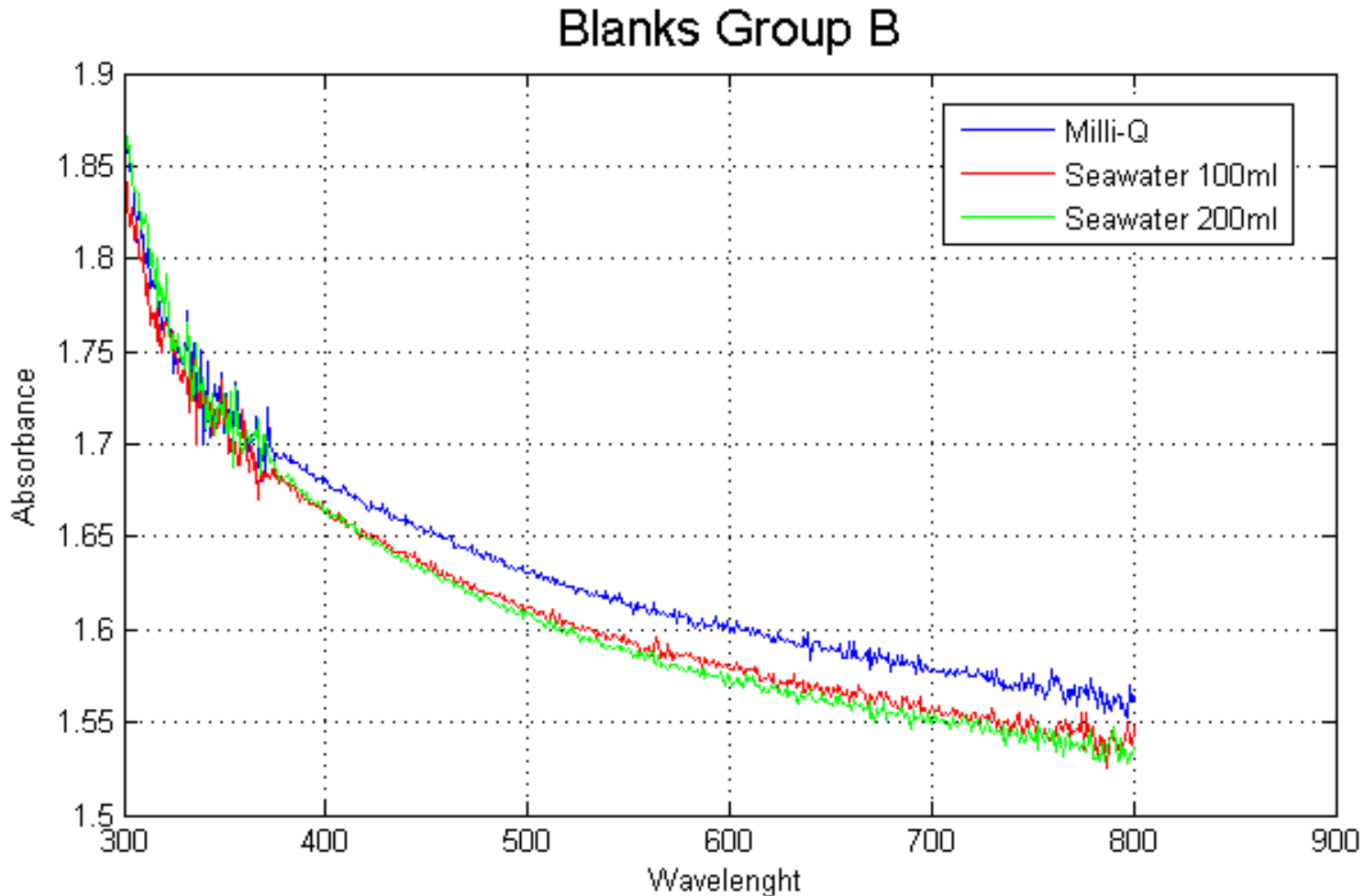
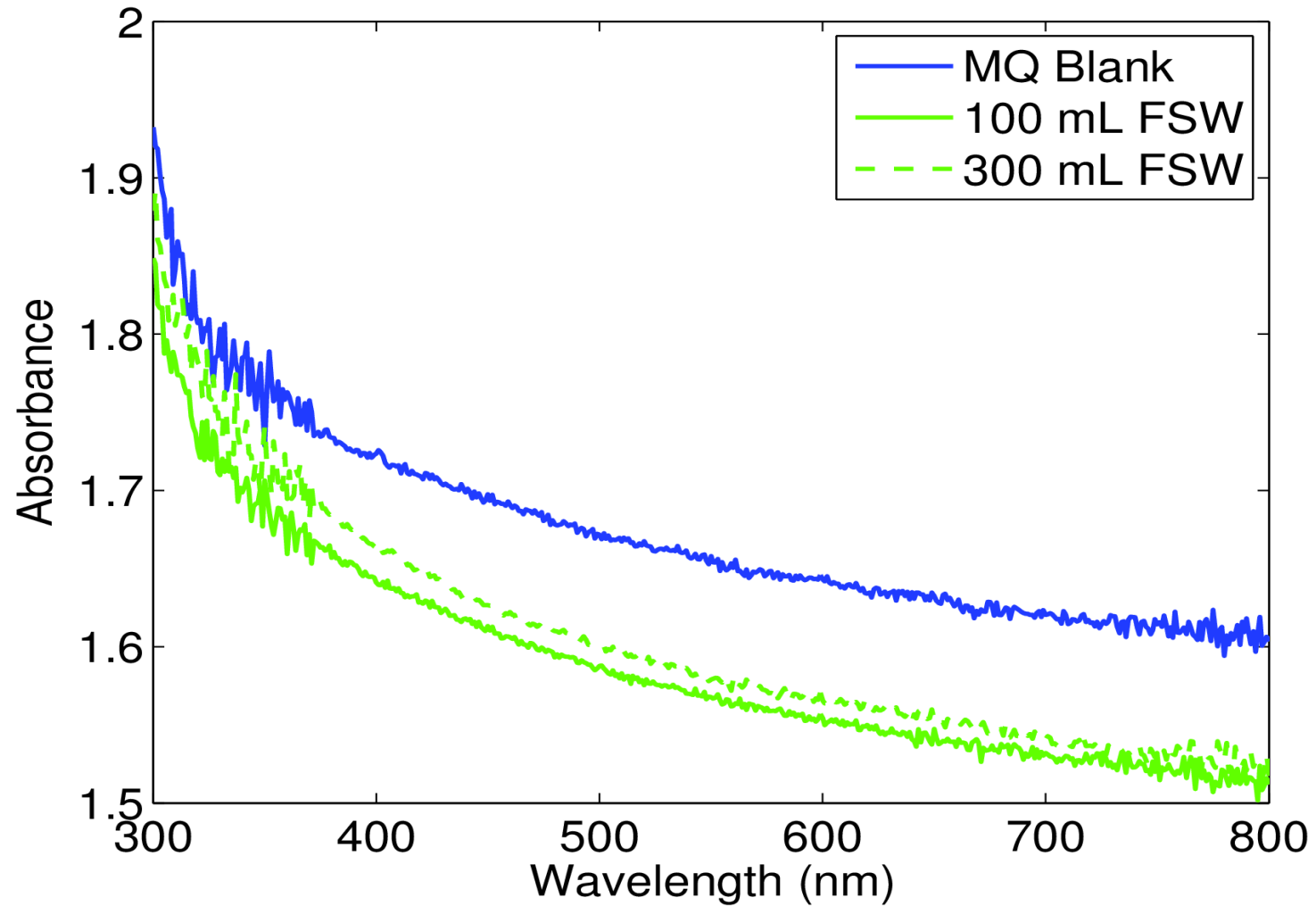


