

CHEM 1423
Chapters 19
Homework Answers

TEXTBOOK HOMEWORK

19.12 10.03

19.15 10.57

19.16 0.55

19.18 3.36

19.19 8.86

19.42(C) 10.24

19.50 1.3×10^{-4}

19.56 (a) $S = 1.7 \times 10^{-3}$ M in 0.06 M $\text{Ca}(\text{NO}_3)_2$

(b) $S = 2.0 \times 10^{-4}$ M in 0.06 M NaIO_3

$S = 5.6 \times 10^{-3}$ M in pure water

SUPPLEMENTARY HOMEWORK

S1. C

S2. B

S3. B

S4. A

S5. (a) Yes

(b) Yes

(c) No

(d) Yes

(e) Yes

(f) No

(g) Yes

(h) No

S6. (a) 2.52

- (b) 6.70
- (c) 11.79
- (d) 11.19
- (e) 7.30
- (f) 1.92
- (g) 7.18
- (h) 11.06
- (i) 2.4
- (j) 3.9

S7. 0.19 M

S8. (a) 5.05
(b) 3.11

S9. 78%

S10. 23%

S11. (a) $S = 1.2 \times 10^{-4} \text{ M}$, $[\text{Ag}^+] = 2.3 \times 10^{-4}$, $[\text{CO}_3^{2-}] = 1.2 \times 10^{-4} \text{ M}$
(b) $S = 1.6 \times 10^{-10} \text{ M}$
(c) $[\text{Ag}^+] = 7.9 \times 10^{-6} \text{ M}$

S12. AgBr(s) WILL precipitate from solution
HgBr₂(s) will NOT precipitate from solution

S13. $[\text{Hg}^+] = 8.0 \times 10^{-3} \text{ M}$, $[\text{SO}_4^{2-}] = 6.0 \times 10^{-3} \text{ M}$,
 $Q = 3.84 \times 10^{-7} \text{ M} (< K_{sp})$. Hg₂SO₄(s) will NOT precipitate from solution

S14. (a) 9.74
(b) 5.57
(c) 10.53
(d) 50% Lys²⁺/50% Lys⁺