

TABLE I

ADC Values ($10^{-5} \text{ cm}^2 \text{ s}^{-1}$, 25°C) for Water, Lactate, IMAC, and Ergothioneine in Model Solutions, Suspensions of Erythrocytes from Rat or Chicken, and Suspensions of Rat Liver Mitochondria

System/metabolite	Model solution ^a ADC	Rat erythrocytes ^b		Chicken erythrocytes ^c		Rat liver mitochondria ^d	
		ADC _e	ADC _i	ADC _e	ADC _i	ADC _e	ADC _i
Water ($R_G = 0.755 \text{ \AA}$)	1.997 ± 0.08 ($n = 21$)	1.713 ± 0.20 ($n = 6$)	0.894 ± 0.12 ($n = 15$)	1.810 ± 0.09 ($n = 5$)	0.900 ± 0.15 ($n = 5$)	1.310 ± 0.24 ($n = 9$)	0.58 ± 0.19 ($n = 9$)
Lactate ($R_G = 2.33 \text{ \AA}$)	0.660 ± 0.12 ($n = 13$)	n.d.	0.21 ± 0.01 ($n = 13$)	n.d.	n.d.	n.d.	n.d.
IMAC ($R_G = 3.44 \text{ \AA}$)	0.670 ± 0.08 ($n = 15$)	0.717 ± 0.04 ($n = 8$)	0.212 ± 0.04 ($n = 13$)	0.777 ± 0.03 ($n = 4$)	0.219 ± 0.03 ($n = 8$)	n.d.	n.d.
Ergothioneine ($R_G = 4.52 \text{ \AA}$)	0.460 ± 0.02 ($n = 4$)	n.d.	0.178 ± 0.06 ($n = 6$)	n.d.	0.167 ± 0.02 ($n = 13$)	n.d.	n.d.

Note. Results are given as means \pm SE of n measurements in different preparations. ADC_e, extracellular or extramitochondrial ADC; ADC_i, intracellular or intramitochondrial ADC; R_G , radius of gyration.

^a 0.2 M IMAC, 0.2 M lactate, 0.2 M ergothioneine, 10 mM TSP.

^b Rat erythrocyte suspensions (45% hematocrit).

^c Chicken erythrocyte suspensions (45% hematocrit).

^d Rat liver mitochondria suspension (100 mg protein/ml).