

Table 2. Comparison of diffusion-controlled and carrier-mediated solute fluxes across bacterial plasma membranes

Transported Solute	Typical transfer rate		
	Diffusion-controlled at a concentration difference of $10 \mu\text{mol l}^{-1}$		Carrier-mediated (V_{max})
K^+	0.00002	0.02	100
glutamate	< 0.00005	< 0.05	25
glucose	0.001	1	50
isoleucine	0.0015	1.5	3
phenylalanine	0.008	8	1
urea	0.04	40	5

The transfer rates (in $\mu\text{mol min}^{-1} \text{g}^{-1}$ dry mass) for diffusion-controlled processes are calculated on the basis of the known passive permeability of bacterial plasma membranes, whereas the rates of carrier-mediated processes represent examples of typical transport systems specific to the respective solutes at full saturation (V_{max})