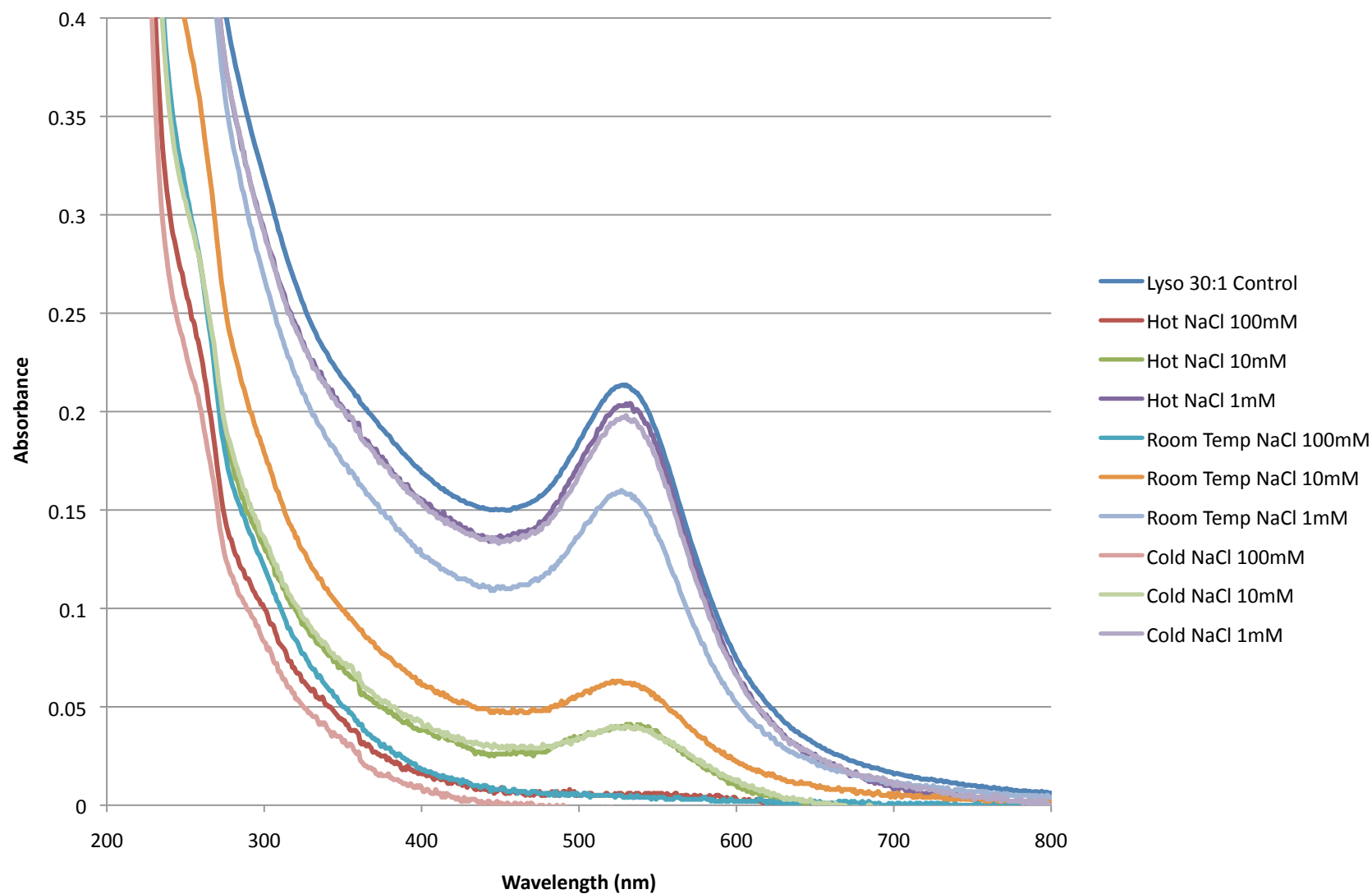


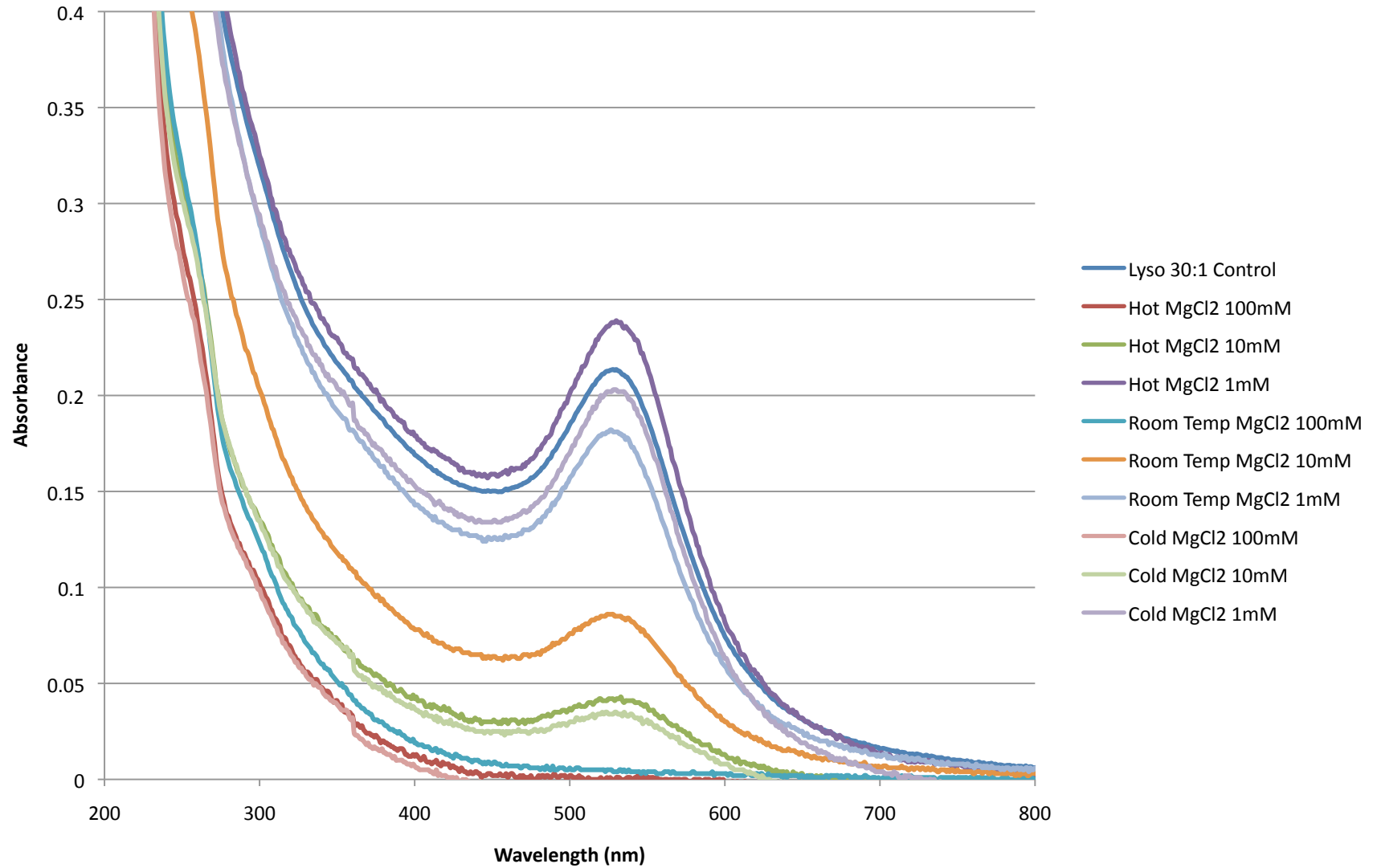
UV-Vis of Solutions With Variable Added After Lysozyme AuNP Synthesis

The Following Slides Represent the
UV-Vis Samples that Came From the
1ml Aliquot Samples of 30:1
Lysozyme AuNP's with .5ml of
Variable Solution Added After
Synthesis

