

Write the Ksp expression for the following:

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| 1) AlPO_4 | 4) AgCN |
| 2) $\text{Cu}_3(\text{PO}_4)_2$ | 5) $\text{Zn}_3(\text{AsO}_4)_2$ |
| 3) CuSCN | 6) $\text{Mn}(\text{IO}_3)_2$ |

Given the following solubilities, calculate the solubility product (Ksp) to each compound.

7. AgNO_3 1.55 g/L
 8. SrCO_3 7.5×10^{-5} M
 9. BaC_2O_4 9.3×10^{-5} g/ml
 10. CuCl 1.01×10^{-3} M

Given the following Ksp values, calculate the solubility of each compound in the units given.

11. PbC_2O_4 Ksp = 2.74×10^{-11} (mol/L)
 12. AgBrO_3 Ksp = 5.77×10^{-15} (g/L)
 13. CuS Ksp = 8.5×10^{-45} (mol/L)
 14. CaSO_4 Ksp = 2.45×10^{-5} (g/mL)

Given the following solubilities, calculate the solubility product of each compound.

15. MnF_2 6.6 g/L
 16. Ag_2CrO_4 1.31×10^{-6} M
 17. $\text{Zn}(\text{OH})_2$ 1.64×10^{-6} g/mL
 18. PbI_2 0.70 g/L

Given the following Ksp values, calculate the solubility of each compound in the units given.

19. $\text{Mg}(\text{OH})_2$ Ksp = 1.2×10^{-11} (mol/L)
 20. CaF_2 Ksp = 3.95×10^{-11} (g/L)
 21. $\text{Pb}(\text{IO}_3)_2$ Ksp = 2.6×10^{-13} (g/mL)
 22. Ag_2CO_3 Ksp = 6.2×10^{-12} (mol/L)

answers

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|---|-------------------------------|
| 1. $\text{Ksp} = [\text{Al}^{3+}][\text{PO}_4^{3-}]$ | |
| 2. $\text{Ksp} = [\text{Cu}^{2+}]^3[\text{PO}_4^{3-}]^2$ | |
| 3. $\text{Ksp} = [\text{Cu}^+][\text{SCN}^-]$ | |
| 4. $\text{Ksp} = [\text{Ag}^+][\text{CN}^-]$ | |
| 5. $\text{Ksp} = [\text{Zn}^{2+}]^3[\text{AsO}_4^{3-}]^2$ | |
| 6. $\text{Ksp} = [\text{Mn}^{2+}][\text{IO}_3^-]^2$ | |
| 7. 8.32×10^{-5} | 15. 1.4×10^{-3} |
| 8. 5.6×10^{-9} | 16. 9.0×10^{-18} |
| 9. 1.7×10^{-7} | 17. 1.80×10^{-14} |
| 10. 1.02×10^{-6} | 18. 1.4×10^{-8} |
| 11. 5.3×10^{-6} M | 19. 1.4×10^{-4} M |
| 12. 1.79×10^{-5} g/l | 20. 1.68×10^{-2} g/l |
| 13. 9.2×10^{-23} mol/l | 21. 2.2×10^{-5} g/ml |
| 14. 6.74×10^{-4} g/ml | 22. 1.2×10^{-4} M |