1. MODEL TRAINING
Model method: Raw. Total Scans: 100
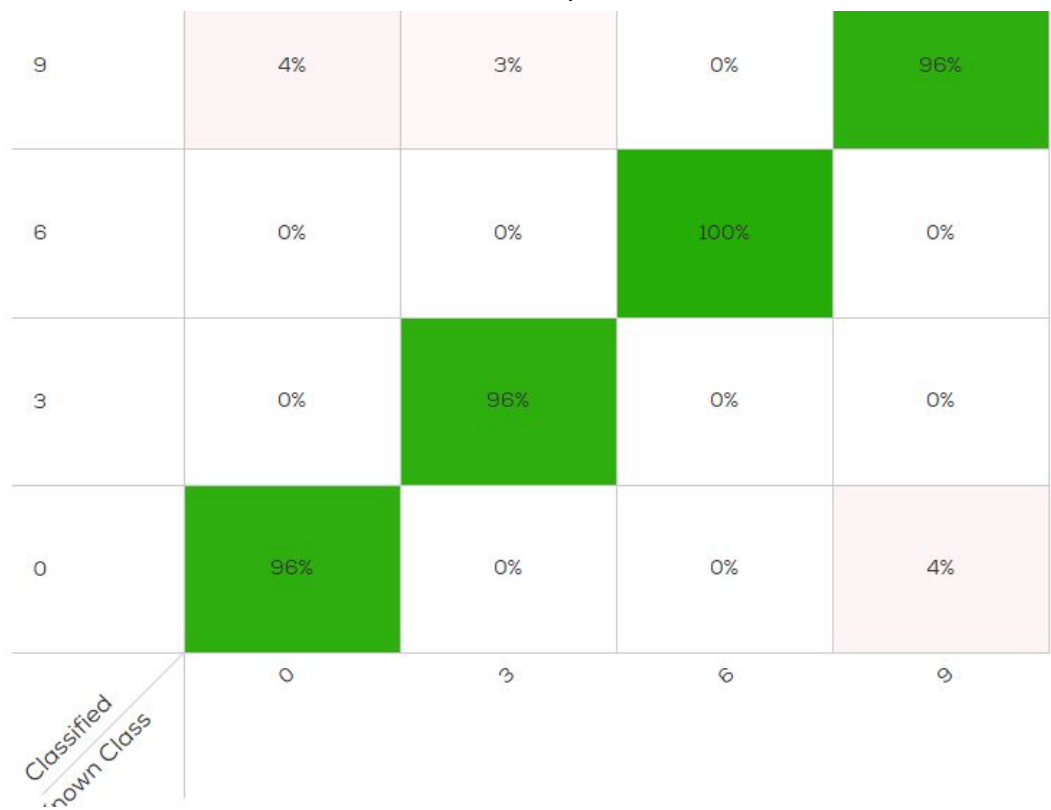