No.	Compound name	Reaction equation	pH	Rate constant ($L\,mol^{-1}\,s^{-1}$)	Comments	Reference
1.1	Hydrated electron	$e_{aq}^- + e_{aq}^- \longrightarrow H_2 + OH^-$		5.5×10^9	Selected value	
			11-13	5.0×10^9	p.r.; D.k.; *tert*-BuOH or H_2 as .OH scavenger; temperature dependence (5-300 °C) was studied.	86A009
			12.8	5×10^9	f.p.; Phot. of OH^-; d.k. at 700 nm; $[H_2] = 7 \times 10^{-4}$ mol L^{-1}, $[NaOH] = 7 \times 10^{-2}$ mol L^{-1}.	86A329
			12	7×10^9	p.r.; D.k. at 600 nm; value of from graph; ϵ(600 nm) = 11,500 L mol^{-1} cm^{-1}; ($[H_2] = 8 \times 10^{-2}$ mol L^{-1}; activation energy determined at 15-60°C.	85A373
			11.6-13	5.0×10^9	p.r.; D.k. at 600 nm in soln. under 30 atm. H_2 ($[H_2] = 2.7 \times 10^{-2}$ and 2.1×10^{-2} mol L^{-1} at 5 and 65°C, resp.) taking ϵ = 12,400 L mol^{-1} cm^{-1}.	76A250
			10.5	6.2×10^9	p.r.; D.k. at 575 nm in solution under 100 atm. H_2 taking ϵ = 10,500 L mol^{-1} cm^{-1}.	751036
			12.7	5.0×10^9	p.r.; Apparent change in k with pH has been obs.; k cor. for I.	700749
			alk.	5.8×10^9	f.p.; D.k.; H_2-satd.; ϵ = 10,900 L mol^{-1} cm^{-1} at 578 nm.	697106
			11	6×10^9	D.k. at 700 nm; soln. H_2-satd.; ϵ = 18,500 L mol^{-1} cm^{-1}.	687143
			13.3	5.5×10^9	p.r.; D.k. at 578 nm; soln. in equil. with 100 atm. H_2; $\epsilon = 10,600$ L mol^{-1} cm^{-1}.	650009
			10.9	5.0×10^9	p.r.; D.k. at 578 nm assuming $\epsilon = 10.4 \times 10^3$ L mol^{-1} cm^{-1}; contg. EtOH, MeOH or ferrocyanide.	630073
1.2		$H^\bullet + e_{aq}^- \longrightarrow H_2 + OH^-$	10.5	2.5×10^{10}	p.r.; Calcd. from d.k. at 578 nm; soln. is in equil. with 100 atm. H_2.	650009
1.3		$.OH + e_{aq}^- \longrightarrow OH^-$	10.5	3.0×10^{10}	p.r.; Calcd. from d.k. at 578 nm; soln. contains NaOH.	850009
1.4		$O^{\bullet-} + e_{aq}^- \longrightarrow OH^-$	13	2.2×10^{10}	p.r.; D.k. at 578 nm; soln. in equil. with 50 atm. H_2 contains NaOH; assuming that $2(O^{\bullet-} + O^-) = 2(e_{aq}^- + e_{aq}^-)$ and $\epsilon(aq^-) = 10,600$ L mol^{-1} cm^{-1}.	650009
1.5		$O_2^{\bullet-} + e_{aq}^- \longrightarrow O_2^{2-}$	11.1	1.3×10^{10}	p.r.; Calcd. from d.k. at 650 nm.	710171