CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

A methodology for measuring axial dispersion coefficients in pulsed disk and ring extraction column sections was developped which takes conditions at the boundaries of the column into consideration. The absence or presence of solids up to a holdup of 2.5 percent does not significantly influence the axial dispersion coefficient of the column. Based on a total of 81 tracer injection experiments a generalized relation was obtained as follows

$$D1 = 36.37(Af)^{.625}(A1)^{-0.611}(h)^{0.082}$$

which is valid for low velocities of pulsation (0.47<Af<2.91 cm/s) and column diameters ranging from 4.5 to 10.0 cm and spacing between disks and rings ranging from 2.5 to 6.25 cm, and for low holdup of dispersed phase (<2.5 percent holdup).

5.2 Recomendations

The range of pulsating velocities being on the low side it would be interesting to extend the data to higher values of Af. If data on continuously flowing extraction column dispersion coefficients were available it would be interesting to compare the results of this present approach.