were grouped together as K_2 and the equation for $(HTU)_S$ for the solid beads could be written as

$$(HTU)_S = K_2(\mu/\rho D_v)^{0.68} \quad (8)$$

with a value of K_2 ranging from 0.017 to 0.03 for the different systems reported in this investigation.

Further work will be necessary on more systems before a more general correlation can be developed. A more extensive study with systems and packings, varied over a wide range of properties, is in progress in these laboratories, and a more general correlation is close at hand.

NOMENCLATURE

- a = interfacial contact area per unit tower volume, surface area of packing per cu. ft.
- C = concentration in lb. moles/cu. ft.
- ΔC = over-all concentration difference in lb. moles/cu. ft.
- D_v = diffusivity
- g = acceleration due to gravity
- x = fractional volumetric holdup of dispersed phase, cu. ft./cu. ft.
- HTU_{OX} = height of over-all transfer unit based on X-phase in ft.
- HTU_X = height of individual transfer unit of X-phase in ft.
- ka = individual volumetric mass transfer coefficient in lb. moles/(hr.)(cu. ft.)(ΔC)
- m = slope of equilibrium line = dC_e/dC_d or dC_w/dC_s
- N = N'/θ = rate of solute transfer in lb. moles/hr.
- Re = Reynolds' number
- U = superficial velocity in ft./hr., (flow rate of phase referred in cu. ft./(hr.)(sq. ft.)
- v = volume of tower
- ϵ or F = void fraction
- σ or γ = interfacial tension in dynes/cm.
- ρ = density in lb./cu. ft.
- ρ' = specific gravity
- μ = viscosity in lb./ft.(sec.), μ' = viscosity in centipoises
- K_1 = constant in the correlation for ring packings
- K_2 = constant in the correlation for bead packings
- θ = time in hours

Subscripts

- W or C = water, continuous phase
- S or D = solvent, dispersed phase
- K,M,P,T = kerosine, methyl isobutyl ketone, Pegasol, and toluene, respectively
- l.m. = logarithmic mean
- av = average

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CORRECTION

In "Fall of Liquid Drops in Water. Drag Coefficients, Peak Velocities, and Maximum Drop Sizes" [P.M. Krishna, D. Venkateswarlu, and G.S.R. Narasimhamurty, *J. Chem. Eng. Data* **4**, 340 (1959)] Equations 5, 6, 8, and 9 on page 343 should read as follows

$$(Re/We)_P = 0.3592\, Sd^{0.8260} \quad (5)$$

$$U_P = 2.784/Sd^{0.8260} \quad (6)$$

$$(Re/We)_M = 0.6883\, Sd^{0.7567} \quad (8)$$

$$U_M = 1.453/Sd^{0.7587} \quad (9)$$

The constants in the equations may be rounded off as suggested by Markowitz (*3*) to have the correlations workable and meaningful.

Regarding the Weber number, this dimensionless group is stated as $D\rho U^2\sigma$ by Hu and Kintner (*1*) and Johnson and Braida (*2*).. Other workers have defined the Weber number as $D\rho U^2\sigma g_c$. If it is necessary to include g_c to be consistent with the definition of the Sd group, it can be defined as $D\rho U^2/\sigma g_c$.

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