

CHM 3120L Introduction to Analytical Chemistry Lab Unknown Grading Scale:

Experiment: Review of Laboratory Techniques

Precision (RAD) = 1 ppt

If greater than 1 ppt, then 0.3 points will be subtracted for every 1ppt higher than this value up to a maximum of 3 points.

Experiment: Standardization of HCl Solution

Precision (RAD) = 3 ppt

If greater than 3 ppt, then 0.3 points will be subtracted for every 3ppt higher than this value up to a maximum of 3 points.

Experiment: Gravimetric Determination of Nickel by Homogeneous Precipitation with Dimethylglyoxime

Accuracy

% error										
less than or	1	2	3	4	5	6	7	8	9	10
equal to										
Grade	10	9.5	9.0	8.5	8.0	7.5	7.0	6.5	6.0	5.5

Precision (RSD) = 0.5%

If greater than 0.5%, then 0.3 points will be subtracted for every 0.5% higher than this value up to a maximum of 3 points.

Experiment: Acid-Base Titration - Unknown

Accuracy

% error										
less than or	1	2	3	4	5	6	7	8	9	10
equal to										
Grade	10	9.5	9.0	8.5	8.0	7.5	7.0	6.5	6.0	5.5

Precision (RSD) = 0.5%

If greater than 0.5%, then 0.3 points will be subtracted for every 0.5% higher than this value up to a maximum of 3 points.

Experiment: Complexometric Titration

Accuracy

% error	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
less than or equal to										
Grade	15	14.5	14.0	13.5	13.0	12.5	12.0	11.5	11.0	10.5

Precision (RSD) = 0.1%

If greater than 0.1%, then 0.3 points will be subtracted for every 0.1% higher than this value up to a maximum of 3 points.

Experiment: Determination of Iron

Accuracy

% error	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
less than or equal to										
Grade	10	9.5	9.0	8.5	8.0	7.5	7.0	6.5	6.0	5.5

Precision (RSD) = 0.5%

If greater than 0.5%, then 0.3 points will be subtracted for every 0.5% higher than this value up to a maximum of 3 points.

Experiment: The Spectrophotometric Determination of Manganese in Steel

Calibration Curve

Correlation Coefficient (R) = 0.995

If lower than 0.995, then 0.3 points will be subtracted for every 0.005 higher than this value up to a maximum of 3 points.

Accuracy

% error	2	4	6	8	10	12	14	16	18	20
less than or equal to										
Grade	7.0	6.5	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5

Precision (RSD) = 2%

If greater than 2%, then 0.3 points will be subtracted for every 2% higher than this value up to a maximum of 3 points.