

Table 10. Rain data analytes for the events studied in detail. N/A = not applicable, CFR = Cape Fear River, NSS = Non Seasalt Sulfate.

Samples	Date	Amount (mm)	pH	[H⁺]	DOC (μM)	H₂O₂ (μM)	Spectral Slope
E411	2/28/03	19	4.76	1.74E-05	105	16	22
E413	3/7/03	20	4.62	2.40E-05	32	15	21
E414	3/11/03	50	4.64	2.29E-05	66	8	20
E417	3/21/03	78	4.61	2.46E-05	61	27	20
E451	8/7/03	102	4.39	4.07E-05	86	29	23
CFR	8/18/03	N/A	7.48	3.31E-08	845	N/A	13
Samples	Cl⁻	NO₃⁻	SO₄²⁻	NSS	Time of Day	Season	Storm Origin
E411	126	21	20	14	6pm-12am	Winter	Mixed
E413	44	22	18	15	6am-12pm	Spring	Cont.
E414	52	13	16	13	12pm-6pm	Spring	Cont.
E417	129	22	29	22	12pm-6pm	Spring	Cont.
E451	7	10	8	8	6pm-12am	Summer	Cont.
CFR	N/A	N/A	N/A	N/A	N/A	N/A	N/A

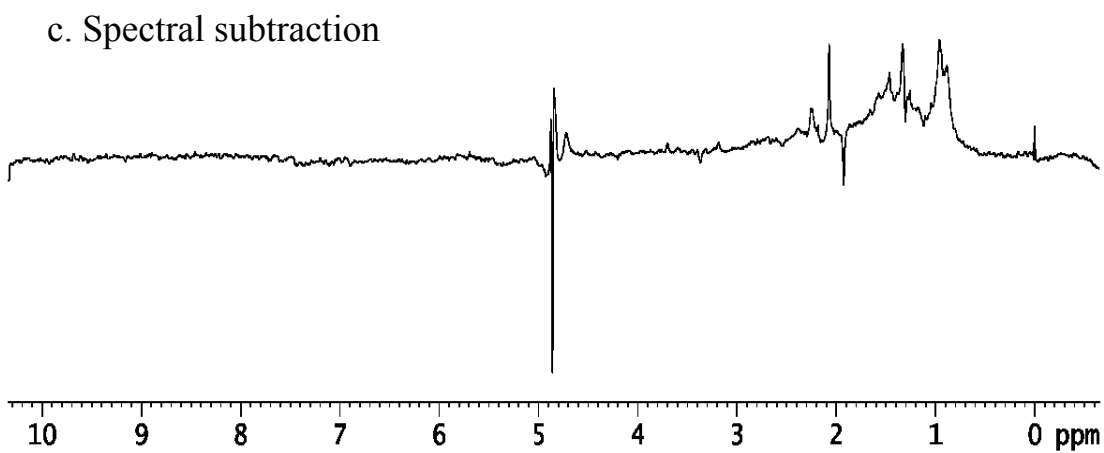
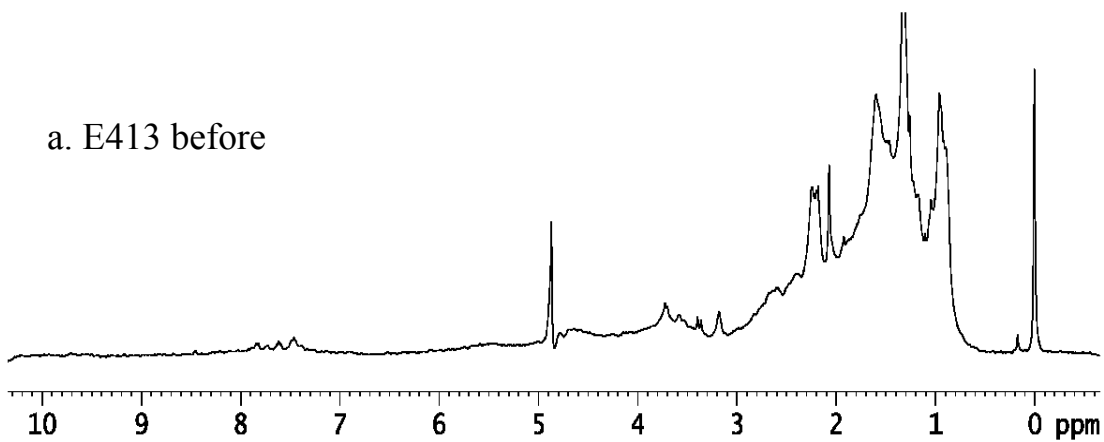
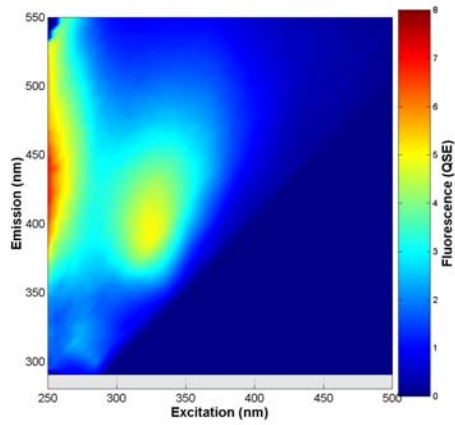
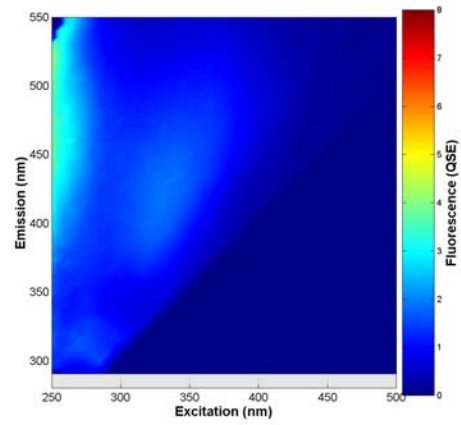


