

TABLE 1 Lateral diffusion coefficients of isoprenic quinones in supported lipid layers

Isoprenic quinones	N (carbon bonds in the chain)	\bar{a}^* (nm)	Lateral diffusion coefficient	
			Calculated [#] ($\times 10^8 \text{ cm}^2 \text{ s}^{-1}$)	Measured [§] ($\times 10^8 \text{ cm}^2 \text{ s}^{-1}$)
UQ ₂ and PQ ₂	8	0.64	4.56	4.6 and 5.2 ± 1
UQ ₃	12	0.78	3.72	4.4 ± 0.9
UQ ₄	16	0.90	3.23	3.6 ± 0.8
UQ ₅	20	1.00	2.89	3.0 ± 0.6
UQ ₆	24	1.10	2.63	2.6 ± 0.5
UQ ₈	32	1.27	2.28	2.3 ± 0.5
PQ ₉	36	1.35	2.15	2.3 ± 0.5
UQ ₁₀	40	1.42	2.04	2.0 ± 0.4

Comparison at 30°C between experimental results and a calculation using a continuum fluid hydrodynamic model.

*Mean radius of the model cylinder calculated from Eq. 5.

[#]Calculated from Eq. 6 with $\eta = 0.9$ poise.

[§]Chronocoulometric measurements on microporous electrodes.