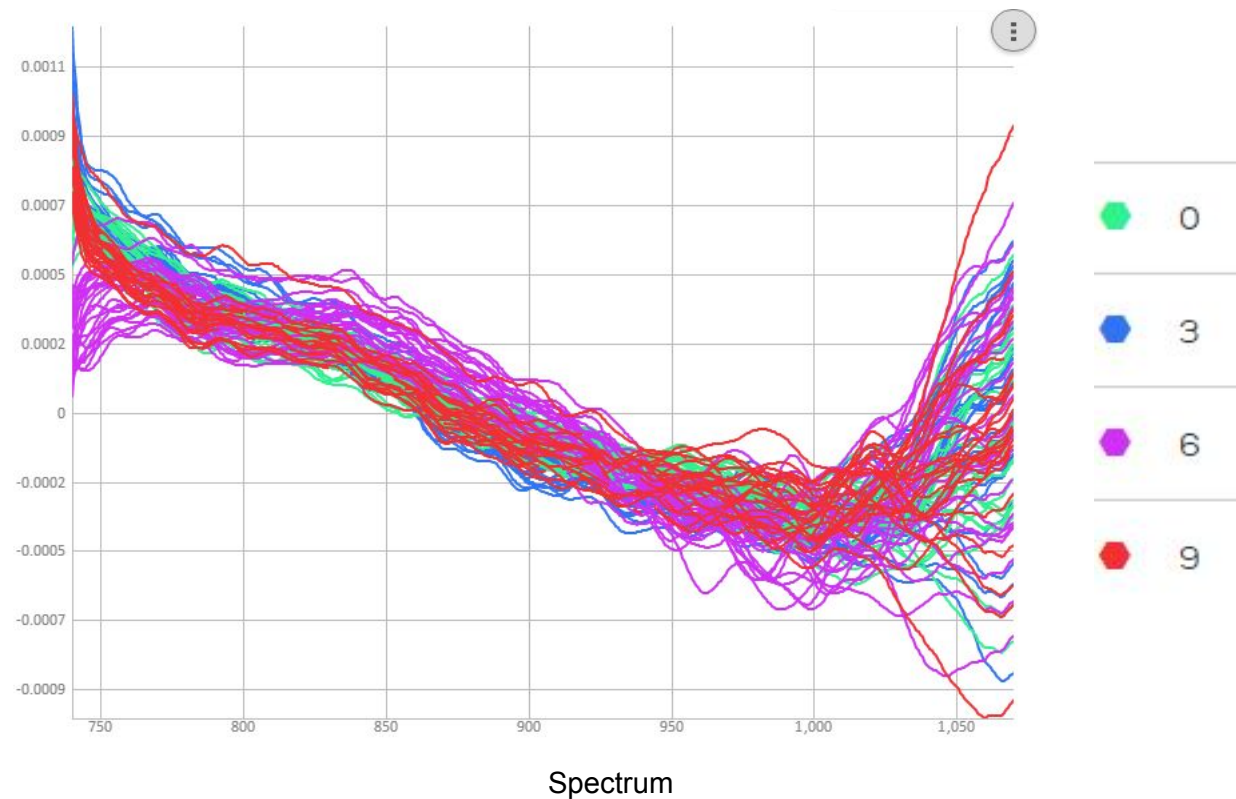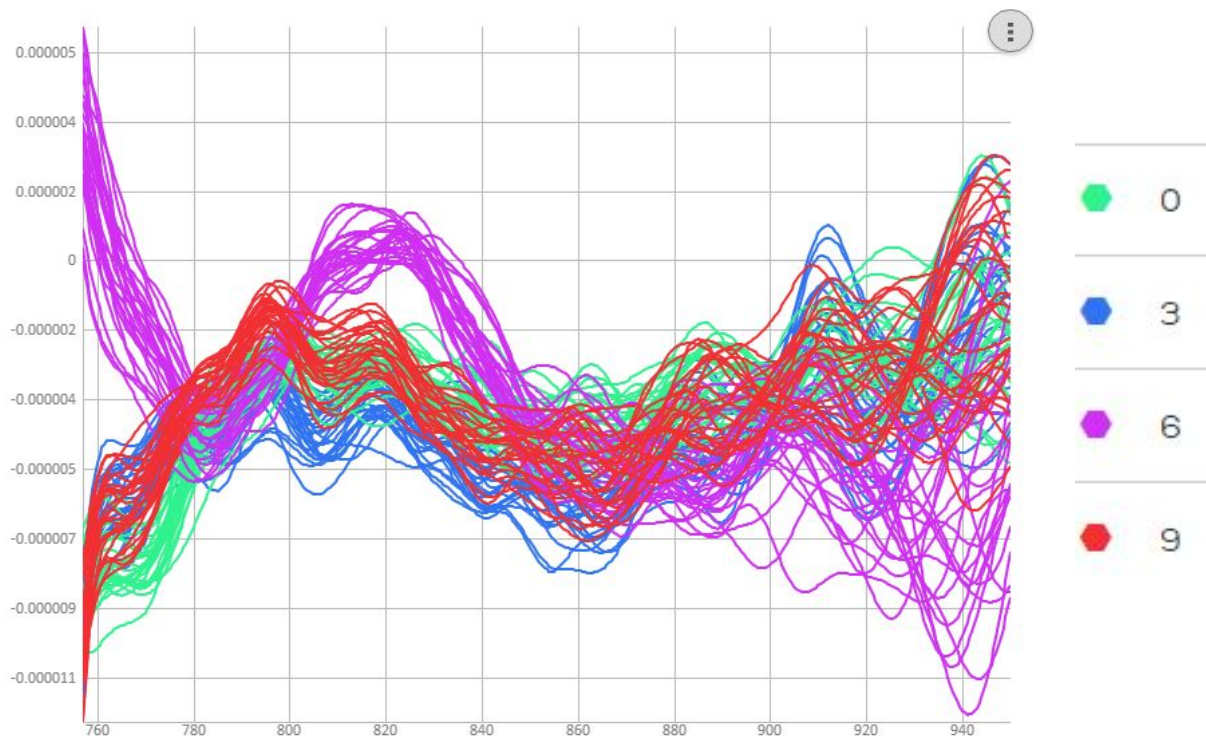

