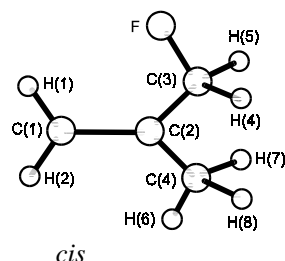


r_0^a	Å	Å
	<i>gauche</i>	<i>cis</i>
C(1)=C(2)	1.339 ^b	1.337 ^b
C(2)–C(3)	1.504(6)	1.505(6)
C(3)–F	1.383(7)	1.382(7)
C(1)–H(1)	1.084 ^b	1.081 ^b
C(1)–H(2)	1.084 ^b	1.084 ^b
C(2)–C(4)	1.506 ^b	1.508 ^b
C(3)–H(4)	1.092 ^b	1.093 ^b
C(3)–H(5)	1.089 ^b	1.093 ^b
C(4)–H(6)	1.091 ^b	1.091 ^b
C(4)–H(7)	1.095 ^b	1.096 ^b
C(4)–H(8)	1.092 ^b	1.096 ^b
θ_0^a	deg	deg
	<i>gauche</i>	<i>cis</i>
C(1)=C(2)–C(3)	120.8 ^b	122.1 ^b
C(1)–C(2)–C(4)	123.6 ^b	123.7 ^b
C(2)–C(3)–F	110.6(5)	112.0(5)
C(2)–C(1)–H(1)	121.9 ^b	121.7 ^b
C(2)–C(1)–H(2)	121.8 ^b	121.2 ^b
H(1)–C(1)–H(2)	116.4 ^b	117.1 ^b
C(2)–C(4)–H(6)	111.3 ^b	111.1 ^b
C(2)–C(4)–H(7)	110.8 ^b	111.2 ^b
C(2)–C(4)–H(8)	110.5 ^b	111.2 ^b
C(2)–C(3)–H(4)	110.8 ^b	110.5 ^b
C(2)–C(3)–H(5)	111.7 ^b	110.5 ^b
H(4)–C(3)–H(5)	109.1 ^b	108.0 ^b
H(4)–C(3)–F	106.9 ^b	107.8 ^b
H(5)–C(3)–F	108.1 ^b	107.8 ^b
dihedral angle	125.0(10)	0.0



The enthalpy difference between *gauche* and *cis* is 104(30) cm^{−1} (297 cal mol^{−1}).

^a) Carbon C(1) is the vinylic carbon with two hydrogens attached, and the H(1) atom is *trans* to the methyl group on the other side of the double bond. See figure.

^b) Assumed.

Durig, J.R., Qiu, H.Z., Durig, D.T., Zhen, M., Little, T.S.: J. Phys. Chem. **95** (1991) 2745.