Figure 18-a, b, and c. ^1H NMR presaturation spectra of rain event E413 before/after 12 hour irradiation and the difference between the two.

a. E413 before



b. E413 after



c. E413 before and after absorption spectra

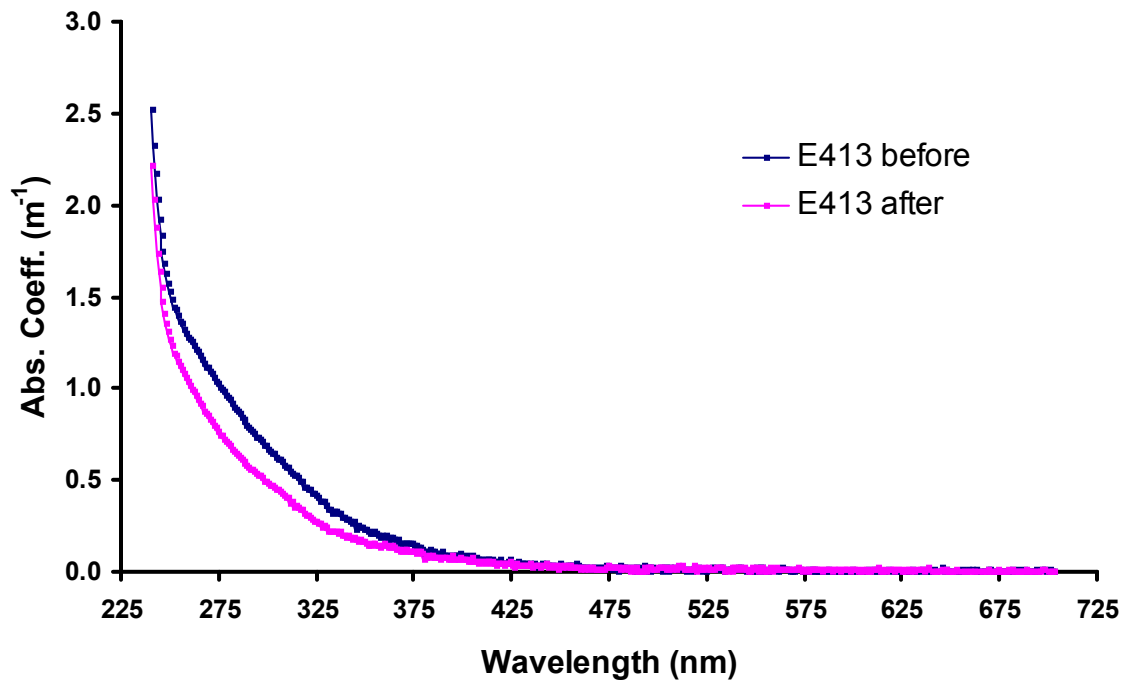


Figure 19-a, b, and c. EEMs and absorption spectra before and after irradiation of rain event E413.

