Question 1

Answer saved

Marked out of 1.00

⚑ Flag question

Zinc (65.37 g/mol) is determined by precipitating and weighing $Zn_2Fe(CN)_6$ (342.70 g/mol). What mass of zinc in grams is contained in a sample that gives 0.438 g precipitate?

- ○ a. 2.19
- ● b. 0.167
- ○ c. 0.334
- ○ d. 2..30

Clear my choice

Question 7

Answer saved

Marked out of 1.00

⚑ Flag question

What is the concentration in ppm of a 1.5×10^{-3} molal solution of NaCl (58.5 g/mol)?

○ a. 88 ppm

○ b. 8.8 ppm

○ c. 150 ppm

○ d. 1.5 ppm

Clear my choice

Which one of the following precipitates is more soluble in its saturated solution?

- ⦿ a. $AgCl$ ($K_{sp} = 1.8 \times 10^{-10}$)

- ○ b. AgI ($K_{sp} = 8.3 \times 10^{-17}$)

- ○ c. $AgBr$ ($K_{sp} = 5.0 \times 10^{-13}$)

- ○ d. Ag_2CrO_4 ($K_{sp} = 1.2 \times 10^{-12}$)

Clear my choice

Next page

Given that the solubility product for $La(IO_3)_3$ is 1.0×10^{-11}, what is the concentration of La^{3+} in a saturated solution of lanthanum iodate?

○ a. 1.35×10^{-3} M

○ b. 1.0×10^{-3} M

○ c. 7.18×10^{-5} M

● d. 7.8×10^{-4} M

Clear my choice

Zinc (65.37 g/mol) is determined by precipitating and weighing $Zn_2Fe(CN)_6$ (342.70 g/mol). What mass of zinc in grams is contained in a sample that gives 0.438 g precipitate?

○ a. 2.19

◉ b. 0.167

○ c. 0.334

○ d. 2..30

Clear my choice

A student performs an experiment to determine the density of a sugar solution. She obtains the following results: 4.71 g/mL, 4.73 g/mL, 4.67 g/mL, 4.69 g/mL. If the actual value for the density of the sugar solution is 4.40 g/mL, which statement below best describes her results?

○ a. Her results are both precise and accurate

◉ b. Her results are precise, but not accurate

○ c. Her results are accurate, but not precise

○ d. It isn't possible to determine with the information given

Determination of the sodium level in separate portions of a blood sample by ion-selective electrode measurement gave the following results: 139.2, 139.8, 140.1, and 139.4 meq/L. What is the range within which the true value falls, assuming no determinate error at the 99% confidence level (t at 99% confidence level = 5.84)

○ a. 139.6 ± 0.6

○ b. 139.6 ± 0.5

○ c. 139.6 ± 1.5

● d. 139.6 ± 1.2

Clear my choice

What is the molar solubility of Hg_2Cl_2 ($K_{sp} = 1.2 \times 10^{-18}$) in 0.060 M KCl?

○ a. 2.6×10^{-15} M

○ b. 1.3×10^{-15}

○ c. 6.6×10^{-16} M

◉ d. 3.3×10^{-16} M

Clear my choice

The following replicates are obtained for analysis of calcium in drinking water: 23.4, 23.2, 22.8, 26.0, 24.0 and 23.0 ppm. After applying Grubbs Test, the mean is------- and the standard deviation is------. Use G_{table} = 1.822

- ● a. 23.7 and 1.2
- ○ b. 23.7 and 0.5
- ○ c. 23.3 and 1.2
- ○ d. 23.3 and 0.5

Clear my choice

Question 13

Answer saved

Marked out of 1.00

⚑ Flag question

How many significant figures are there in the answer for the following calculations?

$$[(143.7 - 121) \times 2.06] \div 0.600$$

○ a. three

○ b. four

● c. two

○ d. one

Clear my choice

What concentration of Ag^+ is required to precipitate ONLY AgBr in a solution that contains both Br^- and Cl^- at a concentration of 0.040 M?

K_{sp} of AgCl = 1.6×10^{-10} and K_{sp} of AgBr = 7.7×10^{-13}

- ○ a. 1.0×10^{-11} M < [Ag+] < 2.0×10^{-9} M

- ◉ b. 1.9×10^{-11} M < [Ag+] < 4.0×10^{-9} M

- ○ c. 1.0×10^{-11} M < [Ag+] < 2.0×10^{-9} M

- ○ d. 3.9×10^{-11} M < [Ag+] < 8.0×10^{-9} M

Clear my choice

Which of the following statement is most correct?

○ a. Disturbance of an equilibrium system result in a shift of equilibrium position

○ b. Adding more reactants for a reaction at equilibrium decreases the value of K

○ c. Always salts with the same value of K_{sp} have similar solubility

○ d. At equilibrium no more reactants are transformed into products

Clear my choice

Question 13

Answer saved

Marked out of 1.00

⚑ Flag question

How many significant figures are there in the answer for the following calculations?

$$[(143.7 - 121) \times 2.06] \div 0.600$$

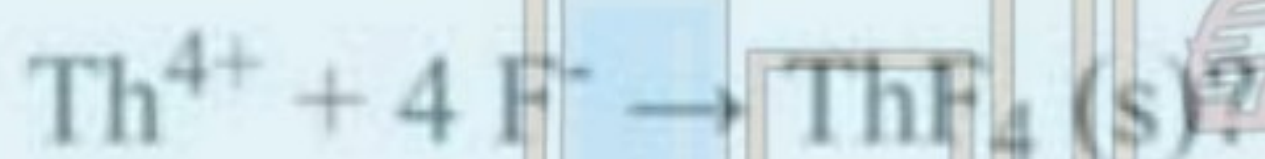○ a. three

○ b. four

◉ c. two

○ d. one

Clear my choice

How many **grams** of 2.50 % by mass aqueous HF (20.0 g/mol) are required to provide 20 % excess to react with 50.0 mL of 0.0325 M Th^{4+} by the reaction

$$Th^{4+} + 4\ F^- \rightarrow ThF_4\ (s)?$$

○ a. 3.12

○ b. 25.0

○ c. 6.24

◉ d. 12,5

Clear my choice

How many milliliters of 0.260 M Na2S are needed to react with 40.00 mL of 0.315 M AgNO3?

Na2S(aq) + 2 AgNO3(aq) → 2 NaNO3(aq) + Ag2S(s)

○ a. 12.1 ml

○ b. 66.0 ml

● c. 24.2 ml

○ d. 48.5 ml

Clear my choice

Question 6

Answer saved

Marked out of 1.00

⚑ Flag question

At 700 K, the reaction $2SO_2(g) + O_2(g) \rightleftharpoons 2SO_3(g)$ has the equilibrium constant $K_c = 4.3 \times 10^6$, and the following concentrations are present: $[SO_2] = 0.10$ M; $[SO_3] = 10.$ M; $[O_2] = 0.10$ M,

Is the mixture at equilibrium? If not at equilibrium, in which direction (as the equation is written), *left to right* or *right to left*, will the reaction proceed to reach equilibrium?

○ a. There is not enough information to be able to predict the direction

● b. No, *right to left*

○ c. No, *left to right*

○ d. Yes, the mixture is at equilibrium

Clear my choice