



Figure 1. (a) pH isolines; (b) CO_3^{2-} concentration isolines in C_T - Alk_T space; (c) CO_3^{2-} , (d) CO_2 and (e) HCO_3^- concentration isolines in pH - Alk_T space. These distributions were calculated with SOLVESAPHE version 1.0.3. For (c), (d) and (e), carbonate alkalinity, Alk_C , was derived by using eq. (2), combined with eqs. (9), (7) and (8) to derive $[CO_3^{2-}]$, $[CO_2]$ and $[HCO_3^-]$, resp. Blank areas represent the pH - Alk_T combinations that lead to negative Alk_C . Fig. 3 in Deffeyes (1965) is similar to (b).