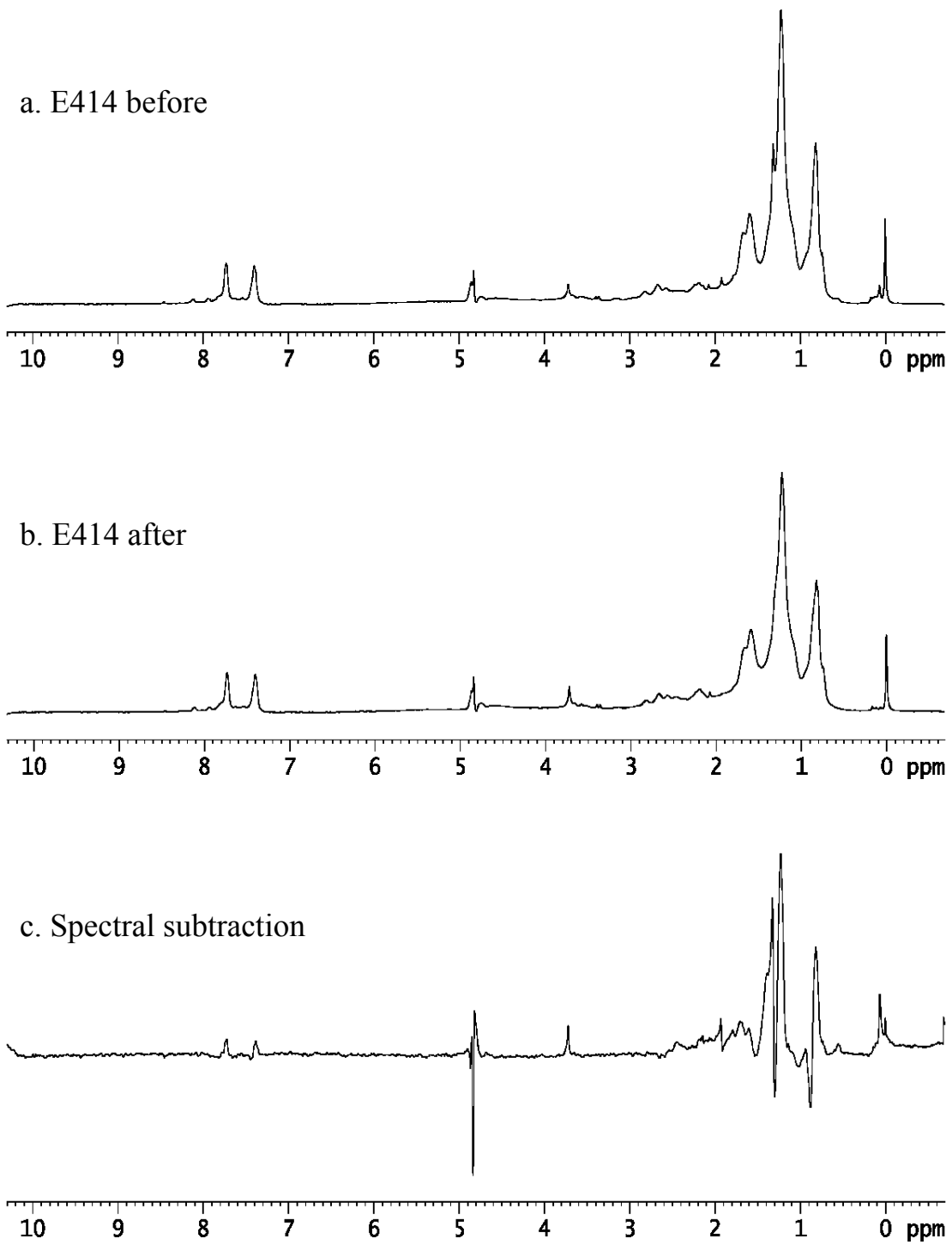
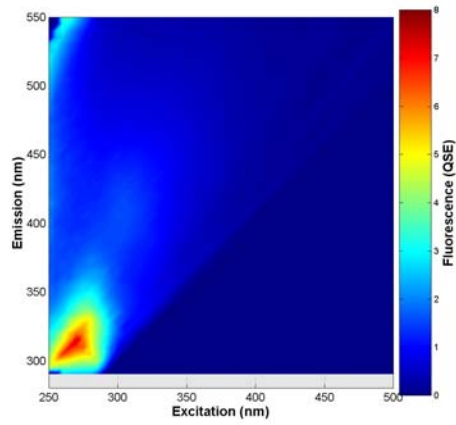
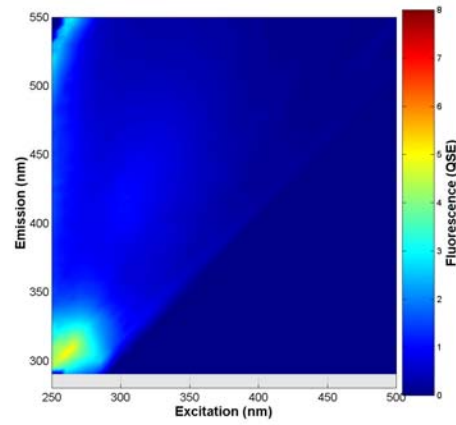