1. Blanks Comparison



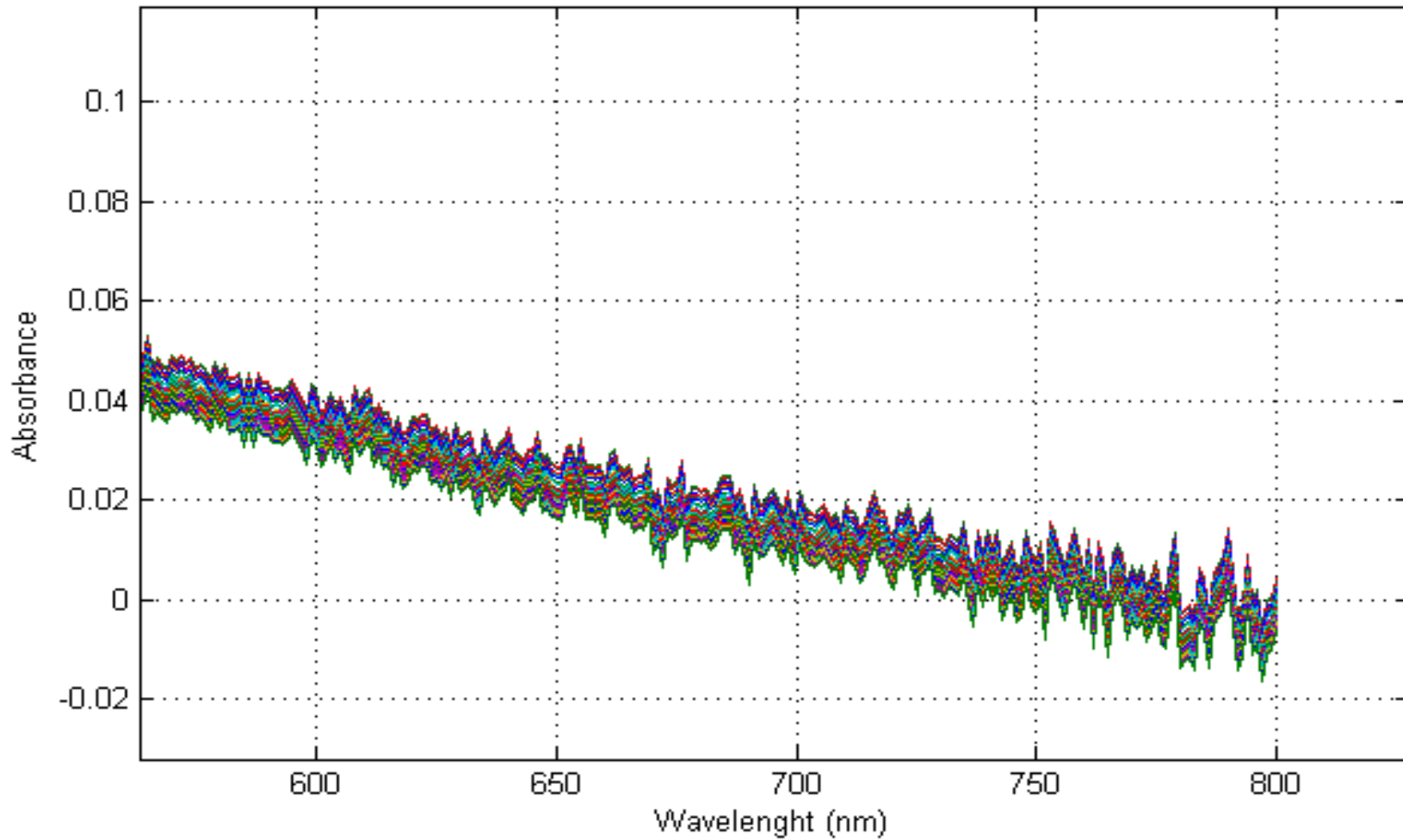
Milli-Q water was consistently higher than the Sea Water blanks
Ideally, we would consider the Sea Water blanks at the same volume for each filter.

