710 W. Lash Miller and R. H. McPherson

point" therefore mest lie between 3 and 4. To find its position more accurately, 3.5 ce chloroform and 6.5 cc water were mixed in a tall cylinder of 25 ce capacity graduated in 1/10 ce, alcohol was added from a burette, and, after shaking, the volumes of the two phases were read (see Table 2). Then, through the point in Fig. 1 which represents the total com-



position of the system, a straight line was drawn terminated at either end by the binodal eurve, its direction being so chosen that the lengths of the two portions (to right and left of the abscissa 3.5) stood in the proportion of the volumes of the upper and lower liquid layer respectively.

If in place of the volumes of the two layers their weights had been determined—or what is the same thing, if their specific gravities were the same—the line so drawn would be a "tic-line" and its extremities would give the compositions of the two phases in equilibrium. Near the plait-point the compositions and consequently the densities of the two liquids are almost identical; lower down in the figure the graph gives only a first approximation to the compositions,