

Species Tag:	74002	Name:	C2H5OOCH
Version:	1		Ethyl formate,
Date:	Jan. 1996		trans and gauche
Contributor:	J. C. Pearson		

Lines Listed:	60671	Q(300.0)=	120097.057
Freq. (GHz) <	2000	Q(225.0)=	79160.238
Max. J:	70	Q(150.0)=	41231.375
LOGSTR0=	-8.0	Q(75.00)=	12254.662
LOGSTR1=	-8.0	Q(37.50)=	3632.345
Isotope Corr.:	0.0	Q(18.75)=	1197.204
Egy. (cm ⁻¹) >	0.0	Q(9.375)=	421.579
μ_a =	1.85	A=	17746.7
μ_b =	0.69	B=	2904.7
μ_c =	0.0	C=	2579.1

Ethyl formate is found in two conformers, trans and gauche. The trans form is denoted by state 0 while the gauche form is state 1. The dipoles and rotational constants given are for the lower energy trans form which is about 60 ± 20 cm⁻¹ below the gauche form. There is no evidence that the two forms interact in the ground state. Lines and dipoles were taken from: J. M. Riveros and E. B. Wilson, 1967, J. Chem. Phys. **46**, 4605. R. Meyer and E. B. Wilson, 1970, J. Chem. Phys. **53**, 3969. J. Demaison, D. Boucher, J. Burie, and A. Dubrulle, 1984, Z. Naturforsch. **39a**, 560.

The gauche form has the following dipole moments $\mu_a = 1.44$ D, $\mu_b = 1.05$ D, $\mu_c = 0.25$ D.