

RINGKASAN

Penelitian mengenai ketergantungan difusivitas metil oranye, metil violet dan mureksida terhadap berat molekul telah dilakukan dengan menerapkan metode Fate & Lynn. Proses difusi dilangsungkan selama 47 jam. Perubahan konsentrasi pada tujuh posisi diikuti secara spektrofotometrik memakai Spectronic-20, yang diatur pada panjang gelombang 465, 595 dan 525 nm untuk metil oranye, metil violet serta mureksida. Konsentrasi awal difusat 30 ppm. Penelitian dilangsungkan pada suhu 29^o C.

Koefisien difusi untuk metil oranye, metil violet dan mureksidaberturut-turut ialah $3,48 \exp(-6)$, $1,47 \exp(-6)$ dan $5,31 \exp(-6) \text{ cm}^2/\text{s}$. Nampak adanya kecenderungan yang jelas atas nilai difusivitas, yaitu cenderung naik apabila berat molekul spesiesnya turun. Sudah barang tentu, ukuran dan bentuk molekul mempengaruhi difusivitas zat.



SUMMARY

Examination of the diffusion coefficient dependence of methyl orange, methyl violet and murexide to its molecular weight was done, by Fate and Lynn method. Diffusion process preserved as long as 47 hours. The change in the concentration at seven position measured by Spectronic-20, setted at wavelength 465 nm for methyl orange, 595 nm for methyl violet and 525 nm for murexide. The initial concentration of diffusate is 30 ppm. The experiment carried out at 29° C.

The methyl orange, methyl violet and murexide diffusion coefficient is $3,48 \exp(-6) \text{ cm}^2/\text{s}$, $1,47 \exp(-6) \text{ cm}^2/\text{s}$ and $5,31 \exp(-6) \text{ cm}^2/\text{s}$, respectively. There are clear preference of diffusion coefficient, that is increasing in the value as the molecular weight decrease. The molecular size and form of the diffusing species, of course, determine the diffusion coefficient.