Figure 20-a, b, and c. ¹H NMR presaturation spectra of rain event E414 before/after 12 hour irradiation and the difference between the two.

a. E414 before



b. E414 after



c. E414 before and after absorption spectra

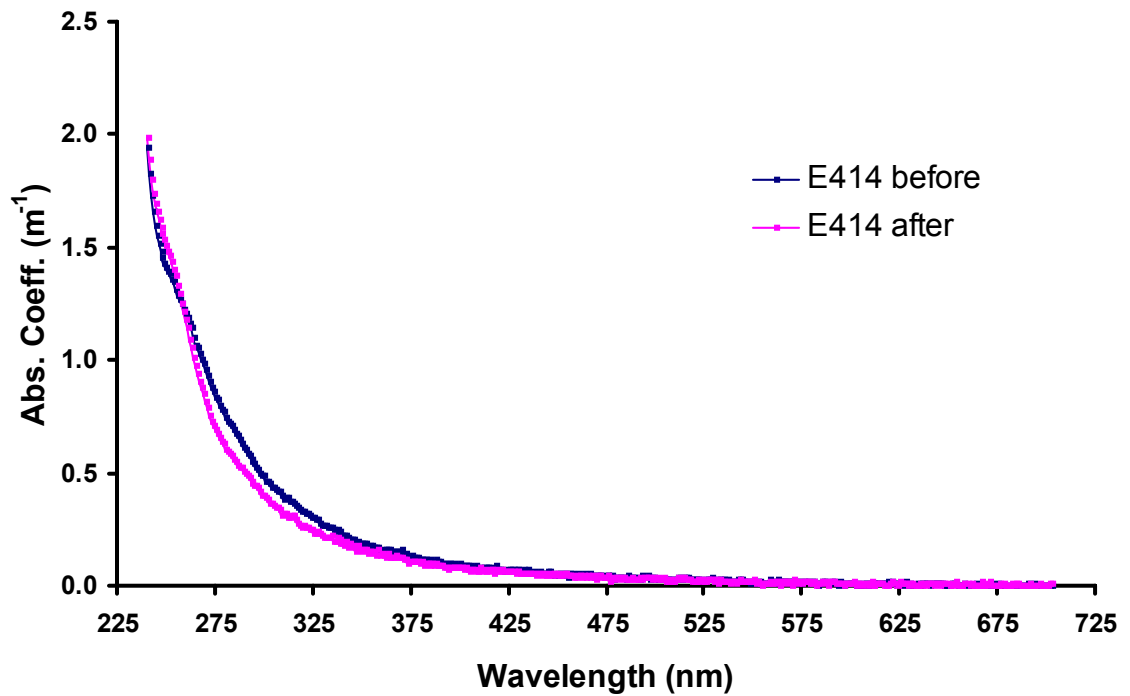
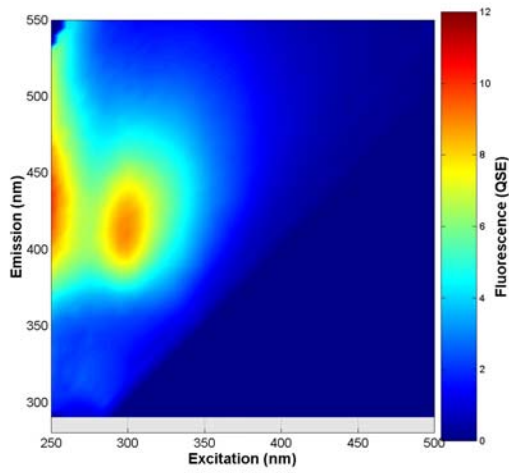


Figure 21-a, b, and c. EEMs and absorption spectra before and after irradiation of rain event E414.

