Quiz 4.6 – Titration

Name: _____

Question 1 (1 points)

$25.00\ ml$ of HCl with unknown concentration were titrated to the end-point with $37.21\ ml$ of $0.150\ M$ NaOH. Find the initial $[\text{HCl}]$

Question 2 (2 points)

$25.00\ ml$ of $Ba(OH)_2$ with unknown concentration were titrated to the end-point with $42.85\ ml$ of $0.350\ M$ HNO_3. Find the initial $[Ba(OH)_2]$

Question 3 (2 points)

Color-changing indicators are available for redox reactions as well as for acid-base reactions. Consider the following reaction:

$$2\,Au^{3+}(aq) + 3\,Cr^{2+}(aq) \longrightarrow 2\,Au(s) + 3\,Cr^{4+}(aq)$$

$50.00\ ml$ of $Au(NO_3)_3$ with unknown concentration were titrated to the end-point with $28.63\ ml$ of $0.125\ M$ $Cr(C_2H_3O_2)_2$. Find the initial $\left[Au(NO_3)_3\right]$

Sonnet 18: Shall I compare thee to a summer's day?

By William Shakespeare

Shall I compare thee to a summer's day?
Thou art more lovely and more temperate:
Rough winds do shake the darling buds of May,
And summer's lease hath all too short a date;
Sometime too hot the eye of heaven shines,
And often is his gold complexion dimm'd;
And every fair from fair sometime declines,
By chance or nature's changing course untrimm'd;
But thy eternal summer shall not fade,
Nor lose possession of that fair thou ow'st;
Nor shall death brag thou wander'st in his shade,
When in eternal lines to time thou grow'st:
  So long as men can breathe or eyes can see,
  So long lives this, and this gives life to thee.