

of 480°C. With increase in temperature (from 350 to 700°C) d_{002} of talc gradually changes from 9.7 to 9.4 Å.

Table 2

Although talc begins to form at $\sim 325^\circ\text{C}$ at all pressures, the course of its crystallization is dependent on both P and T. In the interval between 400 and 500°C there is an increase in the content of small talc crystals in the charge, as indicated by increase in the intensity of all

Fig.3

of its reflections on the diffractometer trace. At temperatures between 500 and 700°C only the crystals lying on their basal pinacoids increase in size, for the diffraction patterns show increase in the intensity of the 001 reflections only. At higher water vapor pressures talc crystallizes more rapidly but the size of the crystals increases more slowly than at lower pressures.

With increase in $P_{\text{H}_2\text{O}}$, in 22-48 hour runs, sepiolite decomposes completely at lower temperatures, and this explains earlier appearance of cristobalite in the charges. The content of cristobalite reaches a maximum at 500°C and $P_{\text{H}_2\text{O}} = 2000 \text{ kg/cm}^2$. Beginning with 600°C cristobalite is transformed into quartz, and judging by weak 3.41 and 2.29 Å reflections,