

How to determine concentration of an impurity in HPLC with the relative response factor RRF – How to

The concentration can be calculated once you have values for the following two equations:

$$\text{Response Factor (RF)} = \text{Peak Area} / \text{Concentration}$$

$$\text{Relative Response Factor (RRF)} = \text{RF}_{\text{impurity}} / \text{RF}_{\text{API}}$$

You can use RRF and RF_{API} to solve for $\text{RF}_{\text{impurity}}$. Then you can use the measured peak area of the impurity to solve for its concentration.