

Table 3

Osmotic coefficients and volumes of bound and free water in the cytoplasm of E. coli grown at low and moderate osmolarity

	Osmolarity of the growth medium	
	0.10	0.28
Volume of bound water (\bar{V}_b) ^a ($\mu\text{l}/\text{mg}$ dry wt)	0.40 ± 0.02	0.38 ± 0.08
$\phi_{(2)} (\Sigma n_j)_{\text{cyto}} = \phi_{(2)} (n_K + n_{\text{Glu}})$ ^a ($\mu\text{mol}/\text{mg}$ dry wt)	0.29 ± 0.01	0.52 ± 0.07
$\phi_{(2)}$ ^b	0.54 ± 0.06	0.71 ± 0.11
$\bar{V}_f = \bar{V}_{\text{cyto}} - \bar{V}_b$ ^c ($\mu\text{l}/\text{mg}$ dry wt)	1.87 ± 0.11	1.66 ± 0.12

^a Obtained from the weighted least-squares lines of Fig. 4(b).

^b Determined from the slopes of Fig. 4(b) divided by the values of $(n_K + n_{\text{Glu}})$ from Table 2.

^c Values of \bar{V}_{cyto} were obtained from the weighted least-squares line of Fig. 2. The weighted average $\bar{V}_b = 0.04 (\pm 0.04) \mu\text{l}/\text{mg}$ dry wt was used.