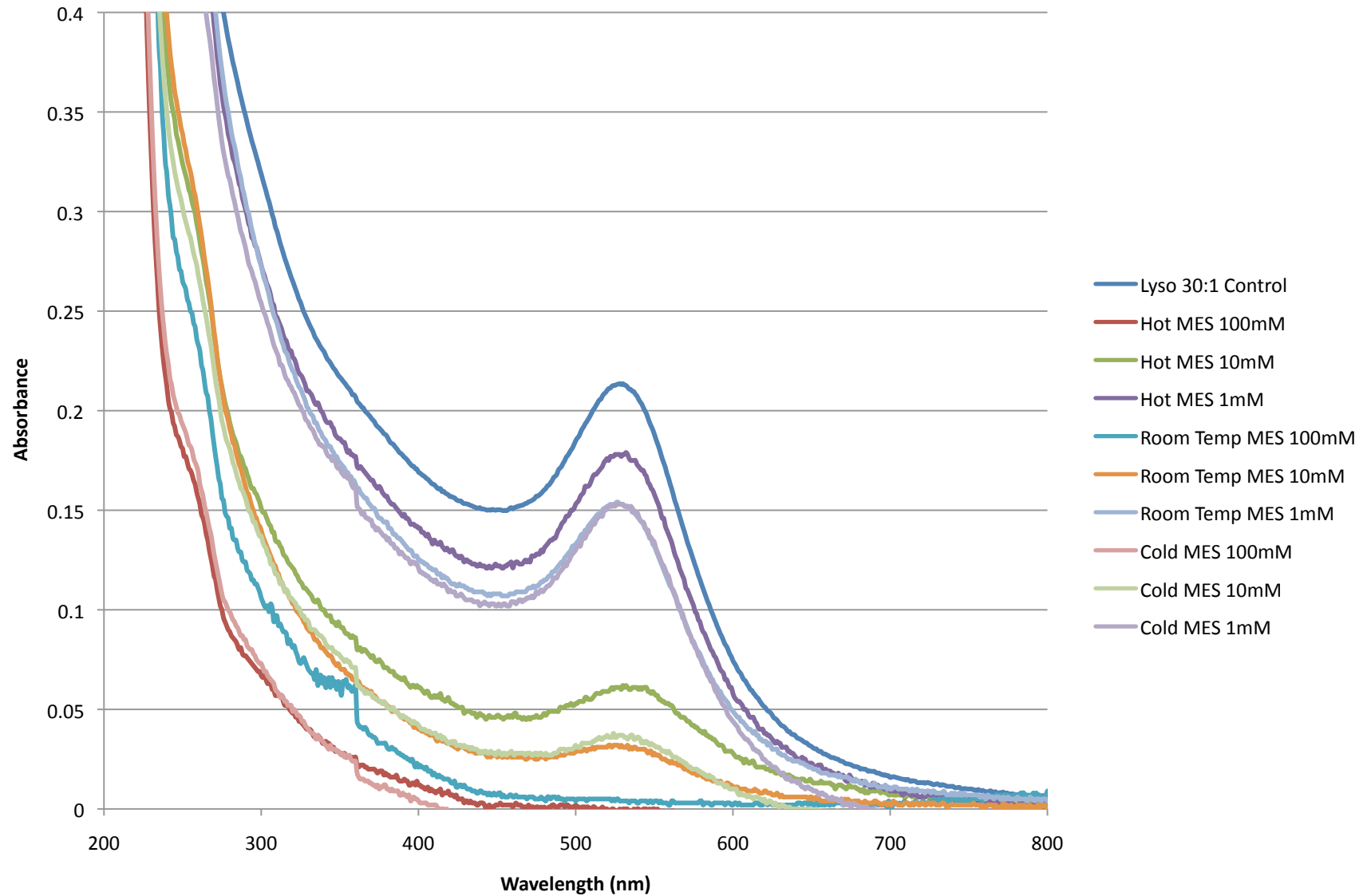
Temp Compiled Data for NaCl Variable Added to Lyso 30:1



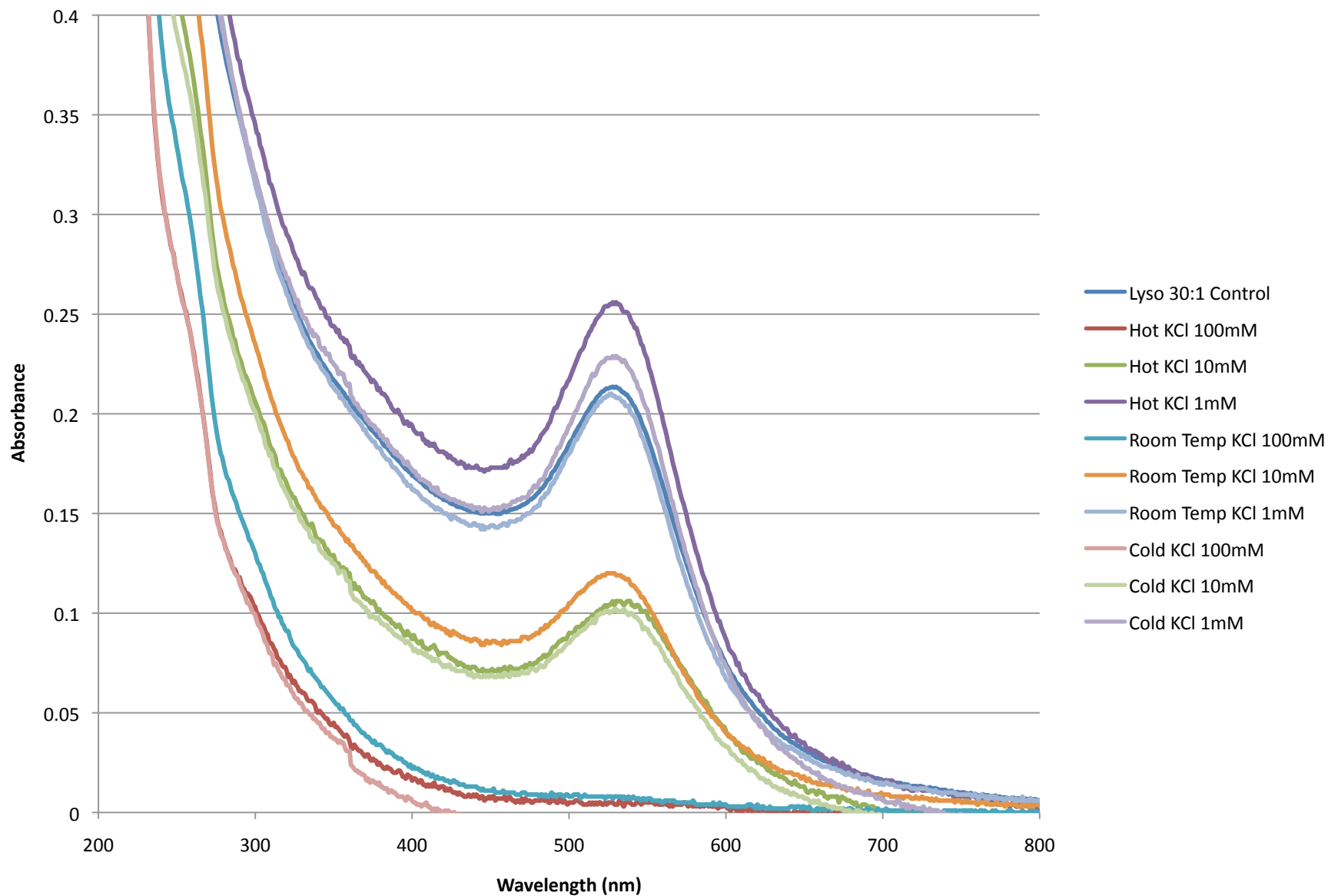
Temp Compiled Data For MgCl_2 Variable Added to Lyso 30:1



