

*** ERRATA ***

Corrections to Guggenheim, S. (1997) Introduction to the properties of clay minerals. *Teaching Mineralogy*, Brady, J.B., Mogk, D.W., and Perkins, D., III, Eds., Mineralogical Society of America, Washington, 371-388.

replace paragraphs 4 and 5 on p. 375 with:

Clay minerals may be made to disperse or flocculate in water. "Dispersed" clay is the case where individual particles are separate and remain in suspension in the fluid. "Flocculation" is where the particles aggregate to form clumps or "flocs" (Figure 6). As the clay flocculates, the flocs fall to the bottom of the glass or beaker.

Colloid chemists are not at all certain about the details of why dispersion and flocculation occur, although a basic understanding is known. For the purposes of this laboratory, it is sufficient to recognize that at low salt concentrations, dispersion generally occurs. Interparticle attraction (flocculation) generally occurs at higher salt concentrations. Thus, a cation salt exchanged montmorillonite in a salt solution may be made to disperse by washing in pure water to remove the salt. Usually, it takes several washings (sometimes up to six) to remove the salt sufficiently. Depending on what experiments or processes are planned, sometimes it is more convenient to work with either a dispersed or a flocculated clay.

replace Figure 6 with:

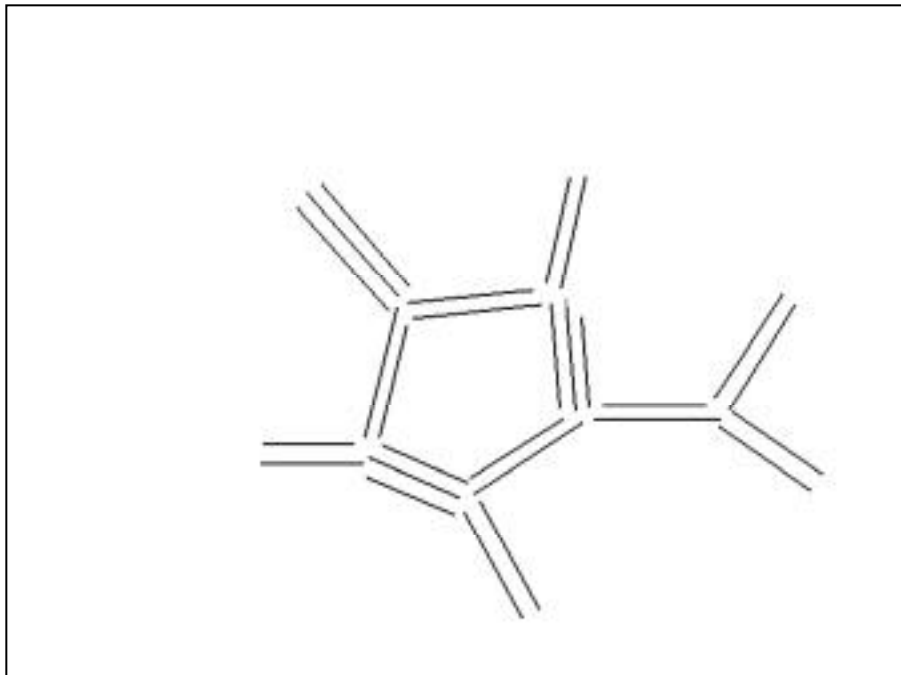


Figure 6. Schematic showing flocs may form by edge-to-edge attraction.

- p. 376, Part I, step 3, line 2: replace "chloride (Cl)" with "salt"
- p. 376, Part I, step 3, line 3: replace "Cl ions" with "salt"
- p. 376, Part I, step 3c. line 3: replace "No" with "Now"
- p. 385, footnote, line 1: replace "Supercol" with "Supergel"
- p. 385, footnote, line 2: replace "Supercol" with "Supergel"
- p. 386, line 15: replace "Cl" with "salt"
- p. 386, line 26: replace "Cl" with "salt"
- p. 386, line 28: replace "Cl" with "salt"