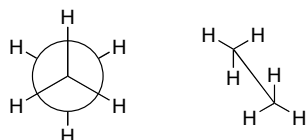


Basic Conformational Analysis:

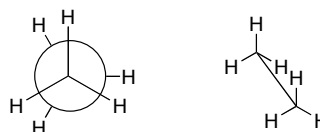
Ethane:

Staggered



Relative Energy: 0 Kcal/mol

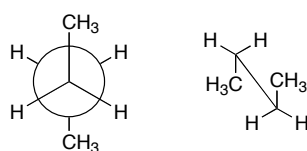
Eclipsed



~3 Kcal/mol

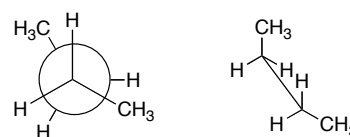
Butane:

Anti



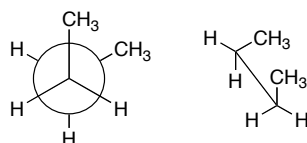
Relative Energy: 0 Kcal/mol

Eclipsed (1)



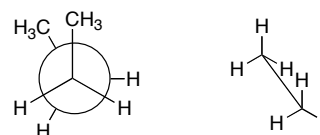
3.8 Kcal/mol

Gauche



Relative Energy: 0.87 Kcal/mol

Eclipsed (2)



4.5 Kcal/mol

Ring Strain:



Relative Energy: 27.3 Kcal/mol 26.5 Kcal/mol 6.2 Kcal/mol 0 Kcal/mol 6.2 Kcal/mol 9.7 Kcal/mol

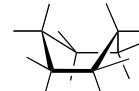
Cyclohexane Conformers:



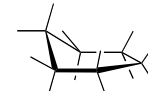
Chair
0 Kcal/mol



Twist Boat
5.3 Kcal/mol



Boat
6.8 Kcal/mol



Half-Chair
12.1 Kcal/mol

Common A-values (In Kcal/mol):

-CH ₃	1.74	F	0.3	OH	1.0
-CH ₂ CH ₃	1.79	Cl	0.55	OCH ₃	0.7
-CH(CH ₃) ₂	2.21	Br	0.6	NH ₂	1.3
-C(CH ₃) ₃	~5	I	0.6		