Spectrum

Confusion Matrix

Model method: Subtract Average. Total Scans: 100

Spectrum

Confusion Matrix

Model method: 1st Derivative + Selected Wavelength. Total Scans: 100

Spectrum

Confusion Matrix

Model method: 2nd Derivative + Select Wavelength. Total Scans: 100

Spectrum

Legend:
- 0 (green)
- 3 (blue)
- 6 (purple)
- 9 (red)
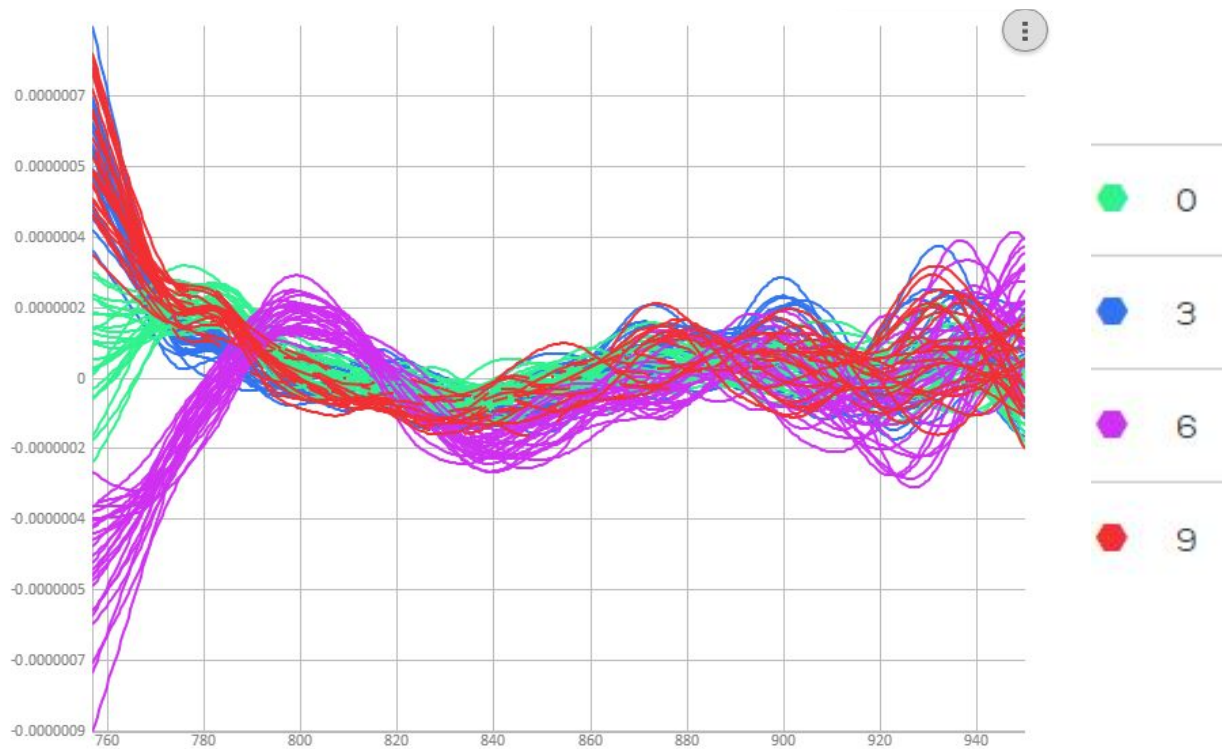
	0	3	6	9
9	0%	3%	0%	84%
6	0%	0%	100%	0%
3	0%	96%	0%	12%
0	100%	0%	0%	4%

Classified / Known Class

Confusion Matrix

2. MODEL TESTING
Test results

Trial run #	Actual Sample	Scanned Result (Result - Confidence level percentage) *Confidence level percentage - probable percentage of the result being right *Higher confidence level - more reliable result			
		Preprocessed	**Raw**	**1st Derivative**	**Subtract Average**
1	0	0 - 82	0 - 52	9 - 41	0 - 72
2	3	6 - 49	3 - 88	6 - 31	9 - 62
3	6	6 - 48	6 - 91	6 - 57	6 - 78
4	9	9 - 45	9 - 70	6 - 89	9 - 57
5	0	3 - 69	0 - 59	0 - 92	0 - 81
6	3	6 - 57	3 - 89	3 - 44	3 - 47
7	6	6 - 47	6 - 48	6 - 52	3 - 49
8	9	9 - 68	9 - 46	9 - 63	9 - 57
9	0	0 - 46	0 - 69	0 - 96	0 - 74
10	3	3 - 44	3 - 93	6 - 50	3 - 80
11	6	3 - 48	6 - 65	6 - 48	3 - 46
12	9	9 - 55	9 - 60	9 - 76	9 - 96
13	0	0 - 87	0 - 63	0 - 69	0 - 73
14	3	0 - 45	3 - 79	3 - 55	3 - 77
15	6	3 - 77	6 - 81	3 - 52	3 - 53
16	9	9 - 48	9 - 76	6 - 47	9 - 65
17	0	0 - 40	0 - 61	0 - 92	0 - 73
18	3	0 - 94	3 - 73	0 - 49	9 - 42
19	6	6 - 59	6 - 76	6 - 76	6 - 43
20	9	6 - 70	9 - 80	9 - 46	9 - 73
Accuracy:		**60%**	**100%**	**65%**	**75%**

*Accuracy - The percentage of how many times our model produced accurate results.

Notes and reflections:

1. This model produced perfect results as expected. All of the samples were in good condition with smooth surface level.