

***** EXAMINATION *****

**PARTITION COEFFICIENTS FOR METALS IN
SURFACE WATER, SOIL, AND WASTE**

1. **The dominant metal oxide sorbing surface was assumed**
 - a) to be ceric oxide when modeling details
 - b) to be kalium oxide when modeling details
 - c) to be silicium oxide when modeling details
 - d) to be hydrous ferric oxide when modeling details
2. **Suspended matter and soil metal partition coefficient**
 - a) totaled 48% of the reported data
 - b) totaled 58% of the reported data
 - c) totaled 68% of the reported data
 - d) totaled 78% of the reported data
3. **The metals used in developing the regression equations,**
 - a) included titanium, platinum & tin
 - b) included cadmium, copper, zinc
 - c) included silver, gold & lead
 - d) included gold, mercury & copper
4. **The concentrations used for DOC were 0.5, 5.0,**
 - a) and 20.0 mg/L, taken as a reasonable range in soil-water
 - b) and 30.0 mg/L, taken as a reasonable range in soil-water
 - c) and 40.0 mg/L, taken as a reasonable range in soil-water
 - d) and 50.0 mg/L, taken as a reasonable range in soil-water
5. **The low, medium, and high concentrations of DOC**
 - a) were 0.39, 3.9 and 39 mg/L
 - b) were 0.59, 5.9 and 59 mg/L
 - c) were 0.79, 7.9 and 79 mg/L
 - d) were 0.89, 8.9 and 89 mg/L
6. **Specifically designed to characterize leachate compositions**
 - a) was the TCLP
 - b) was the HWIR
 - c) was the MRA
 - d) was the LAU

7. **Metal sorption distribution coefficient**
 - a) is the sorbed metal concentration
 - b) is the dissolved metal concentration
 - c) is the metal partition coefficient
 - d) None of the above
8. **Subjectively assigned to each of the final values presented**
 - a) is a difference level
 - b) is a confidence level
 - c) is a concentration level
 - d) is a metal partition coefficient
9. **Data for a metal not represented in the literature with a**
 - a) notable degree of expert judgment were assigned a CL of 1
 - b) notable degree of expert judgment were assigned a CL of 2
 - c) notable degree of expert judgment were assigned a CL of 3
 - d) notable degree of expert judgment were assigned a CL of 4
10. **If data-based regression equations could not be used to estimate**
 - a) soil/water partition, a geological specialization model was used
 - b) soil/water partition, a geochemical specialization model was used
 - c) soil/water partition, an ecological specialization model was used
 - d) None of the above
11. **The hydrous ferric oxide concentration was used**
 - a) as a determining variable
 - b) as an examining variable
 - c) as a calibrating variable
 - d) as a corresponding variable
12. **Representing DOC as a mixture of many types of metal binding**
 - a) sites is the Gaussian distribution model
 - b) sites is geochemical specialization modeling
 - c) sites is the specialized algorithm model
 - d) All of the above
13. **Of the 1170 values obtained from the literature**
 - a) 60% pertained to Cd, Co, Cr, Cu, Hg, Ni, Pb and Zn.
 - b) 70% pertained to Cd, Co, Cr, Cu, Hg, Ni, Pb and Zn.
 - c) 80% pertained to Cd, Co, Cr, Cu, Hg, Ni, Pb and Zn.
 - d) 90% pertained to Cd, Co, Cr, Cu, Hg, Ni, Pb and Zn.
14. **More metal partition coefficient were recovered**
 - a) for cadmium (Cd)
 - b) for chromium (Cr)
 - c) for cobalt (Co)
 - d) for selenium (Se)

15. **Suspended matter and soil metal partition coefficient's**
- a) together totaled 48% of the reported data
 - b) together totaled 58% of the reported data
 - c) together totaled 68% of the reported data
 - d) together totaled 78% of the reported data
16. **The ionic strength was held constant at 0.005 M**
- a) after a sensitivity test in range 0.01 to 0.001 M
 - b) after a sensitivity test in range 0.10 to 0.010 M
 - c) after a sensitivity test in range 0.11 to 0.011 M
 - d) after a sensitivity test in range 0.21 to 0.021 M
17. **After concentration of sorbing sites, the most critical**
- a) model parameter is the concentration of sorbing phases
 - b) model parameter is the DOC concentration
 - c) model parameter is the pH
 - d) All of the above
18. **Metals with little partitioning data available for soil**
- a) are chromium (Cr) and nickel (Ni)
 - b) are lead (Pb) and selenium (Se)
 - c) are beryllium (Be) and barium (Ba)
 - d) are thallium (Tl) and antimony (Sb)
19. **Known to complex with metals are**
- a) the dissolved metals
 - b) the dissolved ligands
 - c) the dissolved soil
 - d) the dissolved chemicals
20. **The second most frequently reported metal partition coefficient**
- a) pertained to suspended matter in streams
 - b) pertained to partitioning soil
 - c) pertained to partitioning metals
 - d) All of the above

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