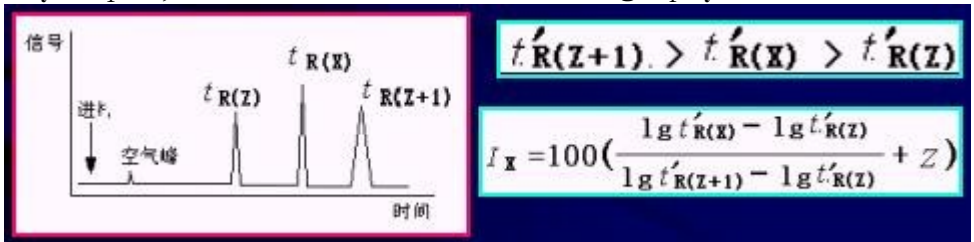


一、 Retention value

1.Retention value

Retention value: compare the retention time of standard substance and the component. Not applicable for the comparison of data obtained in different chromatograph. Adding method: add pure component into sample and observe the relative change of every chromatographic peak. **2. Relative retention value**

Relative retention value  $r_2$ : only decided by column temperature and stationary liquid, can be obtained in chromatography handbook. **二、 Retention**



index

Also named

as Kovats index ( $I$ ), a good parameter for qualitative analysis. Determination methods: Use n-paraffins as standard, its Kovats is the product of ncarbon and 100 (the retention index for pentane is 500). The retention index for the analyte ( $I_X$ ) is given by the  $t_R$  of two adjacent n-paraffins bearing with Z and Z+1 carbons respectively. The adjusted retention time for analyte ( $t_R'$ ) should be between the adjacent n-paraffins. The figure is as follows: **三、 Qualitative**

methods combined with other instruments (structure identification) Chromatograph possesses powerful ability of separation, but weakly qualitative ability. It can't confirm every components, especially new compounds. This limitation has been largely overcome by linking chromatographic columns directly with other instruments, but it also bring new problems such as complicated instrument, high price etc. 1. GC-MS; 2. GC-Infrared spectrometer; 3. HPLC-MS; Outline of

this page: Master qualitative method, be familiar with mensuration of retention index. Thinking subject of this page: what limitations are there in common qualitative analysis of chromatograph? Thinking subject of next page: How to quantify in chromatograph analysis?