



TAULES DE MAGNITUDS TERMOQUÍMIQUES

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COMPOSTOS ORGÀNICS				
Substància	Fórmula	ΔH_f° (kJ/mol)	ΔG_f° (kJ/mol)	S° (J/molK)
Metà (g)	$\text{CH}_4(\text{g})$	-74.8	-50.7	+186.3
Acetilè o etí (g)	$\text{C}_2\text{H}_2(\text{g})$	+226.7	+209.2	+200.9
Etilè (g)	C_2H_4	+52.3	+68.2	+219.6
Età (g)	$\text{C}_2\text{H}_6(\text{g})$	-84.7	-32.8	+229.6
Propà (g)	$\text{C}_3\text{H}_8(\text{g})$	-103.8	-23.3	+270.3
Butà (g)	$\text{C}_4\text{H}_{10}(\text{g})$	-125.6	-17.1	+310.2
Benzè (g)	$\text{C}_6\text{H}_6(\text{g})$	+82.6	+129.8	+269.3
Benzè (l)	$\text{C}_6\text{H}_6(\text{l})$	+49.0	+124.5	+173.4
Ciclohexà (g)	$\text{C}_6\text{H}_{12}(\text{g})$	-123.4	+32.0	+298.4
Ciclohexà (l)	$\text{C}_6\text{H}_{12}(\text{l})$	-156.4	+26.9	+204.4
Naftalè (g)	$\text{C}_{10}\text{H}_8(\text{g})$	+150.6	+224.2	+333.2
Naftalè (l)	$\text{C}_{10}\text{H}_8(\text{l})$	+77.9	+201.7	+167.5
Formaldehid (g)	$\text{HCHO}(\text{g})$	-108.6	-102.5	+218.8
Acetaldehid (g)	$\text{CH}_3\text{CHO}(\text{g})$	-166.2	-128.9	+250.3
Acetaldehid (l)	$\text{CH}_3\text{CHO}(\text{l})$	-192.3	-128.1	+160.2
Metanol (g)	$\text{CH}_3\text{OH}(\text{g})$	-200.7	-162.0	+239.8
Metanol (l)	$\text{CH}_3\text{OH}(\text{l})$	-238.7	-166.3	+126.8
Etanol (g)	$\text{CH}_3\text{CH}_2\text{OH}(\text{g})$	-235.1	-168.5	+282.7
Etanol (l)	$\text{CH}_3\text{CH}_2\text{OH}(\text{l})$	-277.7	-174.8	+160.7
Fenol (s)	$\text{C}_6\text{H}_5\text{OH}(\text{s})$	-165.1	-50.4	+144.0
Acetona (g)	$(\text{CH}_3)_2\text{CO}(\text{g})$	-216.6	-153.0	+295.0
Acetona (l)	$(\text{CH}_3)_2\text{CO}(\text{l})$	-247.6	-155.6	+200.5
Àcid acètic (g)	$\text{CH}_3 - \text{COOH}(\text{g})$	-432.3	-374.0	+282.5
Àcid acètic (l)	$\text{CH}_3 - \text{COOH}(\text{l})$	-484.5	-389.9	+159.8
Àcid acètic (aq)	$\text{CH}_3 - \text{COOH}(\text{aq})$	-485.8	-396.5	+178.7
Àcid benzoic (s)	$\text{C}_6\text{H}_5 - \text{COOH}(\text{s})$	-385.2	-245.3	+167.6
Metilamina (g)	CH_3NH_2	-23.0	+32.2	+243.4
Anilina (g)	$\text{C}_6\text{H}_5\text{NH}_2(\text{g})$	+86.7	+166.8	+319.3
Anilina (l)	$\text{C}_6\text{H}_5\text{NH}_2(\text{l})$	+31.6	+149.2	+191.3

