

Supporting Information Section:

The Hydrogen-Bonded Dianion of Vitamin K₁ Produced in Aqueous-Organic Solutions Exists in Equilibrium with its Hydrogen-Bonded Semiquinone Anion Radical

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Table S1: Integrated Signal Intensities of First Derivative EPR Spectra (Low-Water Condition – 0.05 M H₂O).

<i>n</i>	Run No.	EPR Signal Intensity for Times After Completion of Electrolysis / Arbitrary Units			
		<i>t</i> = 15 minutes	<i>t</i> = 25 minutes	<i>t</i> = 35 minutes	<i>t</i> = 45 minutes
0.2	1	31.82	30.20	29.14	28.24
0.2	2	32.61	30.99	29.83	28.95
0.4	1	70.59	66.76	63.84	61.73
0.4	2	71.00	66.86	64.18	62.06
0.6	1	99.63	94.31	88.96	87.68
0.6	2	102.01	96.93	93.66	91.29
0.8	1	142.90	139.72	136.30	133.61
0.8	2	142.92	135.54	131.32	128.45
1.0	1	177.52	174.06	170.55	169.47
1.0	2	166.87	164.95	163.26	161.48

Table S2: Integrated Signal Intensities of First Derivative EPR Spectra (High-Water Condition – 7.22 M H₂O).

<i>n</i>	Run No.	EPR Signal Intensity for Times After Completion of Electrolysis / Arbitrary Units			
		<i>t</i> = 15 minutes	<i>t</i> = 25 minutes	<i>t</i> = 35 minutes	<i>t</i> = 45 minutes
0.2	1	5.45	5.44	5.43	5.41
0.2	2	4.23	4.18	4.11	4.06
0.4	1	15.34	15.05	14.84	14.74
0.4	2	19.48	19.36	19.32	19.23
0.6	1	38.44	37.60	37.42	37.34
0.6	2	30.49	30.40	30.30	30.26
0.8	1	43.65	43.60	43.60	43.58
0.8	2	48.37	46.72	46.50	46.20
1.0	1	55.96	55.85	55.77	55.47
1.0	2	58.05	57.97	57.92	57.91