a. E417 before



b. E417 before absorption spectra

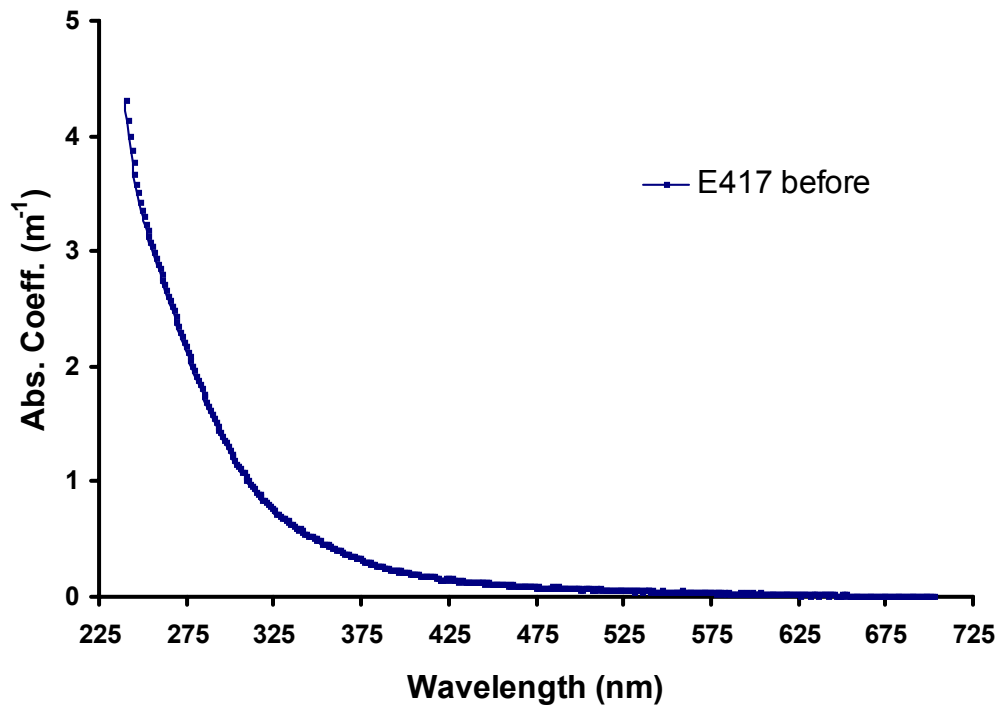
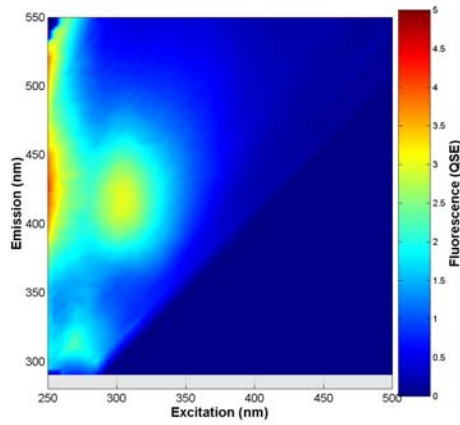
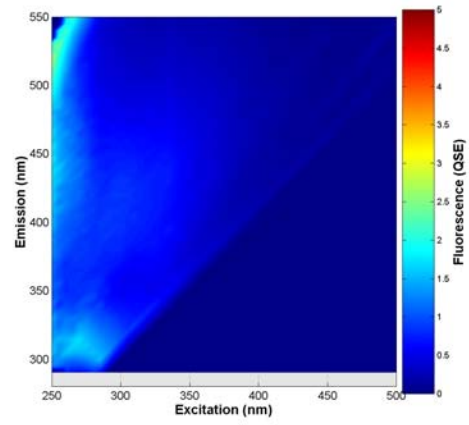


Figure 22-a and b. EEM and absorption spectra before irradiation of rain event E417.