1. Blanks Comparison

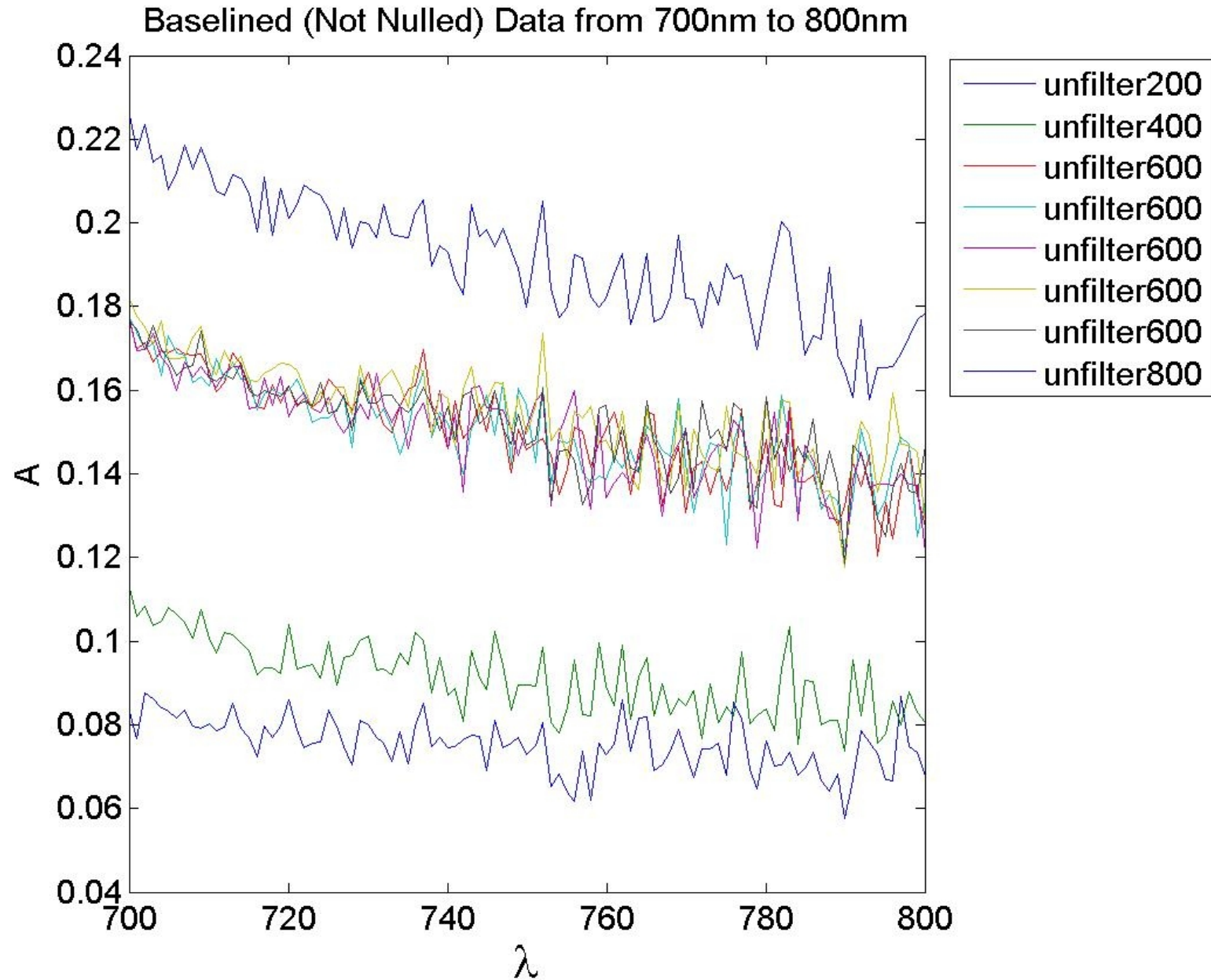


2. NIR Blanks

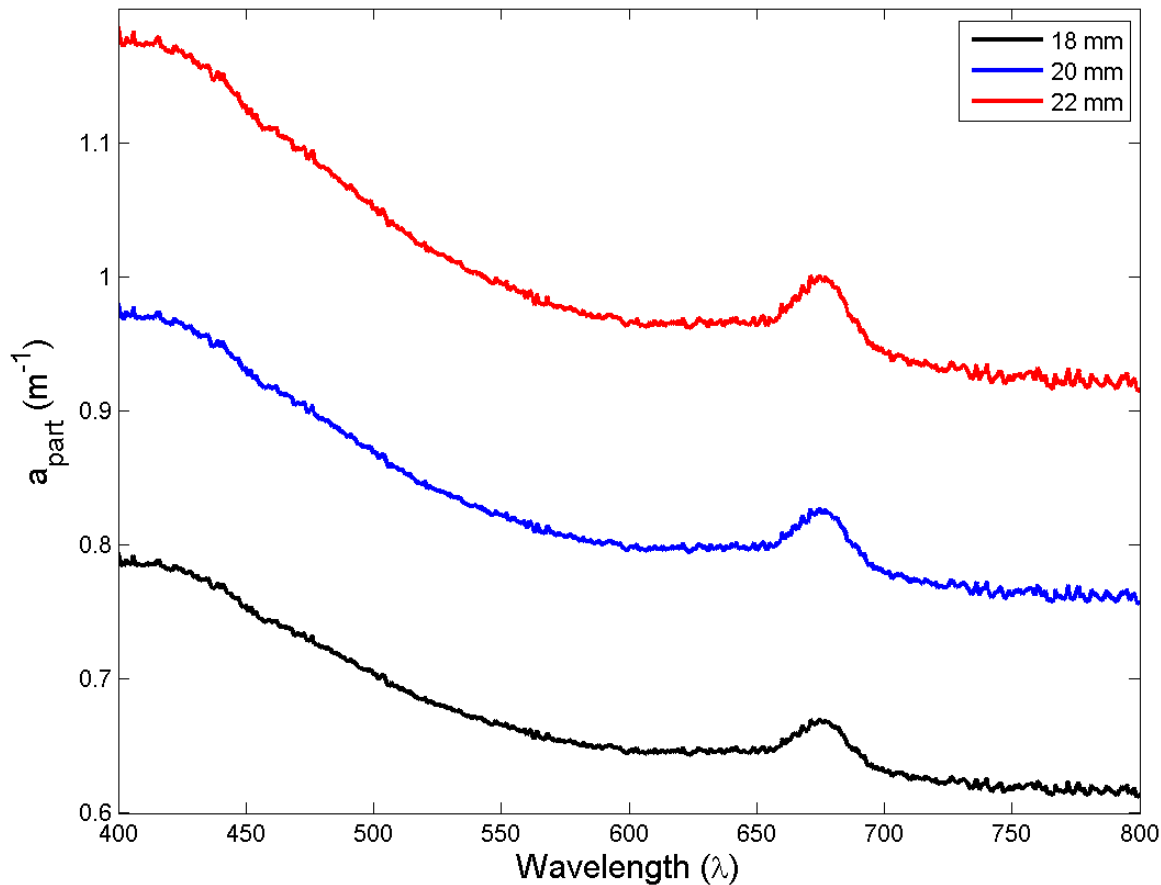
Blank Salt Water 200ml - Wavelength Variation