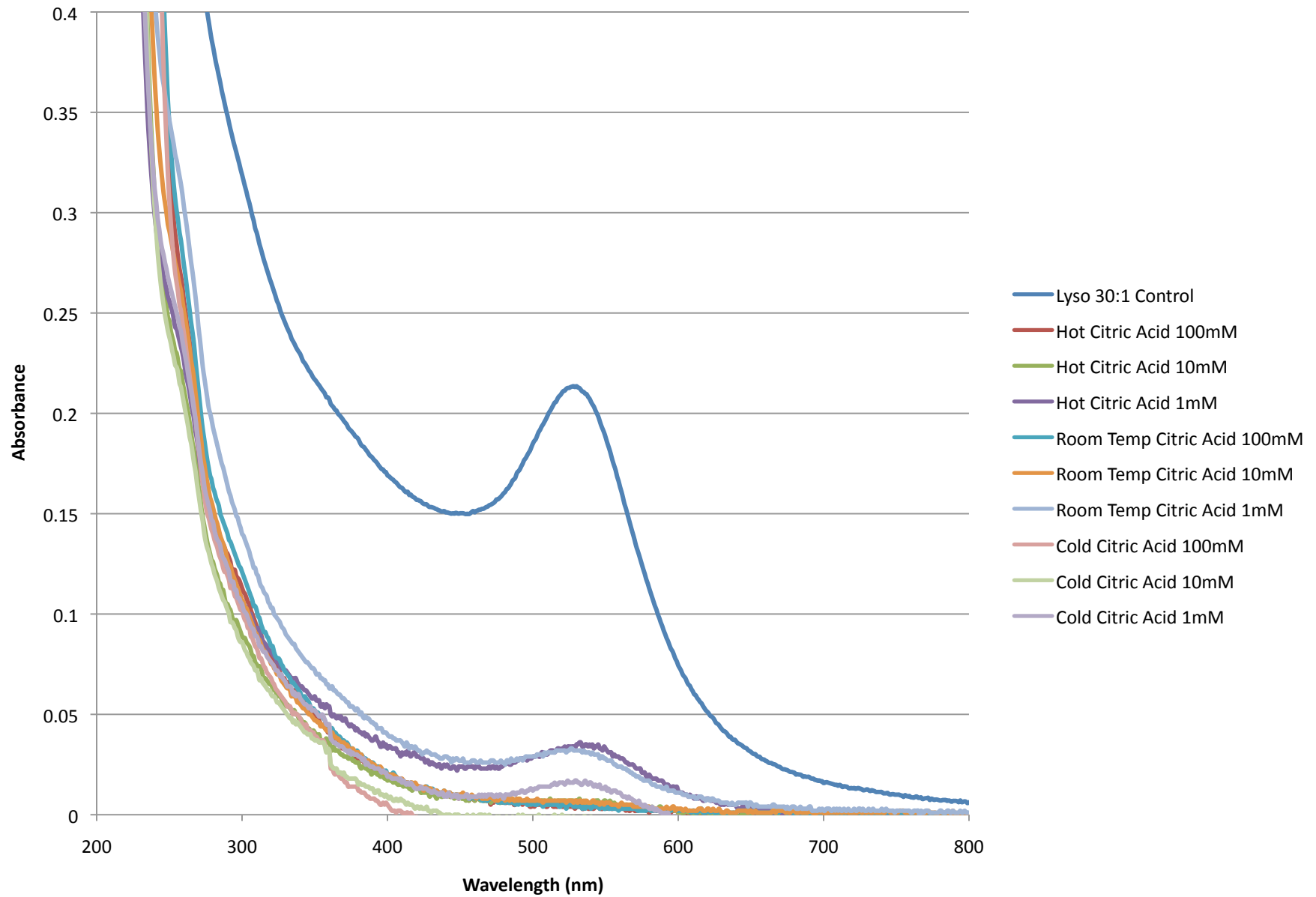
Temp Compiled Data For MES Variable added to Lyso 30:1



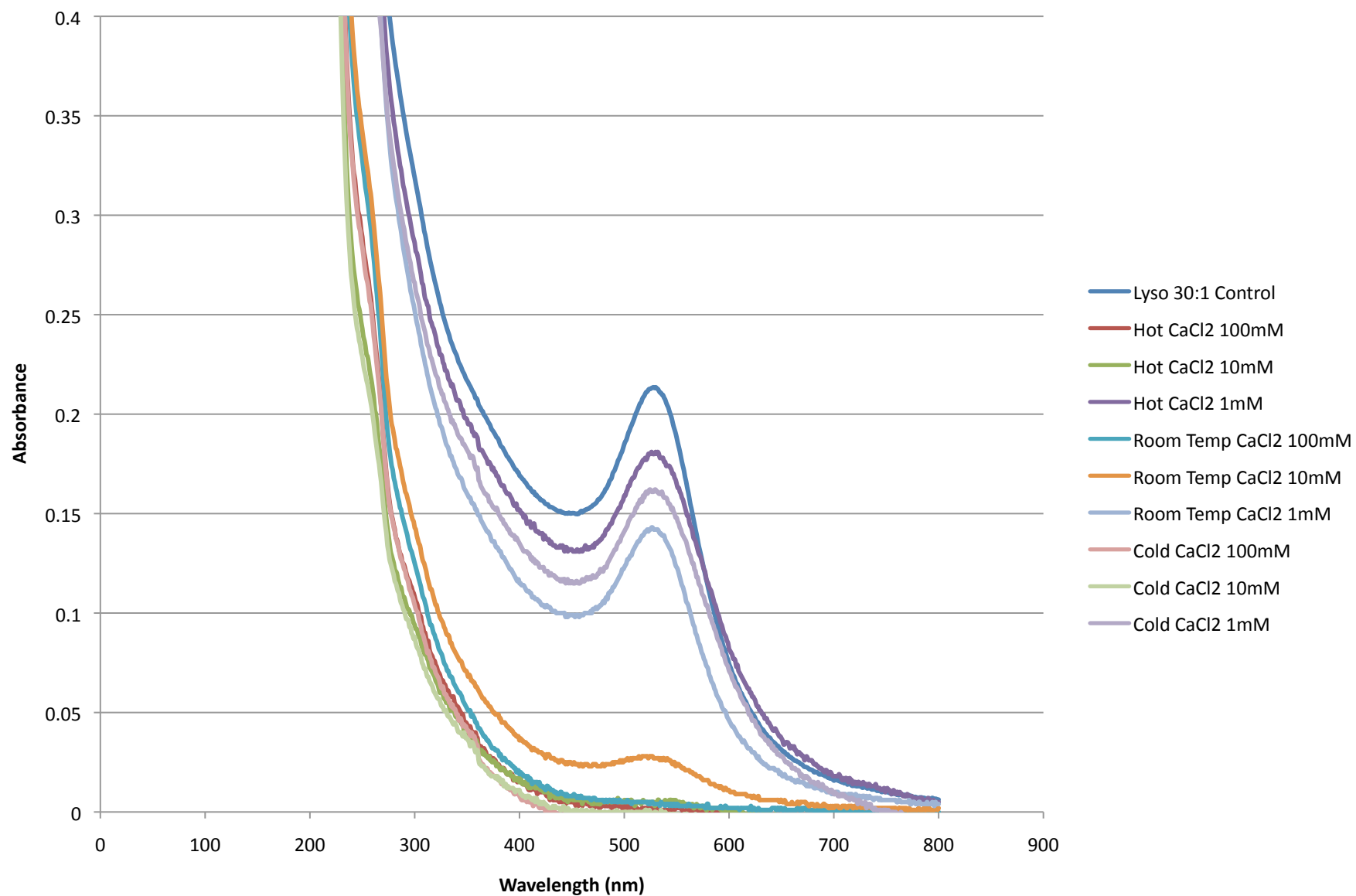
Temp Compiled Data For KCl Variable added to Lyso 30:1



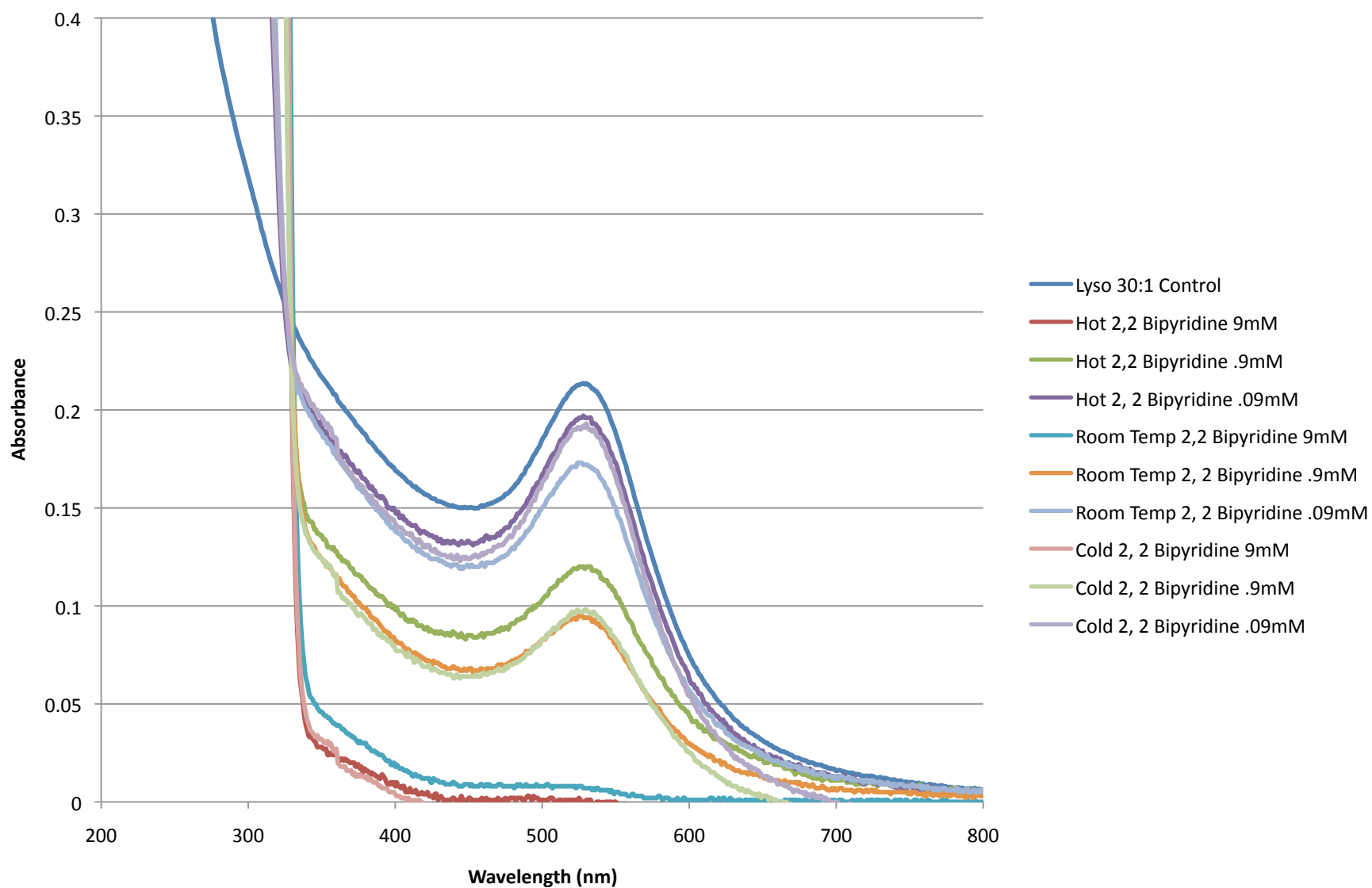
Temp Compiled Data For Citric Acid Variable added to Lyso 30:1



