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Table-2: Equilibrium constant for the ion exchange reaction using ion exchange resin Tulsion A-33 calculated by Bonner et.al. equation  $R-Cl + I^- (aq) \rightleftharpoons R-I + Cl^- (aq)$  Amount of the ion exchange resin in Cl-form = 0.500 g; Ion exchange capacity = 1.5 meq. / 0.500g; Volume of I<sup>-</sup> ion solution = 100.0 mL; Temperature = 30.0 °C System Initial conc. of

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For the ideal ion exchange model, the equilibrium reaction can be represented by the following equation:  $\bar{M} + H \rightleftharpoons \bar{H} + M$  (2) where the bars mean the ions in the solid phase, and K is the equilibrium constant. It must be pointed out that this model failed to approximate the experimental data within the limits of their errors.

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In contrast to an ordinary cation-exchange resin, the ion exchange behavior of Mg(2+) and Ca(2+) on the amphoteric ion-exchange resin showed a marked dependence on the kinds of salts: the distribution coefficients for the NaCl system were inde-

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