a. E411 before



b. E411 after



c. E411 before and after absorption spectra

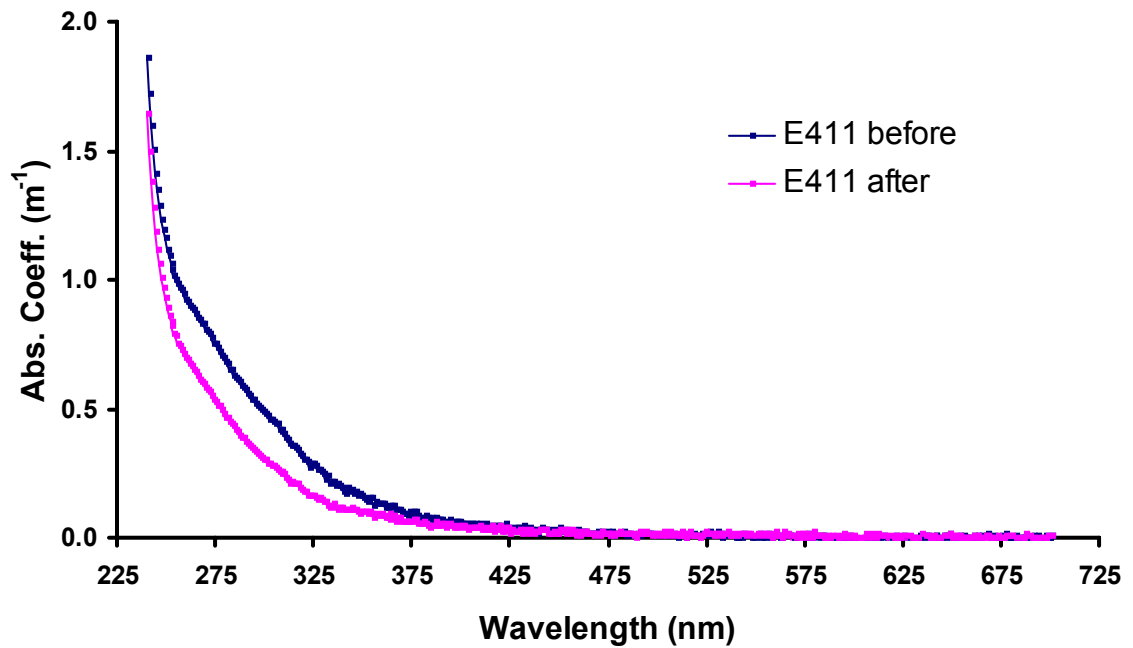
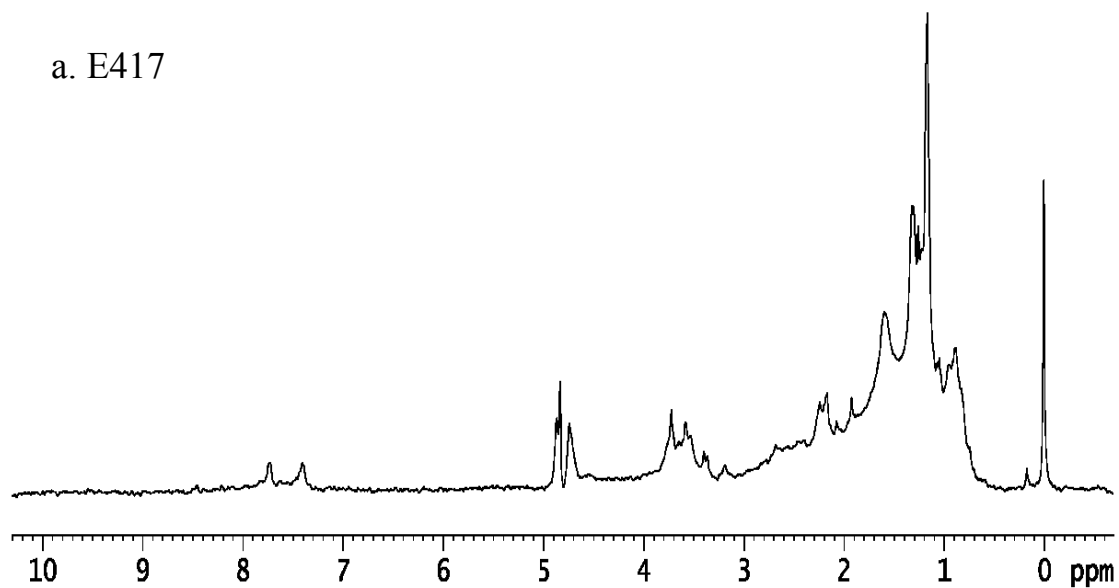


Figure 23-a, b, and c. EEMs and absorption spectra before and after irradiation of rain event E411.

