

peak resolution, R_s

in chromatography

The separation of two peaks in terms of their average peak width at base ($t_{R2} > t_{R1}$):

$$R_s = \frac{t_{R2} - t_{R1}}{\frac{w_{b1} + w_{b2}}{2}} = \frac{2(t_{R2} - t_{R1})}{w_{b1} + w_{b2}}$$

In the case of two adjacent peaks it may be assumed that $w_{b1} \approx w_{b2}$, and thus, the width of the second peak may be substituted for the average value:

$$R_s \approx \frac{t_{R2} - t_{R1}}{w_{b2}}$$

Source:

PAC, 1993, 65, 819 (*Nomenclature for chromatography (IUPAC Recommendations 1993)*) on page 847

Orange Book, p. 108