

Report Sheet Template for Fluoride Ion-Selective Electrode Lab

Date:	October 8th, 2019	Name of TA:	Yinan Zhang
Name of Partner 1:	Linh Nguyen	Lab Section:	21
Name of Partner 2:		Phase of moon:	
Name of Partner 3:			
Name of Partner 4:			

Mass of toothpaste used (g):	0.2224
Label of second unknown:	

A.	Measurements of Standards (change nominal conc. to actual conc.)				
	Potentials Measured for Standards (mV)				
Replicate	10.15 ppm	5.08 ppm	2.54 ppm	1.27 ppm	
1	-15.2	-0.15	15.8	39.0	
2	-15.1	0.00	15.0	38.9	
3	-15.9	-0.30	16.3	39.5	
4	-16.0	-0.18	16.1	40.1	
5	-15.0	-0.20	16.0	39.7	
Mean	-15.4	-0.17	15.8	39.4	
Std Dev	0.5	0.1	0.5	0.5	
RSD (ppt)	-30.6	-653.8	31.8	12.6	

B.	Data from LINEST	
	Slope of calibration plot (mV/log [F ⁻]):	-58.6653
	Std. error in slope of calibration plot (mV/log [F ⁻]):	2.8005
	Intercept of calibration plot (mV):	42.67538
	Std. error in intercept of calibration plot (mV):	2.30749

C.	Measurements of Toothpaste and Second Unknown		
	Potentials Measured (mV)		
Replicate	Toothpaste	Second Unknown	
1	11.0		
2	11.4		
3	10.9		
4	11.2		
5	11.6		
Mean	11.2		
Std Dev	0.3		
RSD (ppt)	25.5		

D.	Reporting the Concentrations of your Unknowns	
	ppm of F ⁻ in diluted toothpaste solution (as analyzed)	3.437
	weight % F in toothpaste (as NaF)	0.155
	ppm of F ⁻ in second unknown	

E.	Reporting the 95% Confidence Interval in the Concentrations of your Unknowns	
	95% C.I. in ppm of F ⁻ in diluted toothpaste solution (as analyzed)	3.437 ± 1.183
	95% C.I. in weight % F in toothpaste (as NaF)	0.155 ± 0.053
	95% C.I. in ppm of F ⁻ in second unknown	