2. NIR Samples



Effect of Erroneous Filter-Diameter Measurements



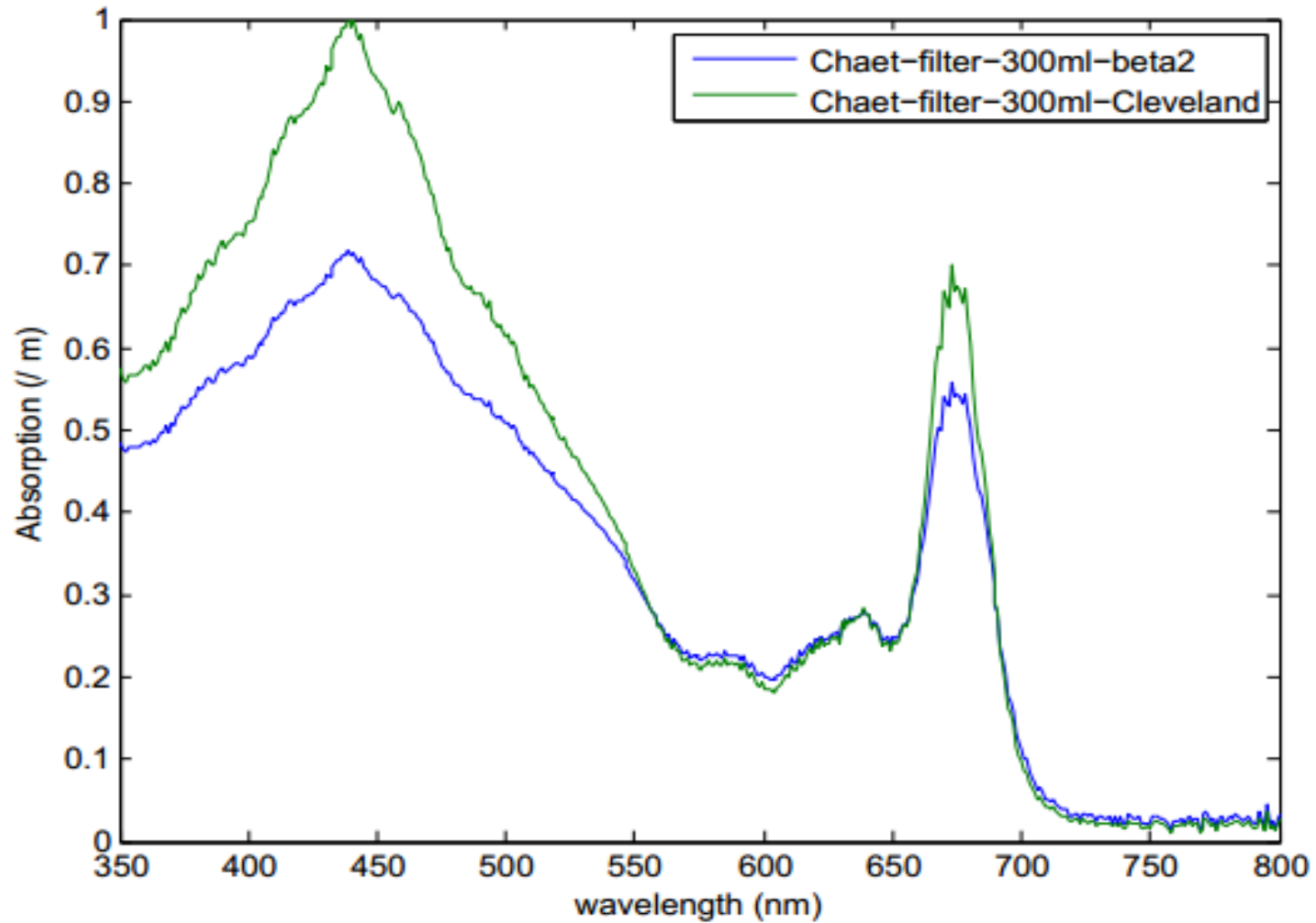
Question 3: What is the effect of an error in the measurement of the filter diameter? ($A = \pi r^2$)

An error in the measurement of the filter diameter causes an *apparent* change in optical pathlength without an associated *real* change in A_{sample} . Therefore you get an inaccurate calculation of total particulate absorption (a_{part}) where normally a_{part} is independent of pathlength.

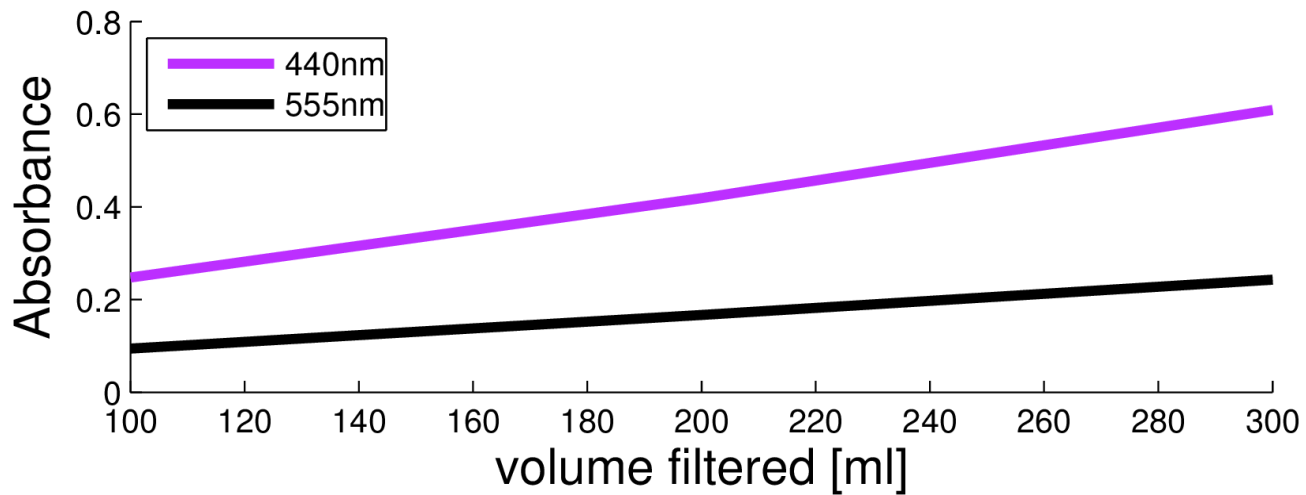
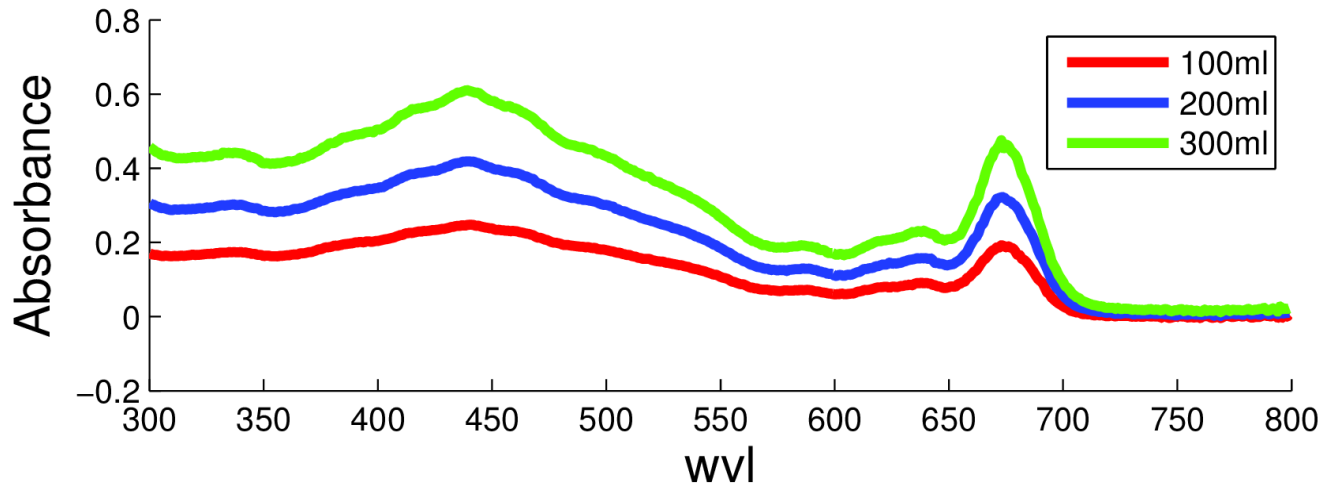
For this sample profile (800 mL of DRE field water, chaetoseros), a 10% error in sample diameter resulted in $\sim 20\%$ error in a_{part} . It did not appear to change the shape or magnitudes of the curves.