Temp Compiled Data For CaCl₂ Variable Added to Lyso 30:1



Temp Compiled Data for 2, 2 Bipyridine Added to Lyso 30:1



February 25th: 22 Degrees Celsius

Percentage of Nanoparticles in Solution

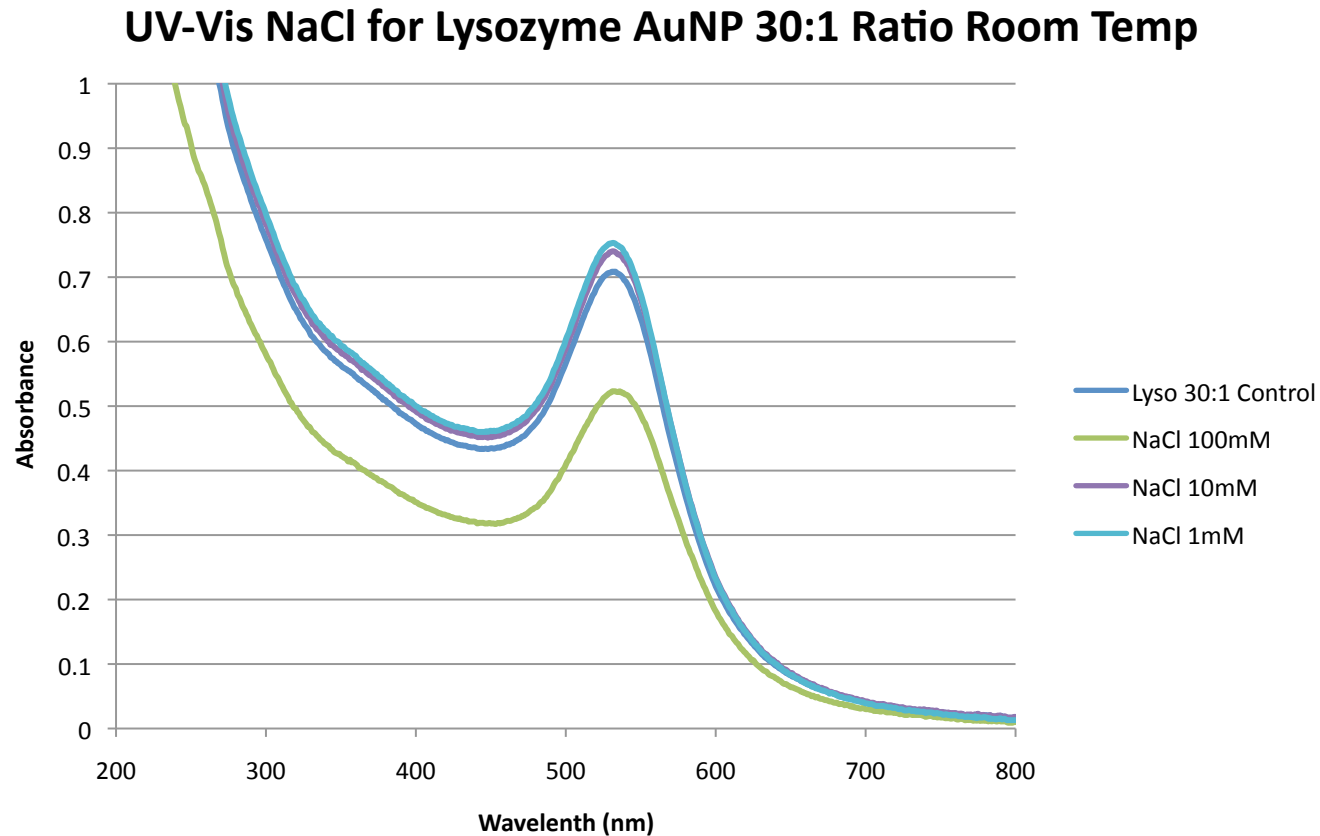
Variable Used	Peak Wavelength	Percentage %
NaCl 100mM	527 nm	2.230
NaCl 10mM	527 nm	34.572
NaCl 1mM	527 nm	88.104
MgCl2 100mM	527 nm	2.230
MgCl2 10mM	527 nm	47.398
MgCl2 1mM	527 nm	100.000
KCl 100mM	527 nm	4.461
KCl 10mM	527 nm	66.357
KCl 1mM	527 nm	100.000
Citric Acid 100mM	527 nm	2.230
Citric Acid 10mM	527 nm	3.903
Citric Acid 1mM	527 nm	17.844
CaCl2 100mM	527 nm	2.230
CaCl2 10mM	527 nm	15.056
CaCl2 1mM	527 nm	79.182
MES 100mM	527 nm	2.230
MES 10mM	527 nm	17.286
MES 1mM	527 nm	85.316
2, 2 Bipyridine 9mM	527 nm	3.903
2, 2 Bipyridine .9mM	527 nm	52.416
2, 2 Bipyridine .09mM	527 nm	95.911

February 26th: 36 Degrees Celsius		
Percentage of Nanoparticles in Solution		
Variable Used	Peak Wavelength	Percentage %
NaCl 100mM	532 nm	2.500
NaCl 10mM	532 nm	17.083
NaCl 1mM	532 nm	85.000
MgCl ₂ 100mM	n/a	0.000
MgCl ₂ 10mM	533 nm	18.017
MgCl ₂ 1mM	530 nm	99.307
KCl 100mM	532 nm	2.500
KCl 10mM	530 nm	44.044
KCl 1mM	530 nm	100.000
Citric Acid 100mM	532 nm	1.667
Citric Acid 10mM	532 nm	3.333
Citric Acid 1mM	532 nm	15.000
CaCl ₂ 100mM	530 nm	0.831
CaCl ₂ 10mM	532 nm	2.500
CaCl ₂ 1mM	530 nm	75.208
MES 100mM	530 nm	0.000
MES 10mM	530 nm	25.762
MES 1mM	532 nm	74.583
2, 2 Bipyridine 9mM	530 nm	0.416
2, 2 Bipyridine .9mM	534 nm	49.719
2, 2 Bipyridine .09mM	528 nm	81.856

