

## Quiz 5.4 – Titration

Name: \_\_\_\_\_

**Question 1 (1 points)**

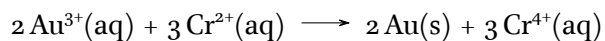
25.00 *ml* of HCl with unknown concentration were titrated to the end-point with 37.21 *ml* of 0.150 *M* NaOH. Find the initial [HCl]

**Question 2 (2 points)**

25.00 *ml* of Ba(OH)<sub>2</sub> with unknown concentration were titrated to the end-point with 42.85 *ml* of 0.350 *M* HNO<sub>3</sub>. Find the initial [Ba(OH)<sub>2</sub>]

**Question 3 (2 points)**

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



50.00 *ml* of Au(NO<sub>3</sub>)<sub>3</sub> with unknown concentration were titrated to the end-point with 28.63 *ml* of 0.125 *M* Cr(C<sub>2</sub>H<sub>3</sub>O<sub>2</sub>)<sub>2</sub>. Find the initial [Au(NO<sub>3</sub>)<sub>3</sub>]

*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.