

**total retention volume (time),  $V_R$ ,  $t_R$** 

*in column chromatography*

The volume of mobile phase entering the column between sample injection and the emergence of the peak maximum of the sample component of interest, or the corresponding time. It includes the hold-up volume (time):

$$t_R = \frac{V_R}{F_c}$$

where  $F_c$  is the mobile phase flow rate at column temperature.

**Source:**

PAC, 1993, 65, 819 (*Nomenclature for chromatography (IUPAC Recommendations 1993)*) on page 841