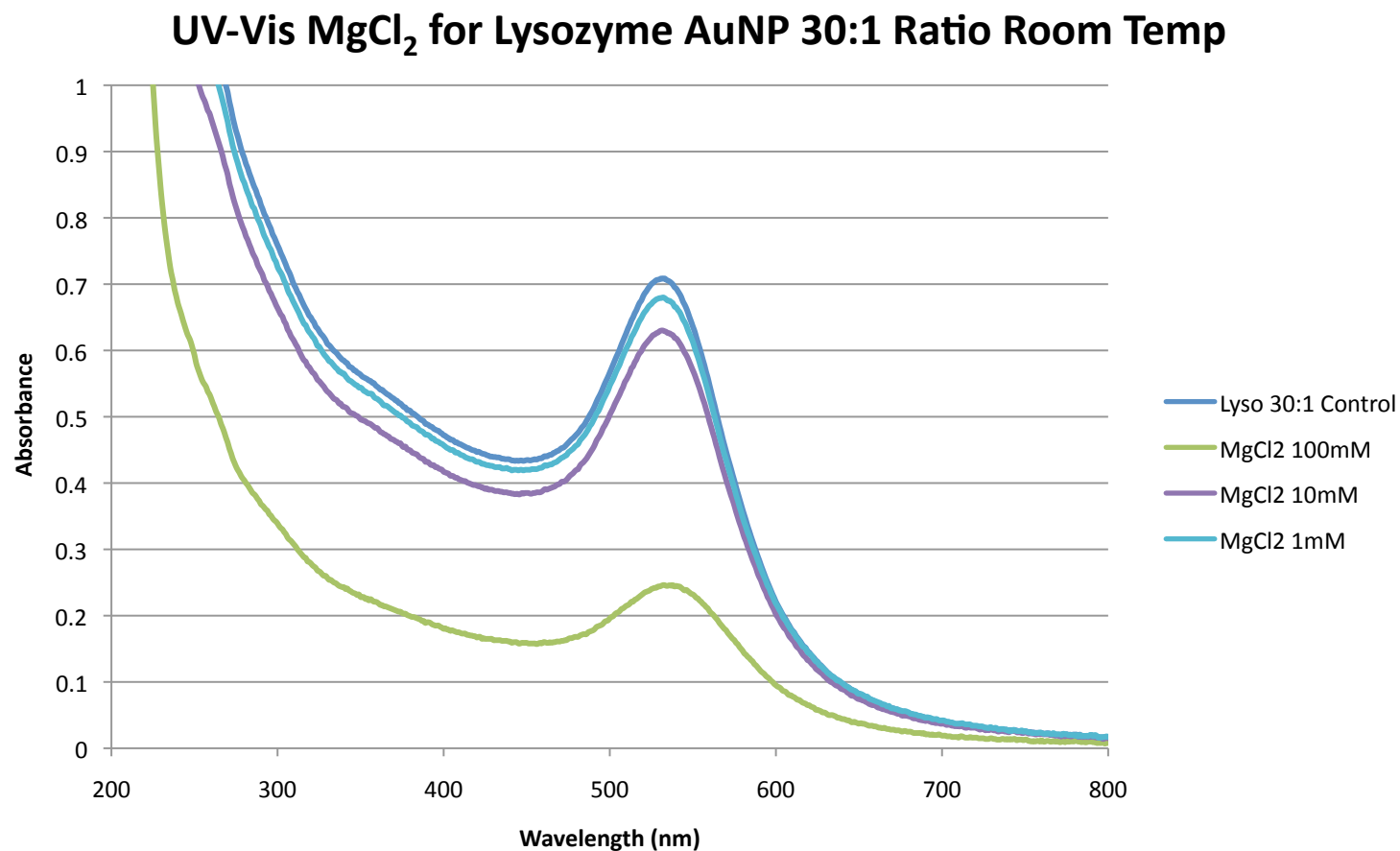
March 4th: 4 Degrees Celsius		
Percentage of Nanoparticles in Solution		
Variable Used	Peak Wavelength	Percentage %
NaCl 100mM	n/a	0.000
NaCl 10mM	531 nm	18.237
NaCl 1mM	530 nm	89.728
MgCl2 100mM	n/a	0.000
MgCl2 10mM	530 nm	15.861
MgCl2 1mM	530 nm	91.994
KCl 100mM	n/a	0.000
KCl 10mM	530 nm	46.224
KCl 1mM	530 nm	100.000
Citric Acid 100mM	n/a	0.000
Citric Acid 10mM	n/a	0.000
Citric Acid 1mM	524 nm	7.751
CaCl2 100mM	n/a	0.000
CaCl2 10mM	n/a	0.000
CaCl2 1mM	524 nm	73.860
MES 100mM	n/a	0.000
MES 10mM	524 nm	17.325
MES 1mM	524 nm	69.757
2, 2 Bipyridine 9mM	n/a	0.000
2, 2 Bipyridine .9mM	530 nm	44.411
2, 2 Bipyridine .09mM	530 nm	87.462

The Following Slides Represent the UV-Vis Analysis of the 5ml Samples of Lysozyme AuNP's 30:1 Ratio Samples with 2.5ml of Variable Added After Synthesis. All samples were analyzed at 22 degrees celsius.

