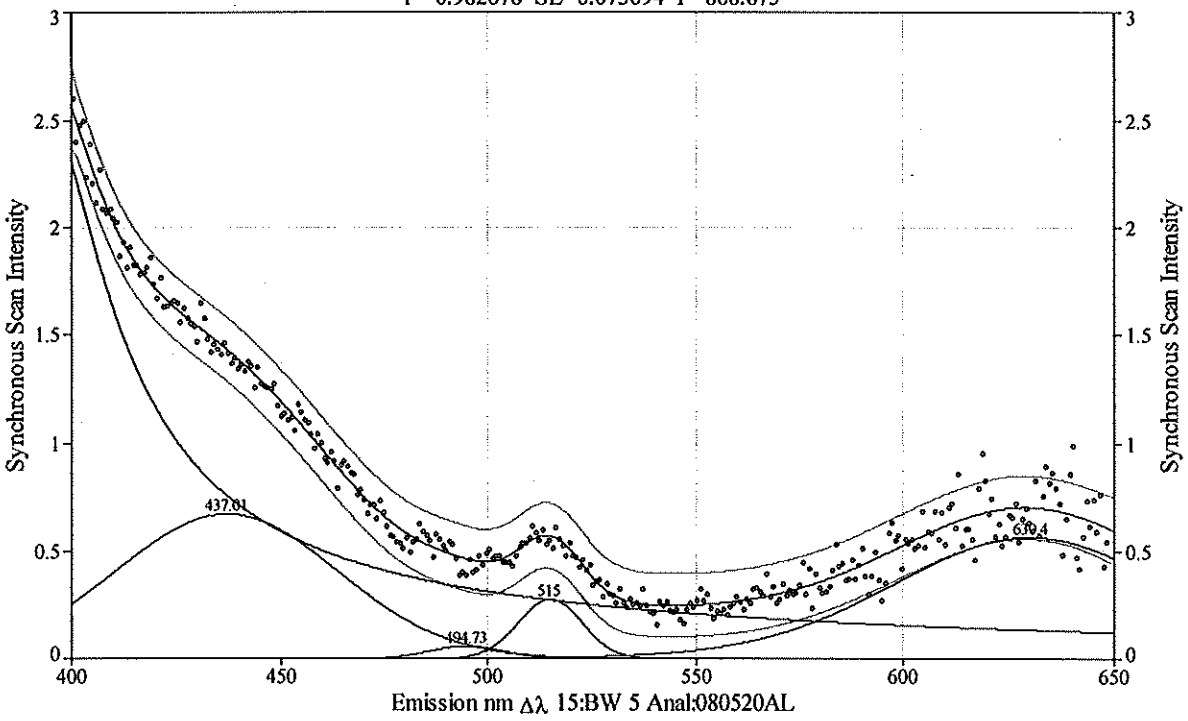
Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	2.93047458	390.538991	83.1131593	0.98225458	0.00000000	0.00000000
2	Pearson VII Area	0.58425616	459.390094	57.2285097	0.99999994	116.672569	0.99999997
3	Pearson VII Area	0.21817998	510.786468	38.2632061	1.00000001	76.7821054	1.00000000
4	Pearson VII Area	0.09027615	571.335960	27.1021462	1.00000000	83.2173409	1.00000000
5	Pearson VII Area	0.26016828	644.436940	60.9935081	1.00000000	130.663596	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu

Scanning Spectrofluorophotometer Results – Shimadzu RF-5000 and PeakFit V4.0
Frego Creek Trace 31 March 2008 Inputs

LCCMR, Water, Eluent Blank, Sampled:080520 1550

Pk=Pearson VII Area 5 Peaks
r^2=0.982678 SE=0.073094 F=868.873



Description: LCCMR, Water, Eluent Blank, Sampled:080520 1550
X Variable: Emission nm Δλ 15:BW 5 Anal:080520AL
Y Variable: Synchronous Scan Intensity
File Source: g:\dyetracing\fregocreek080331\fregocreekwater080507\eb80520b

Fitted Parameters

r^2 Coef Det	DF Adj r^2	Fit Std Err	F-value
0.98267814	0.98148353	0.07309404	868.872537

Peak	Type	a_0	a_1	a_2	a_3
1	Pearson VII Area	1519.47676	392.356471	47.6458722	0.52579602
2	Pearson VII Area	45.1968840	437.007809	62.7923199	57.5757445
3	Pearson VII Area	1.30674108	494.725861	20.9539645	167.514672
4	Pearson VII Area	5.38234931	514.997114	18.2129449	129.808566
5	Pearson VII Area	48.4184752	630.400850	78.0181067	8.30309053

Measured Values

Peak	Type	Amplitude	Center	FWHM	Asym50	FW Base	Asym10
1	Pearson VII Area	2.53232610	396.272936	49.9941157	0.72909114	0.00000000	0.00000000
2	Pearson VII Area	0.67380318	437.007808	62.7923199	1.00000001	126.606557	1.00000001
3	Pearson VII Area	0.05851489	494.725866	20.9539645	0.99999912	42.0480960	0.99999952
4	Pearson VII Area	0.27719262	514.997114	18.2129449	1.00000000	36.5741639	1.00000000
5	Pearson VII Area	0.56803019	630.400850	78.0181067	1.00000000	164.424338	1.00000000

Hydrogeochemistry Laboratory
Dept. of Geology & Geophysics, University of Minnesota
alexa017@umn.edu