$$pathlength = \frac{\text{Volume filtered (cm}^3\text{)}}{\text{Area of the filter (cm}^2\text{)}} \quad a_{part}(\lambda) = \frac{2.303 * 100}{pathlength * \beta} * \{ A_{pad}(\lambda) - [A_{blank}(\lambda) - A_{null}(\lambda)] \}$$

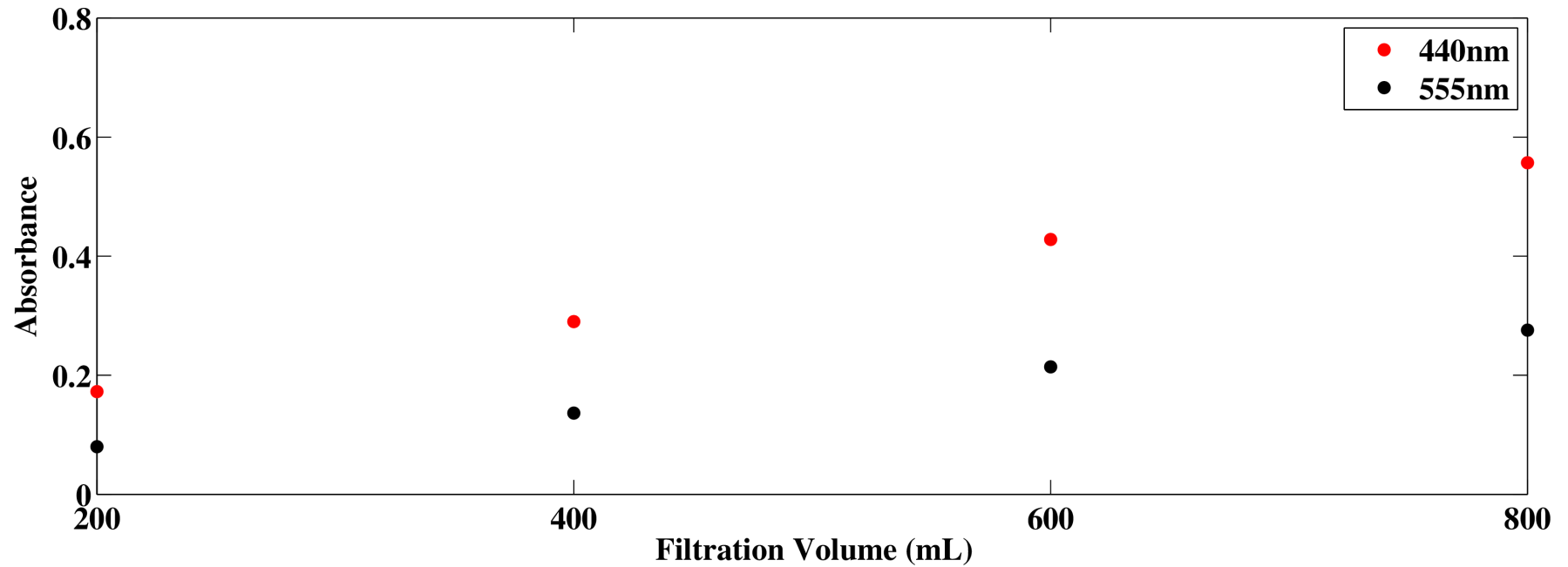
4. Beta formulations



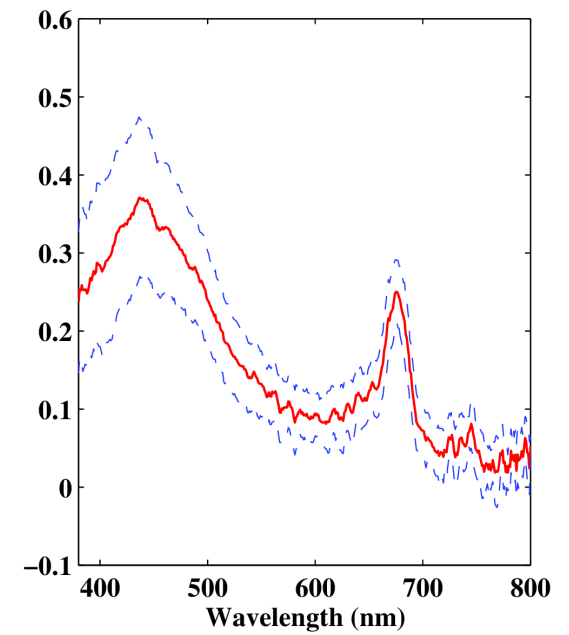
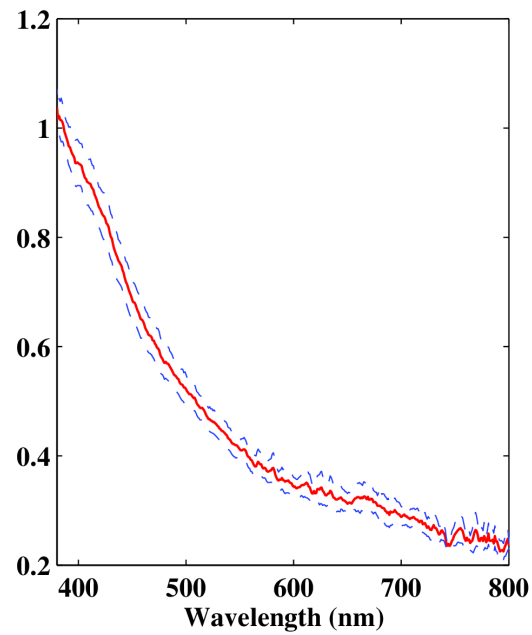
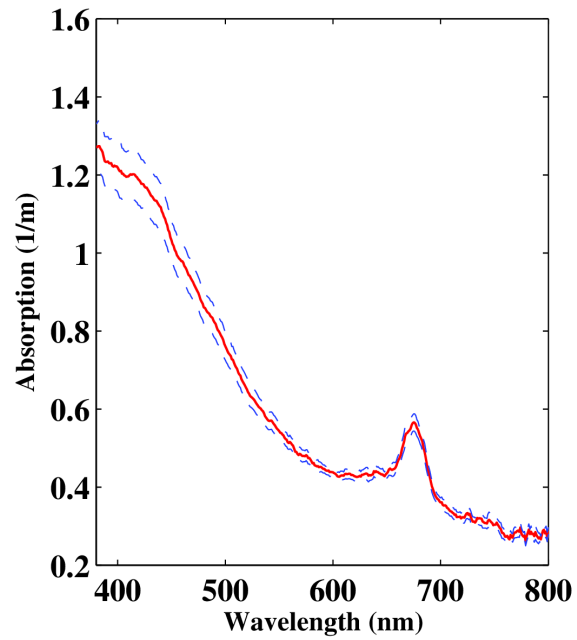
5. Absorbance vs Volume



