

## Tentative Set of Key Values for Thermodynamics. Part VIII

SUBSTANCE	STATE	$\Delta_f H^\circ(298 \text{ K})$ kcal/mol	NOTE	$S^\circ(298 \text{ K})$ cal/(mol.K)	$H^\circ(298 \text{ K}) - H^\circ(0)$ kcal/mol	NOTE
$\text{ClO}_4^-$	aq	-30.62 $\pm$ 0.10	a	44.0 $\pm$ 0.3	-----	a
$\text{S}^{2-}$	aq	8.77 $\pm$ 0.60	b	-4. $\pm$ 6.	-----	b
$\text{HS}^-$	aq	-4.02 $\pm$ 0.22	b	15.7 $\pm$ 1.0	-----	b
$\text{H}_2\text{S}$	g	-4.92 $\pm$ 0.12	b	49.137 $\pm$ 0.024	2.380 $\pm$ 0.004	b
$\text{H}_2\text{S}$	aq	-9.34 $\pm$ 0.31	b	29.8 $\pm$ 0.8	-----	b
$\text{NO}_3^-$	aq	-49.44 $\pm$ 0.10	c	35.04 $\pm$ 0.10	-----	d
$\text{HPO}_4^{2-}$	aq	-310.4 $\pm$ 0.4	a	-8.0 $\pm$ 0.4	-----	e
$\text{H}_2\text{PO}_4^-$	aq	-311.3 $\pm$ 0.4	e	22.1 $\pm$ 0.4	-----	e
$\text{CO}_2$	aq	-98.77 $\pm$ 0.05	f	28.53 $\pm$ 0.14	-----	f
$\text{CO}_3^{2-}$	aq	-161.38 $\pm$ 0.06	f	-12.0 $\pm$ 0.3	-----	f
$\text{HCO}_3^-$	aq	-164.90 $\pm$ 0.05	f	23.52 $\pm$ 0.14	-----	f
$\text{B(OH)}_3$	s	-261.66 $\pm$ 0.20	g	21.50 $\pm$ 0.11	3.549 $\pm$ 0.008	g
$\text{B(OH)}_3$	aq	-256.40 $\pm$ 0.20	g	38.84 $\pm$ 0.12	-----	g
$\text{B(OH)}_4^-$	aq	-321.53 $\pm$ 0.20	g	24.19 $\pm$ 0.12	-----	g
$\text{Al}^{3+}$	aq	-128.68 $\pm$ 0.36	h	-78. $\pm$ 2.	-----	h
Li	g	38.07 $\pm$ 0.24	i	33.142 $\pm$ 0.006	1.481 $\pm$ 0.011	i
Na	g	25.69 $\pm$ 0.17	j	36.712 $\pm$ 0.006	1.481 $\pm$ 0.011	j
K	g	21.27 $\pm$ 0.10	k	38.295 $\pm$ 0.006	1.481 $\pm$ 0.011	k
Rb	g	19.33 $\pm$ 0.10	l	40.626 $\pm$ 0.006	1.481 $\pm$ 0.011	l
Cs	g	18.28 $\pm$ 0.24	m	41.942 $\pm$ 0.006	1.481 $\pm$ 0.011	m