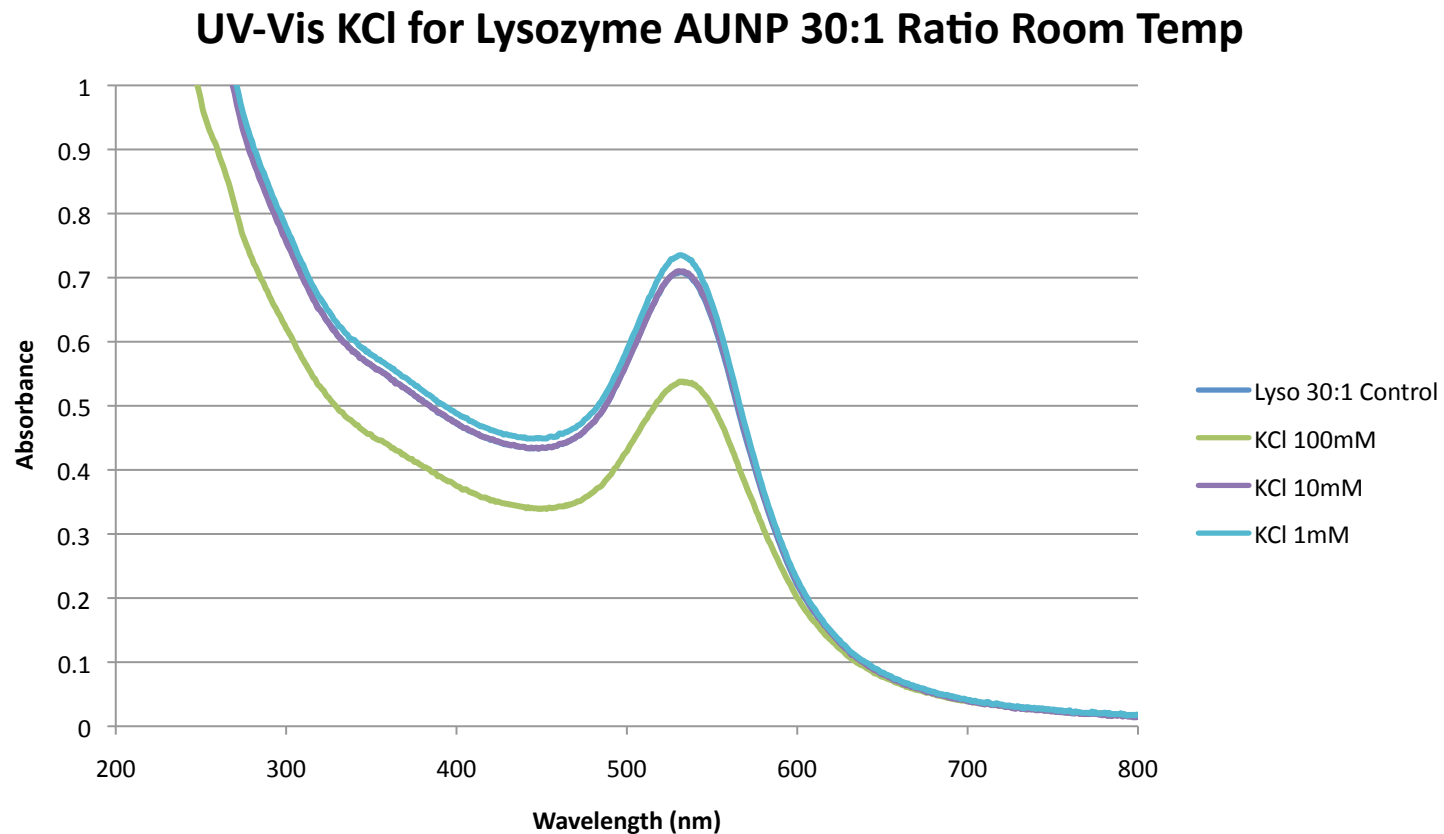
March 18, 2014 UV-Vis of 5ml Samples



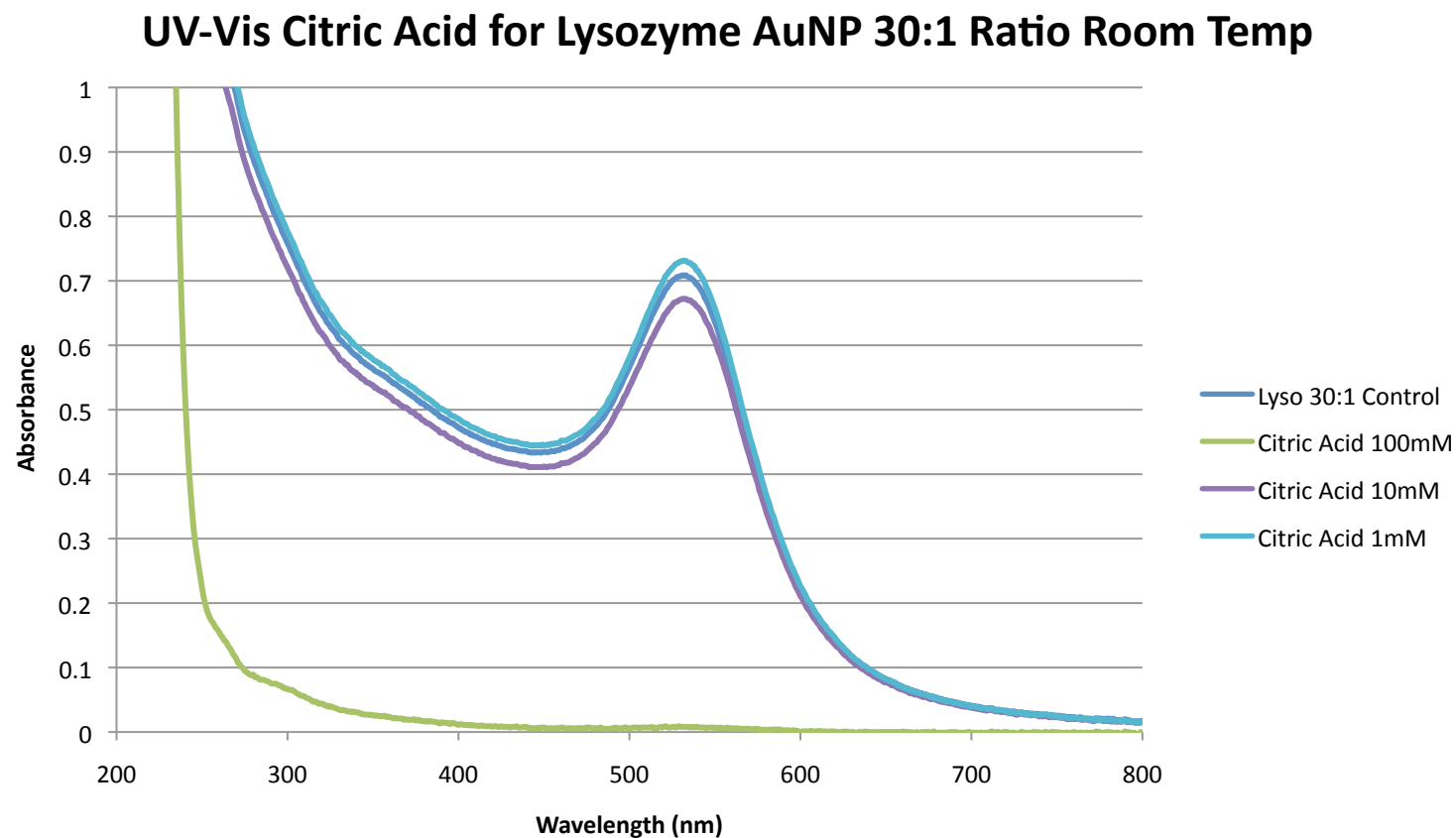
March 18, 2014 UV-Vis of 5ml Samples



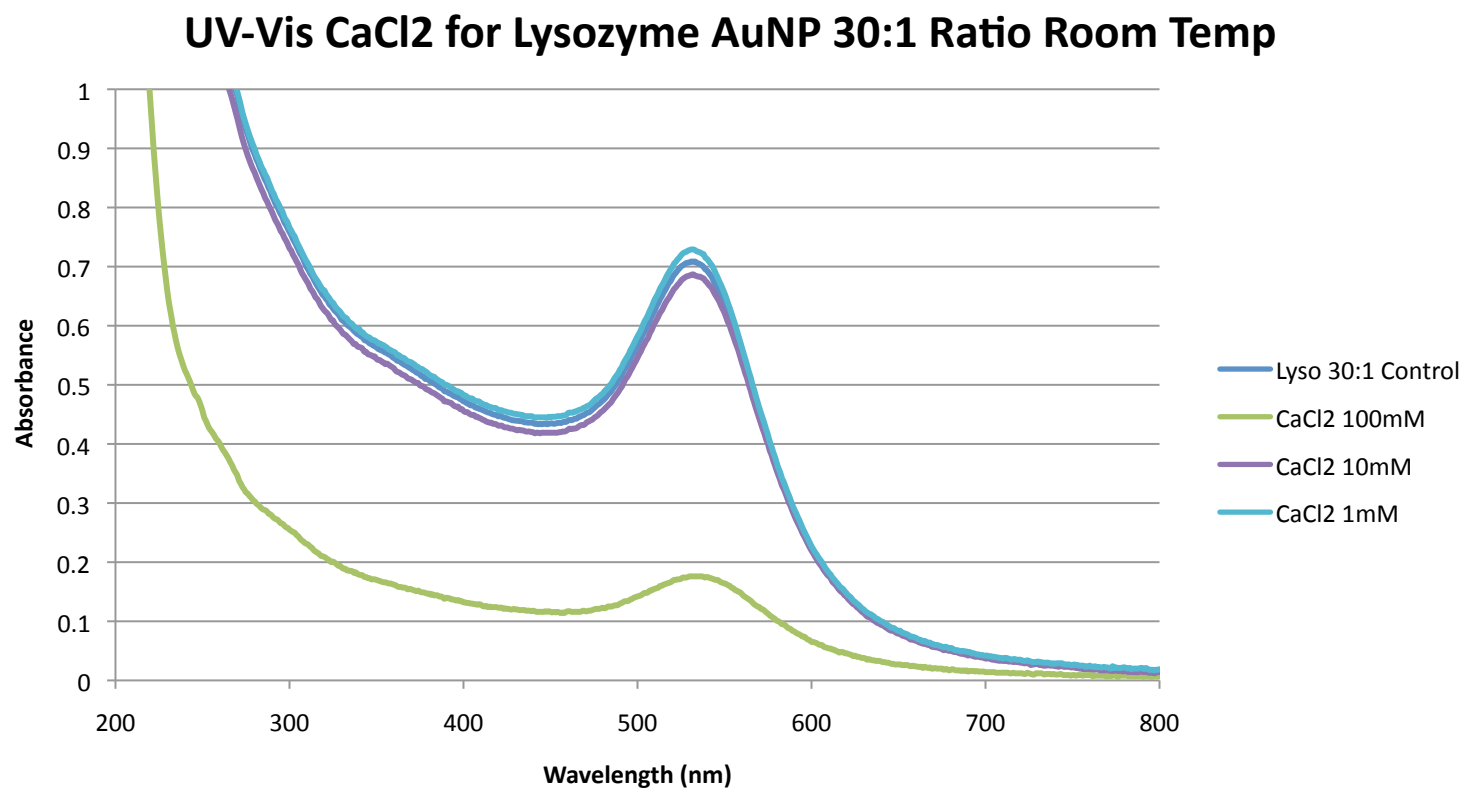
March 18, 2014 UV-Vis of 5ml Samples



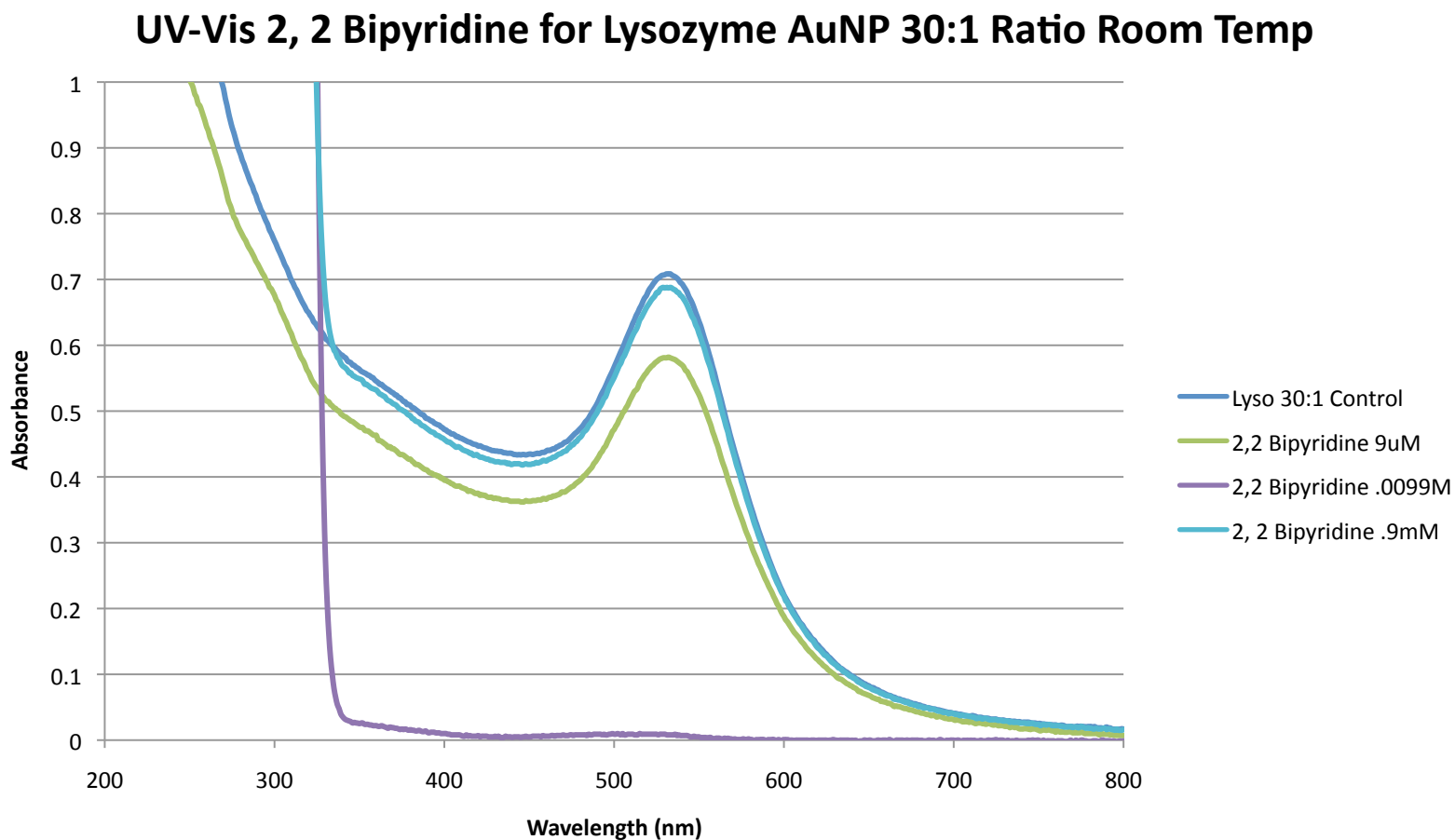
March 18, 2014 UV-Vis of 5ml Samples



March 18, 2014 UV-Vis of 5ml Samples



March 18, 2014 UV-Vis of 5ml Samples



Add [] of Gold From AA and Conductivity

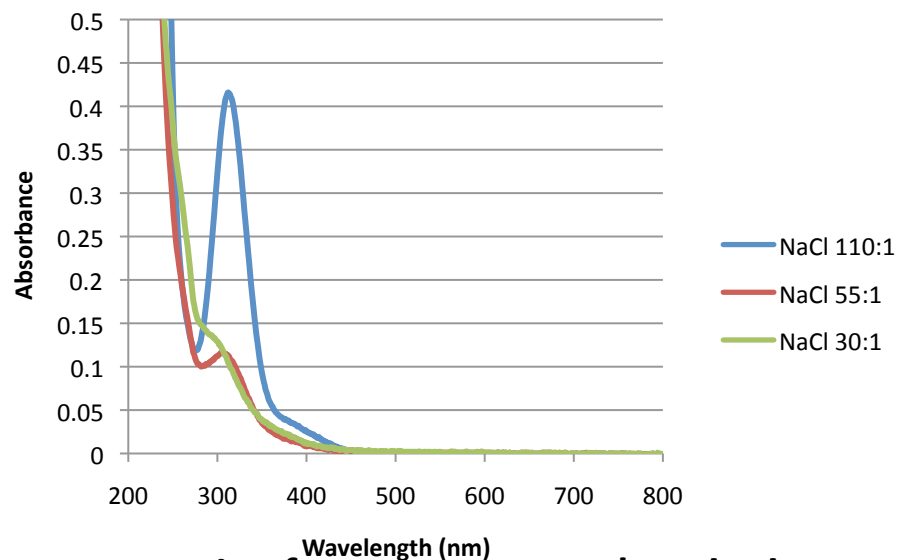
March 18th: 22 Degrees Celsius

Percentage of Nanoparticles in Solution

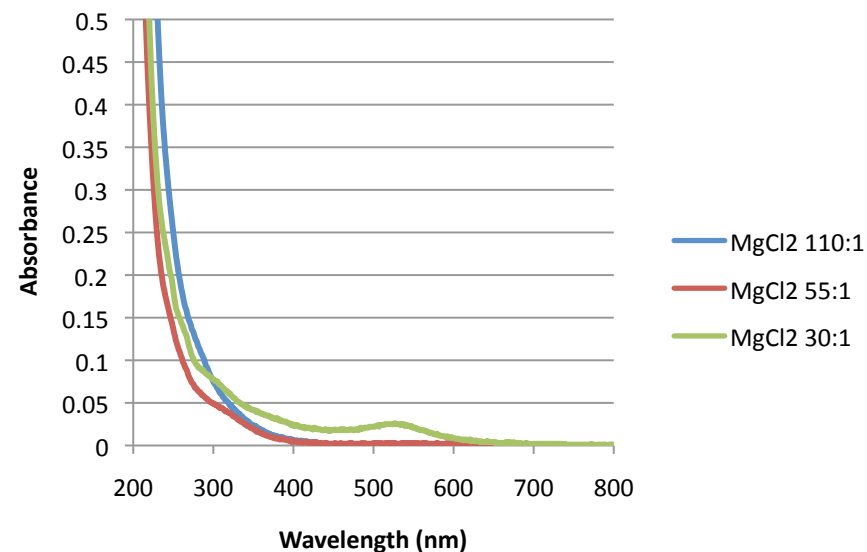
Variable Used	Peak Wavelength	Percentage %	Concentration of Gold (ug/ml)	Conductivity (uS/cm)
NaCl				
100mM	531 nm	73.801	28.5398	3821.714
NaCl 10mM	531 nm	100.000	39.3273	611.875
NaCl 1mM	531 nm	100.000	37.6871	318.175
MgCl ₂				
100mM	531 nm	34.572	13.1712	5354.8
MgCl ₂				
10mM	532 nm	88.983	33.9459	633.875
