CHAPTER V
CONCLUSIONS

5.1 Batch Experiments

1 The 1:1 Ca^{2+}/HEDP precipitate (spindle particle) molar ratio formed at pH=2.0 while the 2:1 Ca^{2+}/HEDP precipitate (spherical particle) formed at pH=6.0 which are the same as the previous research (Browning,1996).

2 The 1:1 Ca^{2+}/HEDP precipitate transformed to the 2:1 Ca^{2+}/HEDP precipitate in 2:1 saturated Ca^{2+}/HEDP solution (pH=6.0) while the 2:1 Ca^{2+}/HEDP precipitate transformed to the 1:1 Ca^{2+}/HEDP precipitate in 1:1 saturated Ca^{2+}/HEDP solution (pH=2.0).

3 The 1:1 Ca^{2+}/HEDP precipitate transformed faster than the 2:1 Ca^{2+}/HEDP precipitate.

5.2 Differential Reactor Experiments

1 The initial dissolution rate of the 1:1 Ca^{2+}/HEDP precipitate was faster than the rate of the 2:1 Ca^{2+}/HEDP precipitate.

2 The excess calcium in model formation water dissolved both 1:1 and 2:1 Ca^{2+}/HEDP precipitates slower than less calcium in formation water.

5.3 Micromodel Experiments

1 Excess calcium in elution fluids can enhance a longer treatment lifetime of HEDP in both 1:1 and 2:1 Ca^{2+}/HEDP precipitates in porous media.