5. Absorbance vs Volume

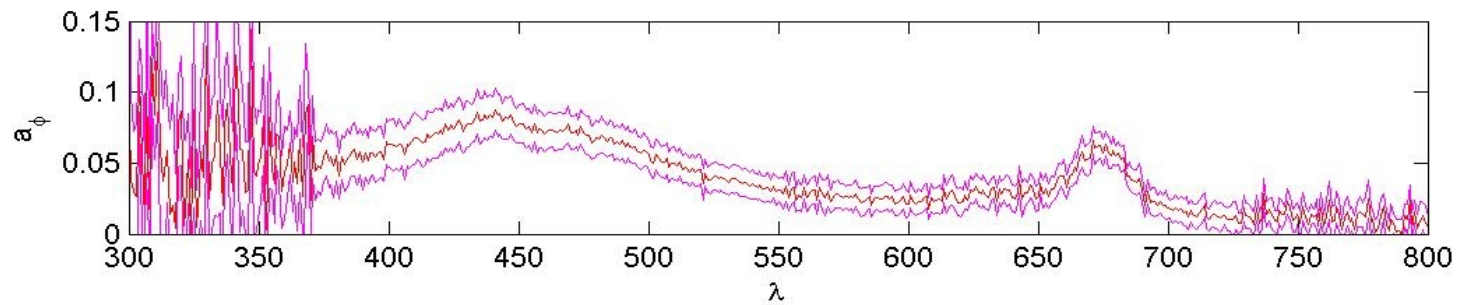
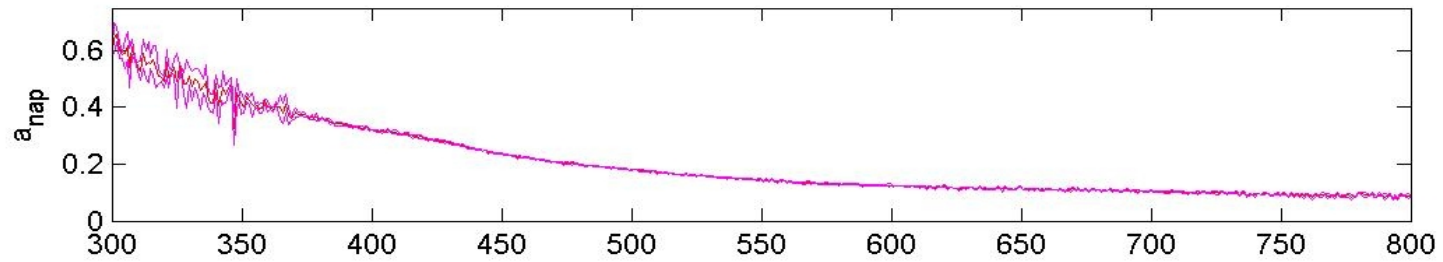
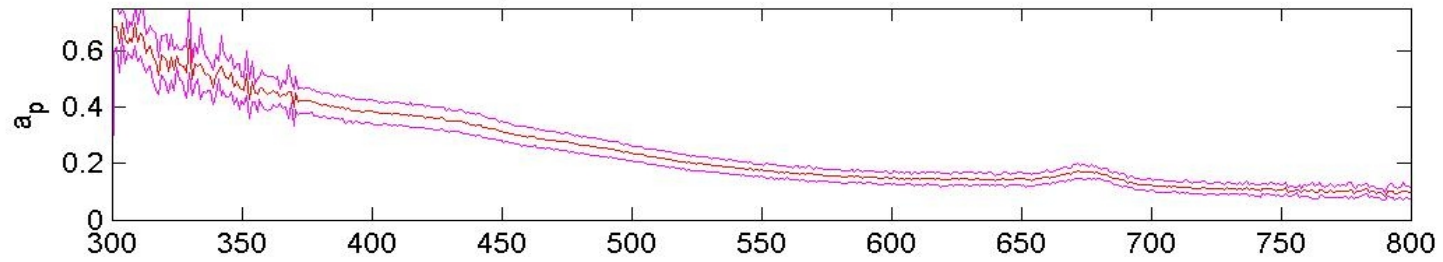


6.1 DRE samples



6.1 DRE Samples

Absorption for Damariscotta River Water



6.2 Spectral Slopes

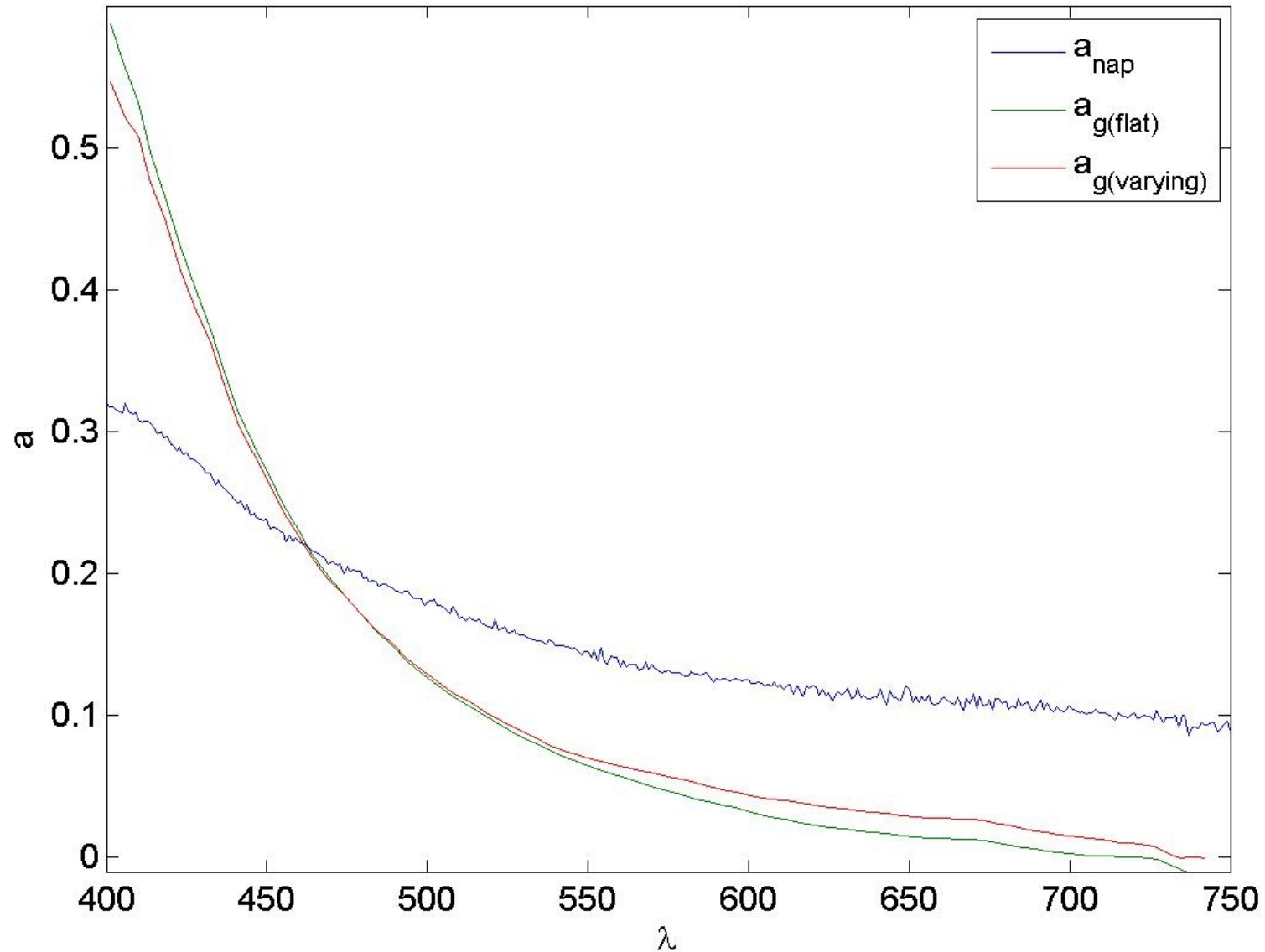
	DRE	Culture
NAP (spec)	0.0042 0.0050	0.0094
ag (acs)	0.0141 0.0155	N/A

