

### Pathlength Accuracy – (<1mm pathlength)

- High concentrated Potassium Dichromate standard sample was specially prepared from GFS Chemicals.
- GFS tested sample with 1mm pathlength quartz cuvette. The absorbance values of pathlength less than 1mm are the calculation values from GFS.
- GFS reported max.  $\pm 5\%$  error in the absorbance data.

### Absorbance Data:

Pathlength	VPE		GFS	
	Wavelength, nm		Wavelength, nm	
mm	Abs	Abs	Abs	Abs
1	2.3228	1.0613	2.3491	1.0739
0.95	2.1672	1.0055	2.2316	1.0202
0.9	2.0708	0.9535	2.1142	0.9665
0.85	1.9795	0.8968	1.9967	0.9128
0.8	1.8699	0.8393	1.8793	0.8591
0.75	1.7248	0.7864	1.7618	0.8054
0.7	1.6140	0.7350	1.6444	0.7517
0.65	1.5063	0.6829	1.5269	0.6980
0.6	1.3982	0.6321	1.4095	0.6443
0.55	1.2838	0.5812	1.2920	0.5906
0.5	1.1699	0.5312	1.1746	0.5370
0.45	1.0632	0.4813	1.0571	0.4833
0.4	0.9502	0.4298	0.9396	0.4296
0.35	0.8410	0.3809	0.8222	0.3759
0.3	0.7268	0.3284	0.7047	0.3222
0.25	0.6079	0.2736	0.5873	0.2685
0.2	0.4846	0.2185	0.4698	0.2148
0.15	0.3689	0.1655	0.3524	0.1611
0.1	0.2518	0.1132	0.2349	0.1074

### Pathlength Accuracy:

Pathlength	Wavelength, nm	
	350	313
mm	Abs	Abs
1	-1.1%	-1.2%
0.95	-2.9%	-1.4%
0.9	-2.1%	-1.3%
0.85	-0.9%	-1.8%
0.8	-0.5%	-2.3%
0.75	-2.1%	-2.4%
0.7	-1.8%	-2.2%
0.65	-1.4%	-2.2%
0.6	-0.8%	-1.9%
0.55	-0.6%	-1.6%
0.5	-0.4%	-1.1%
0.45	0.6%	-0.4%
0.4	1.1%	0.1%
0.35	2.3%	1.3%
0.3	3.1%	1.9%
0.25	3.5%	1.9%
0.2	3.1%	1.7%
0.15	4.7%	2.8%
0.1	7.2%	5.4%