a. E417



b. E411

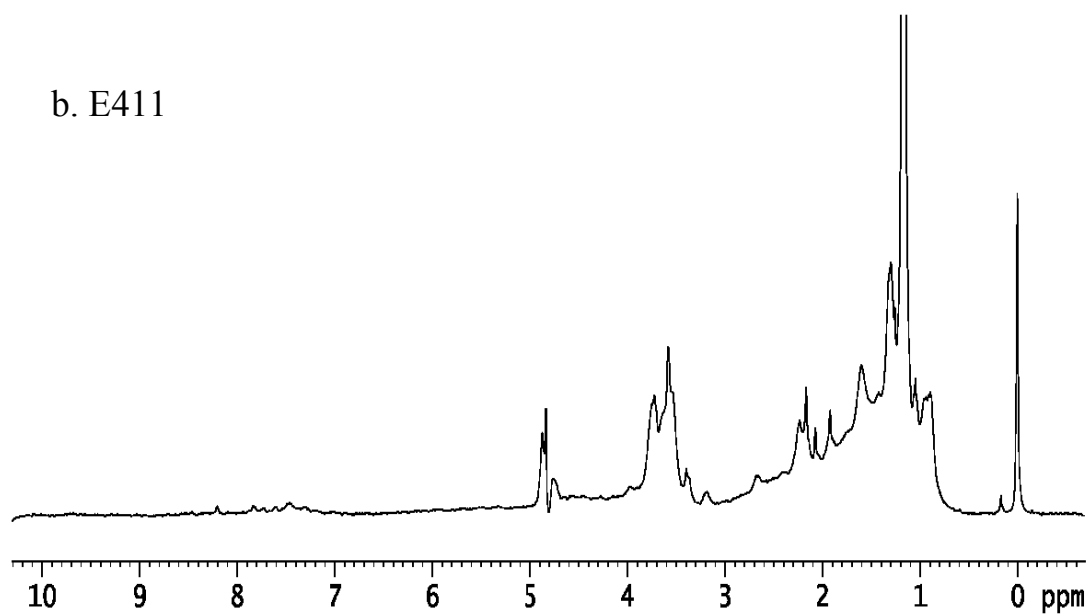
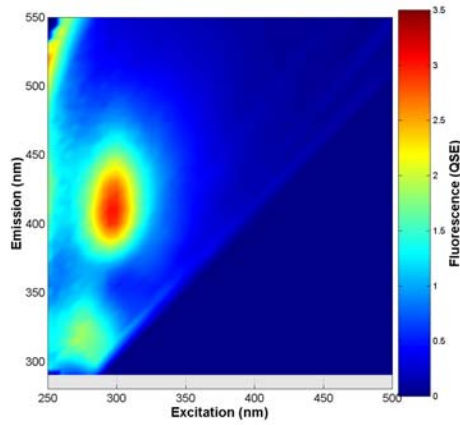
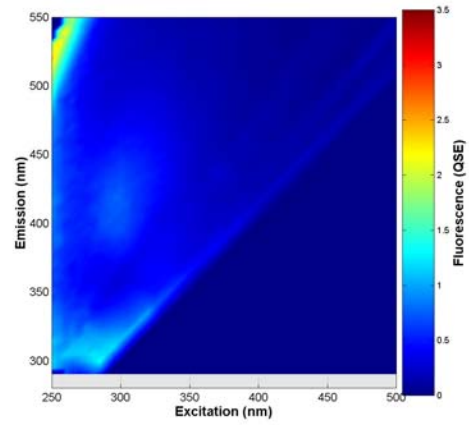


Figure 24-a and b. ¹H NMR presaturation spectra of rain event E417 and E411.

a. E451 before



b. E451 after



c. E451 before and after absorption spectra

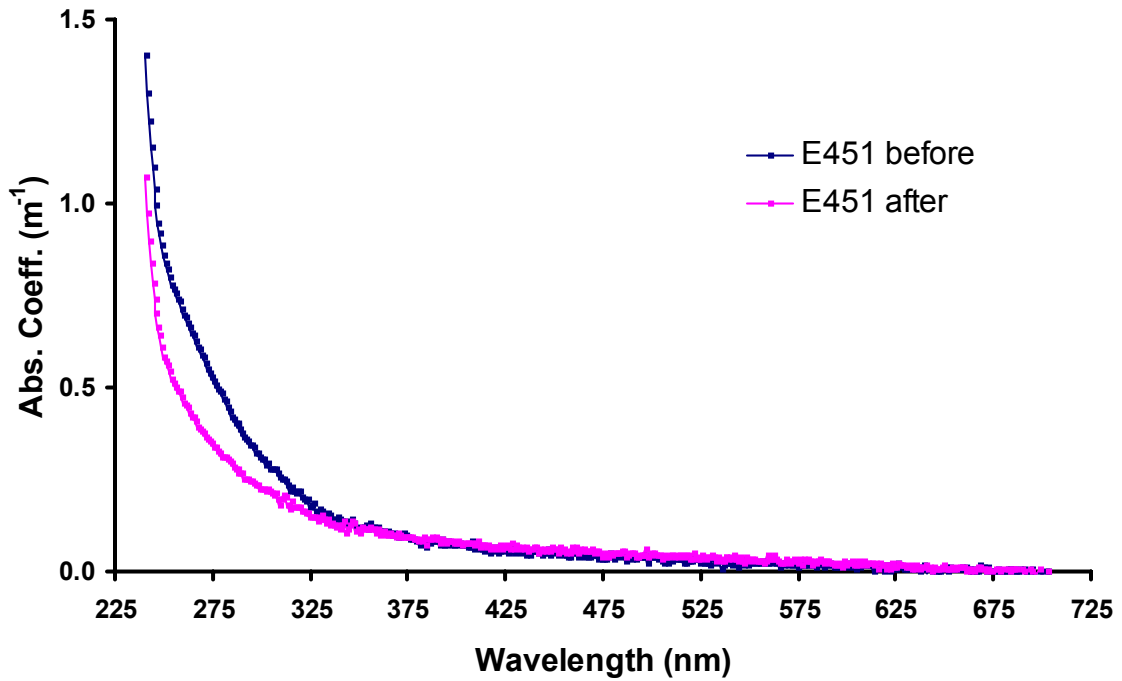
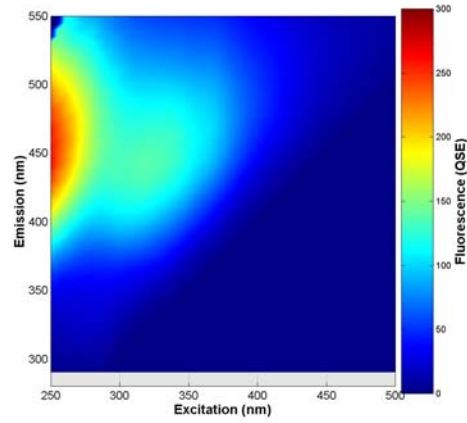
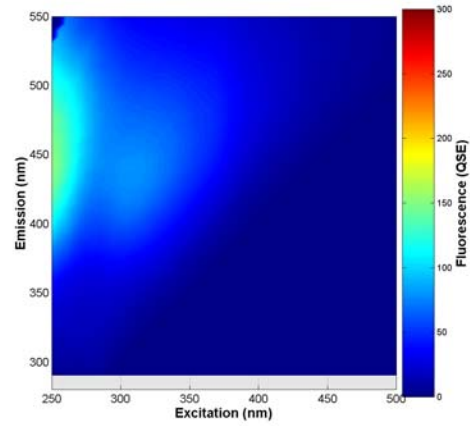