MgCl ₂ 1mM	532 nm	96.045	36.6734	333.177
KCl 100mM	531 nm	75.917	27.7593	4151.5
KCl 10mM	531 nm	100.000	35.6201	734.8
KCl 1mM	531 nm	100.000	35.8176	313.425
Citric Acid				
100mM	529 nm	1.274	4.3188	1832.286
Citric Acid				
10mM	532 nm	94.915	38.6154	471.625
Citric Acid				
1mM	532 nm	100.000	38.2926	287.1
CaCl ₂				
100mM	532 nm	24.859	10.5782	6726.5
CaCl ₂ 10mM	532 nm	97.034	36.111	995.5
CaCl ₂ 1mM	532 nm	100.000	38.0154	373.013
2, 2				
Bipyridine				
9uM	532 nm	82.203	36.5134	286
2, 2				
Bipyridine				
.0099M	528 nm	1.275	4.1308	327.433
2, 2				
Bipyridine				
.9mM	531 nm	97.084	38.5572	126.028

The Following Slides Represent
Lysozyme AuNP's Baked with Salt at
Various Gold to Protein Ratios: All
AuNP samples were made with
2.4696ml of 1M Salt

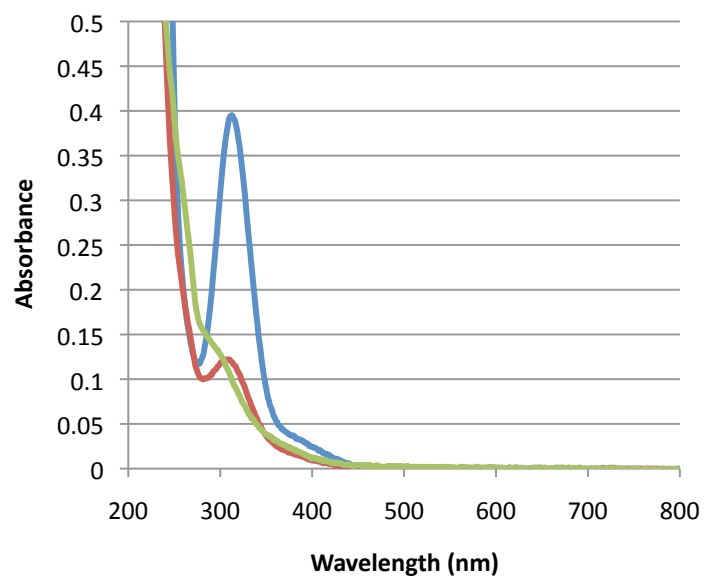
**UV-Vis of Lysozyme AuNP's Baked
With NaCl**



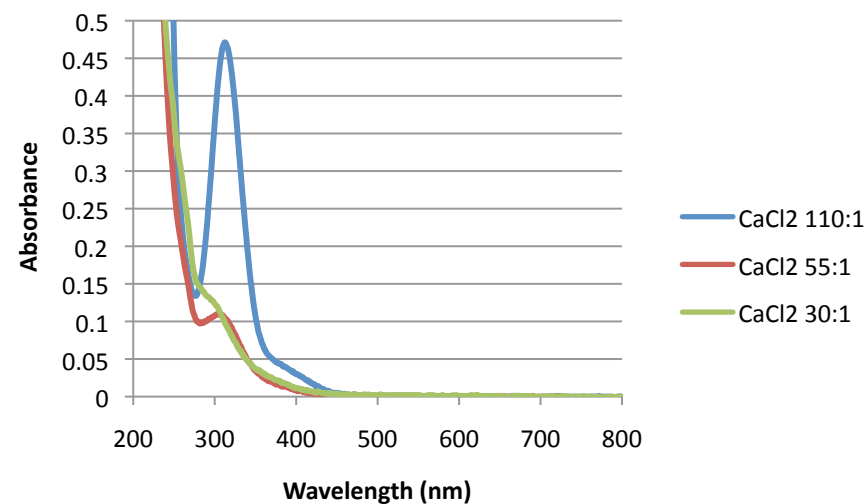
**UV-Vis of Lysozyme AuNP's Baked
with MgCl2**



