

enrichment factor (in liquid-liquid distribution), S

The factor by which the ratio of two substances in the feed must be multiplied to give their ratio after treatment.

$Q_A/Q_B = S_{A,B} (Q'_A/Q'_B)$ where Q_A and Q'_A are the final and initial amounts of species A and Q_B and Q'_B are the final and initial amounts of species B. Hence $S_{A,B} = E_A/E_B$ where E is the fraction extracted. In terms of D , n , r (where n is the number of stages and r the phase ratio),

$$S_{A,B} = \frac{1 - (1 + rD_A)^{-n}}{1 - (1 + rD_B)^{-n}}$$

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