Figure 25-a, b, and c. EEMs and absorption spectra before and after irradiation of rain event E451.

a. CFR before



b. CFR after



c. Cape Fear River before and after absorption spectra

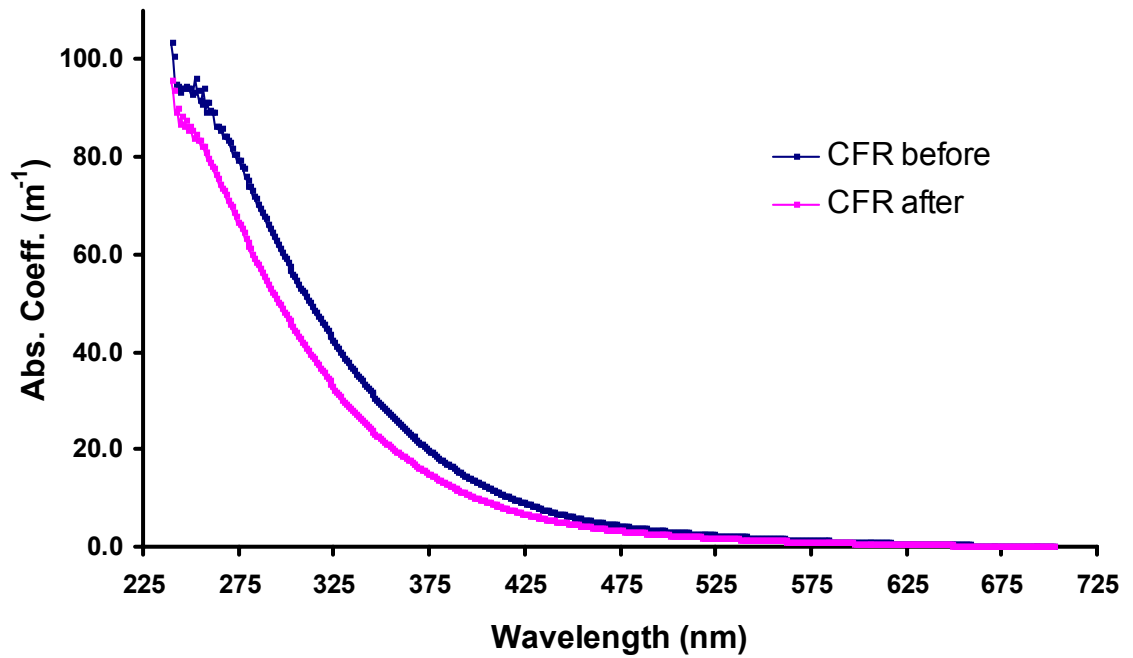


Figure 26-a, b, and c. EEMs and absorption spectra before and after irradiation of Cape Fear River water.