**UV-Vis of Lysozyme AuNP's Baked
with KCl**



**UV-Vis of Lysozyme AuNP's Baked
with CaCl2**

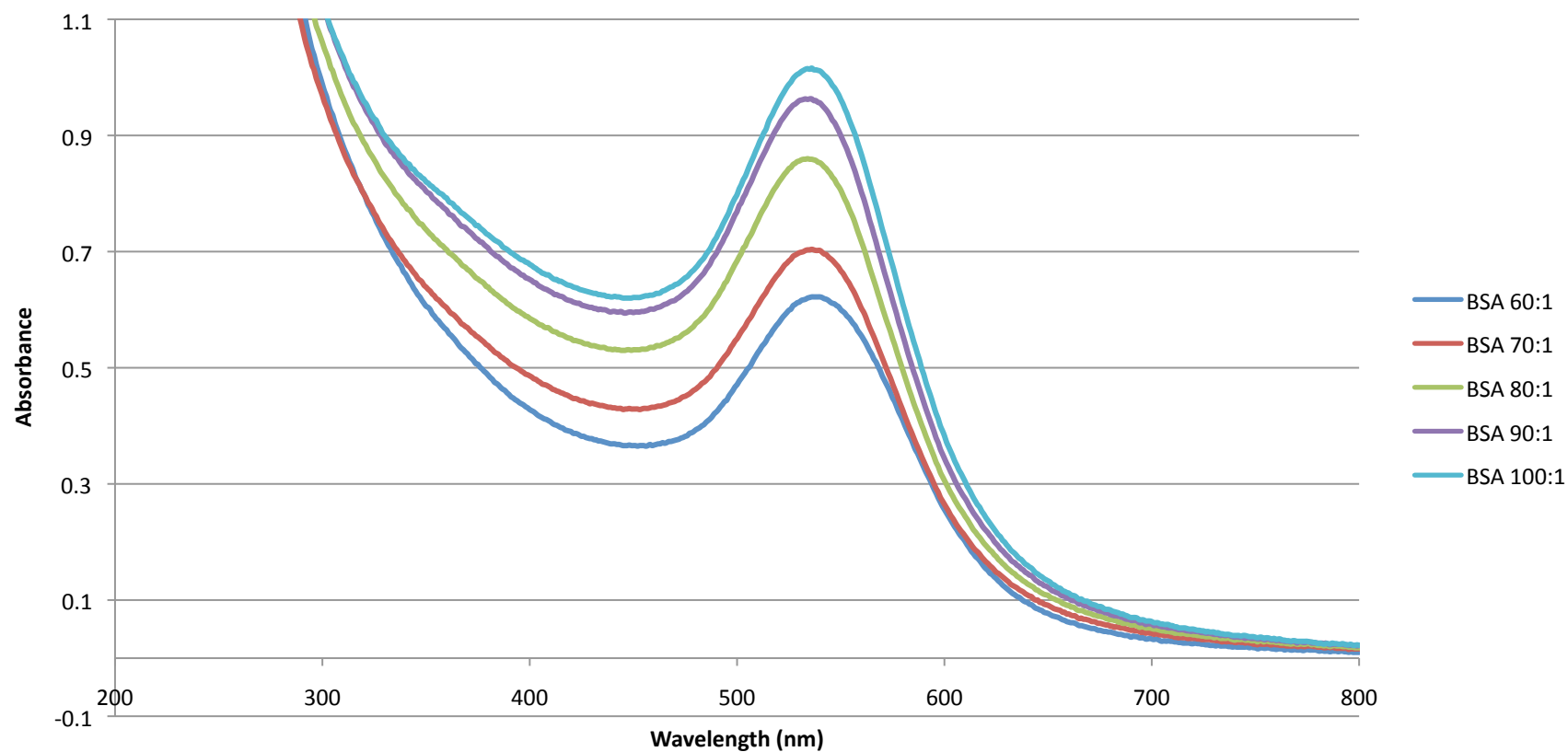


UV-Vis of BSA AuNP Baked with MgCl₂ at Different Gold to Protein Ratios

Concentration of MgCl₂? 1M

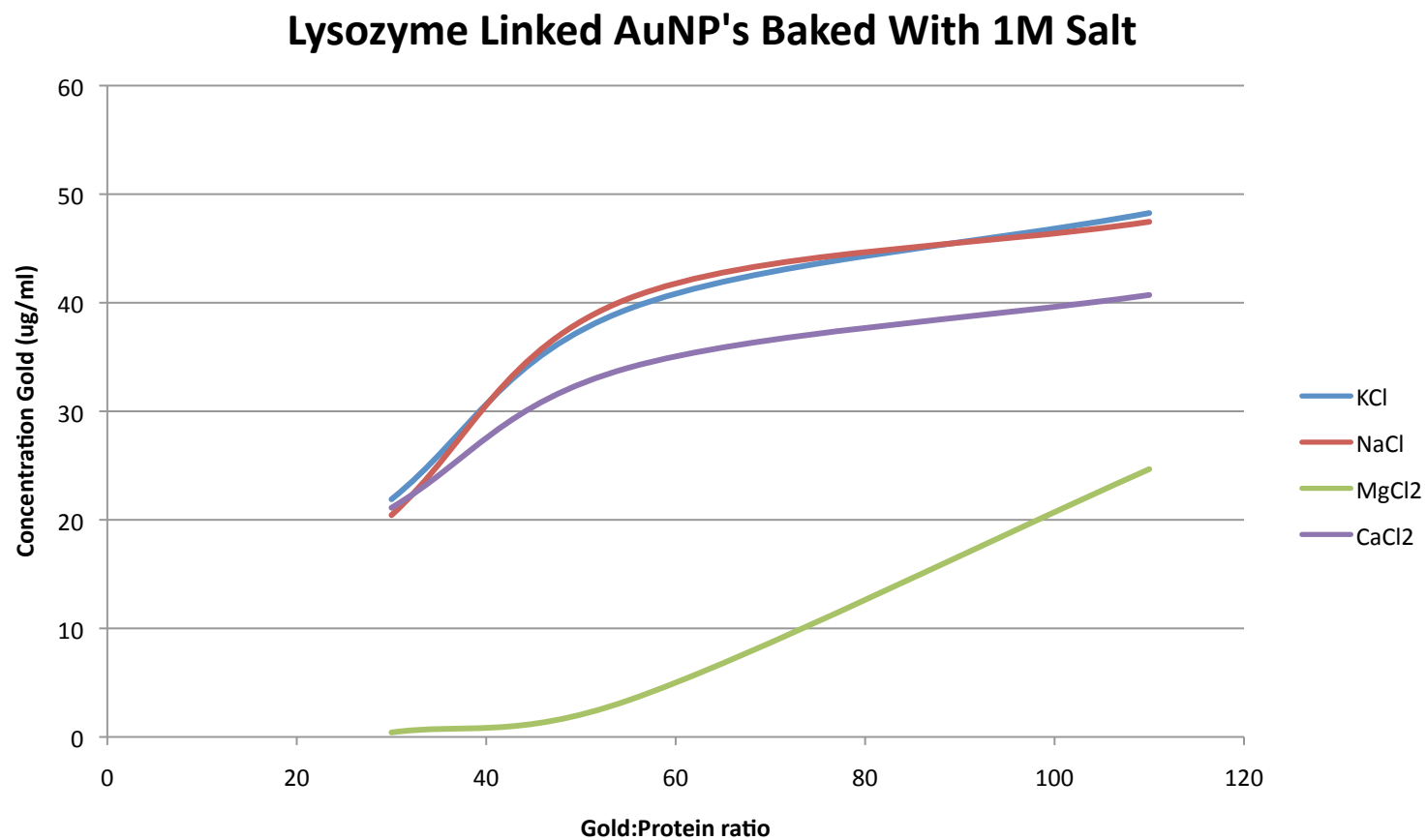
March 18, 2014

UV-Vis of BSA AuNP's Baked with MgCl_2 at Different Protein to Gold Ratios



The following slide shows the atomic absorption spectra for lysozyme linked AuNP's for ratios 30:1, 55:1, and 110:1 baked with 2.4696 ml of 1M salt

February 25th



March 5th

Atomic Absorption Spectra for BSA Linked AuNP's Baked with MgCL2