Lab 2 Supplement

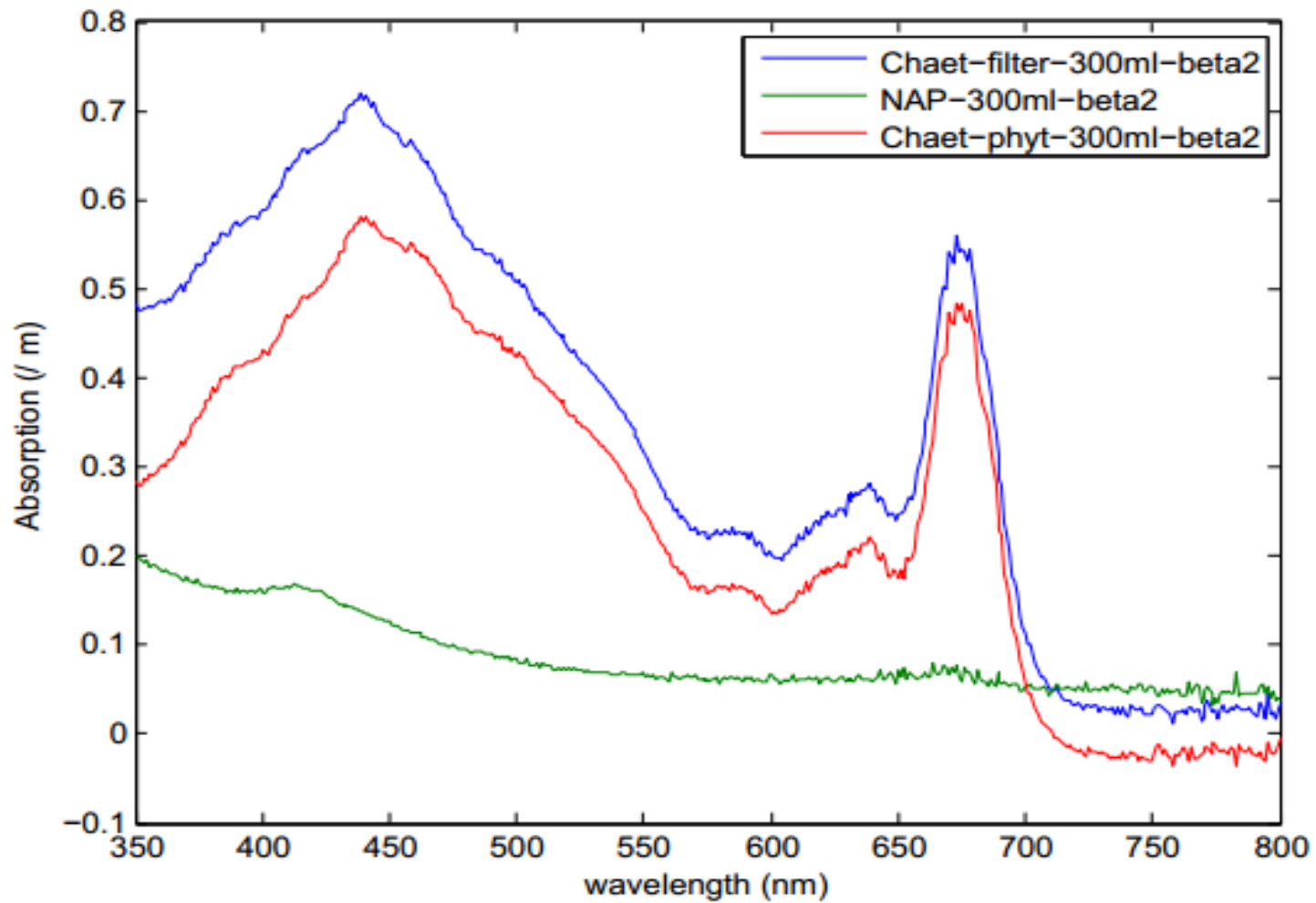
	DRE 0.7/0.2 micron	Biscay
AC-9	0.0138	N/A
AC-S (25)	N/A	0.0121
AC-S (16)	0.0131	N/A
Spec 1cm	0.006/0.005	0.0039
Spec 5cm	0.0153/0.0102	0.0120