COMPOSTOS INORGÀNICS				
Element	Fórmula	ΔH_f° (kJ/mol)	ΔG_f° (kJ/mol)	S° (J/molK)
Sofre	S ₈ (g)	+102.3	+49.6	+431.0
	SO ₂ (g)	-296.8	-300.2	+248.2
	SO ₃ (g)	-395.7	-371.1	+256.8
Brom	Br ₂ (g)	+30.9	+3.1	+245.5
	Br ₂ (l)	0.0	0.0	+152.2
Calci	CaCO ₃ (s)	-1207.0	-1129.0	+92.9
	CaO(s)	-635.1	-604.0	-39.8
	Ca(OH) ₂ (s)	-986.1	-898.5	+83.4
Carboni	C (diamant)	+1.9	+2.9	+2.38
	C (grafit)	0.0	0.0	+5.74
	CCl ₄ (g)	-102.9	-60.6	+309.9
	CO(g)	-110.5	-137.2	+197.7
	CO ₂ (g)	-393.5	-394.4	+213.7
Clor	Cl ₂ (g)	0.0	0.0	+223.1
Fòsfor	P(vermell)	-17.6	-12.1	+22.8
Hidrogen	H ₂ (g)	0.0	0.0	+130.7
	HCl(g)	-92.3	-95.3	+186.9
	H ₂ S(g)	-20.6	-33.6	+205.8
	HF(g)	-271.1	-273.2	+173.8
	HBr(g)	-36.4	-53.5	+198.7
	HI(g)	+26.5	+1.7	+206.6
	HNO ₃ (l)	-174.1	-80.7	+155.6
	H ₂ O(g)	-241.8	-228.6	+188.8
	H ₂ O(l)	-285.8	-237.1	+69.9
	H ₂ O ₂ (g)	-136.3	-105.6	+232.7
	H ₂ O ₂ (l)	-187.8	-120.4	+109.6
	H ₂ SO ₄ (l)	-814.0	-690.0	+156.9
Liti	Li(g)	+159.4	+126.7	+138.8
Mercuri	Hg(l)	0.0	0.0	+76.0
Nitrogen	NH ₃ (g)	-46.1	-16.45	+192.5
	NO ₂ (g)	+33.2	+51.3	+240.1
	N ₂ O ₄ (g)	+9.2	+97.9	+304.3
Oxigen	O ₂ (g)	0.0	0.0	+205.1
	O ₃ (g)	+142.7	163.2	+238.9
Potassi	K(s)	+89.2	+60.6	+160.3
	KCl(s)	-436.7	-409.1	+82.6
Sodi	Na(g)	+107.3	+76.8	+153.7
	Na ₂ CO ₃ (s)	-1131.0	-1044.0	+135.0
	NaCl(s)	-411.2	-384.1	+72.13
	NaOH(s)	-425.6	-379.5	+64.5
Iode	I ₂ (s)	0.0	0.0	+260.7

MAGNITUDS D'ENLLAÇ			
Enllaç	Longitud (pm)	$\Delta H_{\text{enl}}^{\circ}$ (kJ/mol)	$\Delta H_{\text{dis}}^{\circ}$ (kJ/mol)
H-H	74	-436	+436
H-C	107	-414	+414
H-N	100	-389	+389
H-O	96	-464	+464
H-S	134	-368	+368
H-F	92	-565	+565
H-Cl	127	-431	+431
H-Br	141	-364	+364
H-I	160	-297	+297
C-C	154	-347	+347
C=C	133	-611	+611
C \equiv C	120	-837	+837
C-N	143	-305	+305
C=N	138	-615	+615
C \equiv N	116	-891	+891
C-O	143	-360	+360
C=O	121	-736	+736
C-S	182	-259	+259
C-Cl	178	-335	+335
N-N	147	-163	+163
N=N	124	-418	+418
N \equiv N	110	-946	+946
N-O	136	-222	+222
N=O	122	-590	+590
O-O	148	-142	+142
O=O	121	-498	+498
F-F	140	-159	+159
Cl-Cl	199	-243	+243
Br-Br	228	-193	+193
I-I	267	-149	+149