the total possible amount of iodine set free by the arsenic acid in the part taken for titration. The values of x are calculated by the proportionality between this final reading (where $E = x$) and the reading at the time in question. Under K_1 is given the value calculated by Equation (6); throughout the time of the first reading and not the time of mixing is used as zero time in the calculation, thus avoiding the irregular reaction during the time of mixing. This choice of zero time required the use of $(E - x)$ from line one as the initial E; C and D were usually so large that the difference was negligible. In Tables 1, 4, 9, and 10, K_2 is calculated from the integral of Equation (4) assuming only D (or C) constant.

Tables 1–10 were carried out according to the plan outlined above (page 729). The results of these and other experiments are summarized in Table 20. The factor by which K_1 increases for multiplying D by 2 at the concentrations in question, is given under "D factor," and the similar number for C under "C factor." Under "D index" and "C index" is given the value required for b and for a in Equation 2 in order to give the corresponding factor. As will be seen, the numbers increase very rapidly in both cases with increase in concentration. In case of the sulphuric acid (D), where the limits of concentration are wider, the index goes from 1 to 3.7. In Tables 11 and 12 the index has fallen to 1 and from the way in which it falls off this would appear to be the lower limit and to hold for solutions where none of the reacting substances are present in greater concentration than 3 Units per 120 cc. In the case of the iodide (C) the index is approaching 1 in Tables 1 and 2, and probably is 1 in Tables 11 and 12 where, therefore, the general formula (Equation 1) with all indices unity holds. Consequently $K = 3.9 \times 10^{-7}$ calculated from these tables increases in each of the preceding tables with the increase in C and D but parallel also with the increase in $dx/d\theta$.

Dividing the constant 1.2×10^{-7} of Table 2 by the successive D factors 5.4, 3.3, 2.9, 2.6, and calculating the value of K_1 assuming this the value of K_1 where $D = 1.21$ and $C = 1.36$ gives 2.16×10^{-7}. Taking the constant 0.76×10^{-7} of Table 9 and