6.2 Spectral Slopes

spectrophotometer a_{nap} and ac-s a_{g} for DRE water



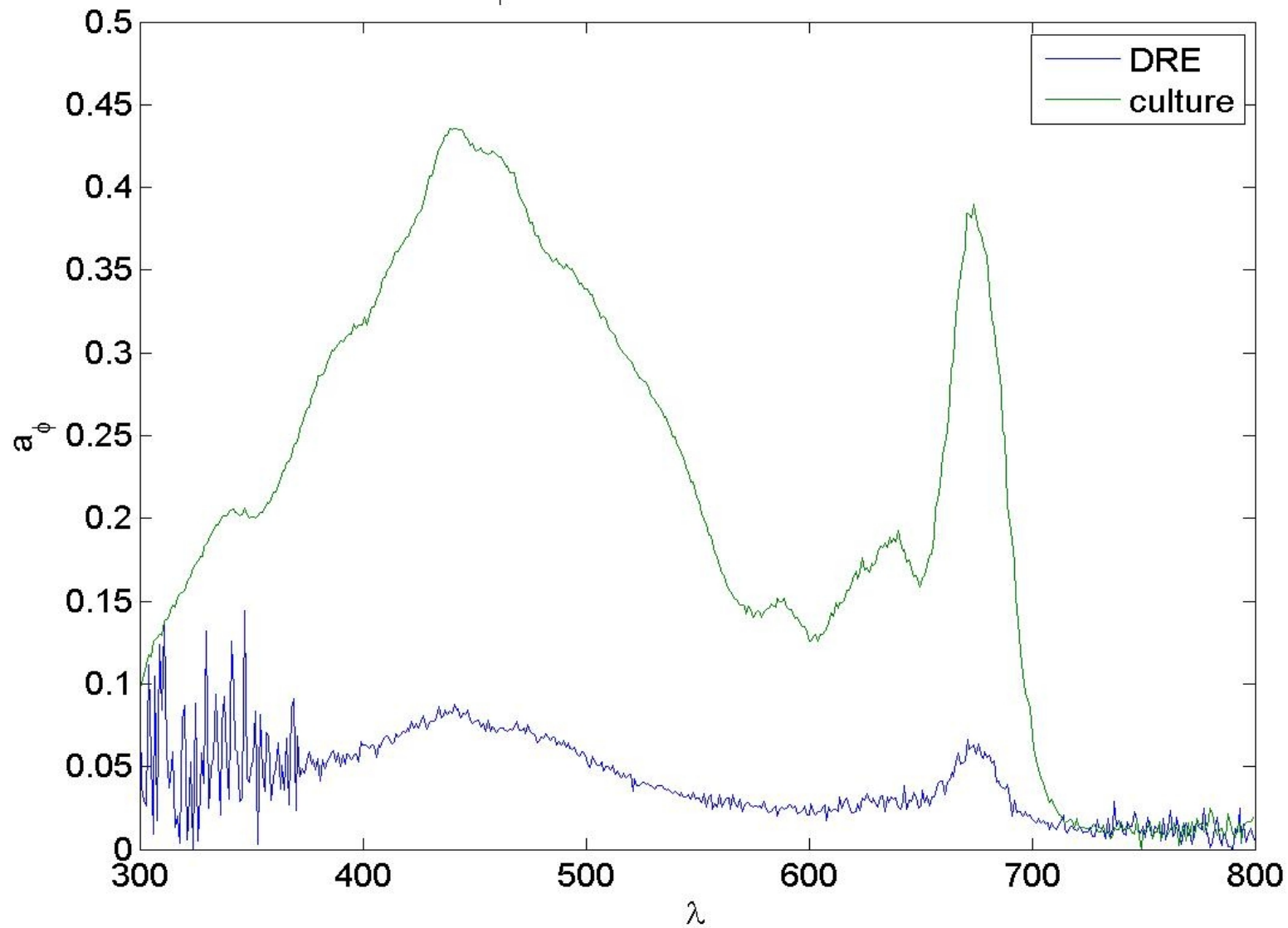
6.3 Cultures



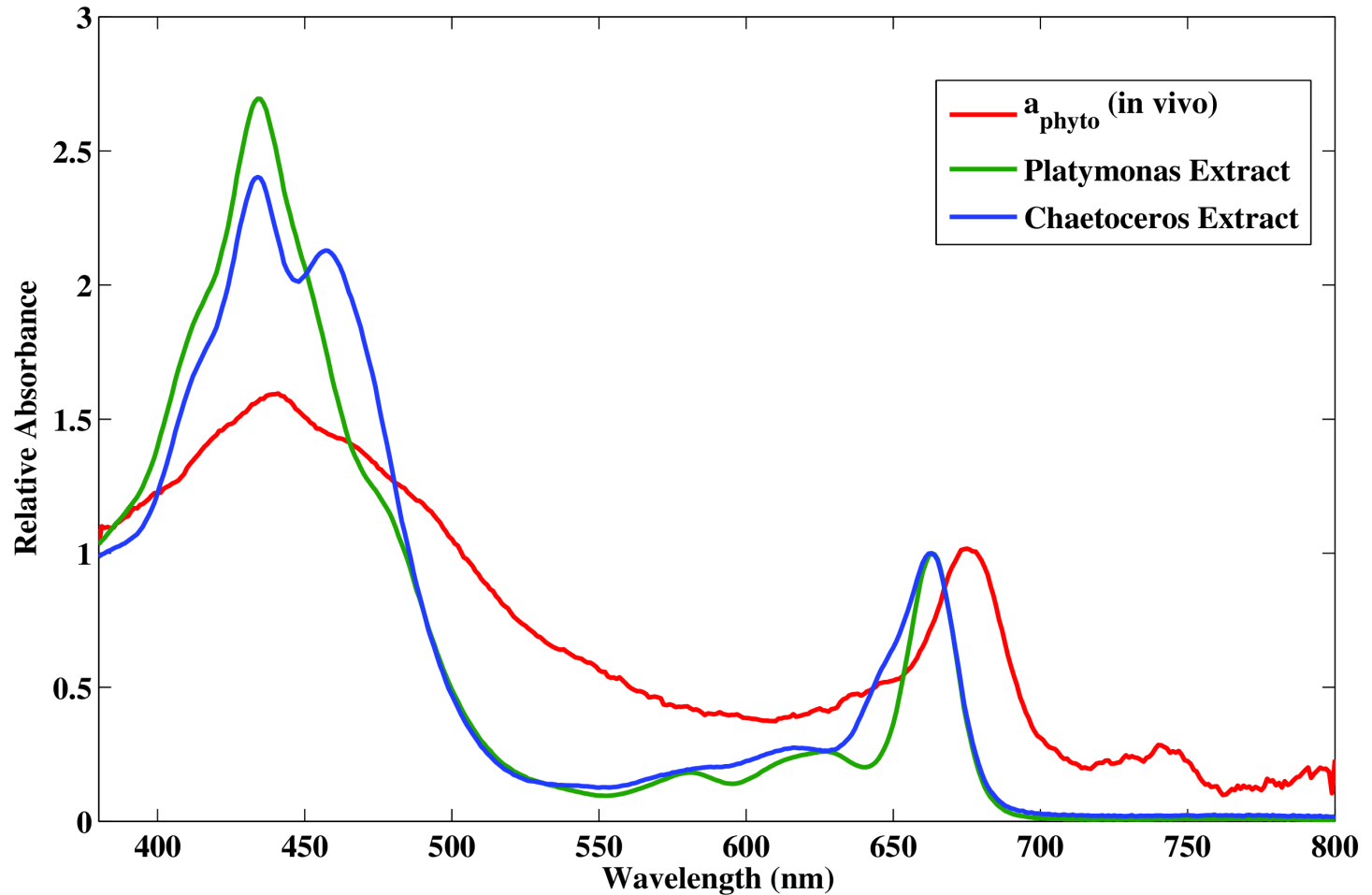
6.3 Culture

6.4 Culture

a_ϕ for DRE water and culture



12. Extracted comparison



- Shift when dissolved acetone.