

Species Tag:	55001	Name:	C2H5CN
Version:	4		Ethyl Cyanide or
Date:	Jan. 1997		Propionitrile
Contributor:	J. C. Pearson		
Lines Listed:	52883	Q(300.0)=	37389.7769
Freq. (GHz) <	3373	Q(225.0)=	24284.7664
Max. J:	99	Q(150.0)=	13209.5756
LOGSTR0=	-9.0	Q(75.00)=	4667.9360
LOGSTR1=	-9.0	Q(37.50)=	1651.0571
Isotope Corr.:	0	Q(18.75)=	584.6478
Egy. (cm^{-1}) >	0.0	Q(9.375)=	207.4255
μ_a =	3.85	A=	27663.7
μ_b =	1.23	B=	4714.2
μ_c =		C=	4235.1

The experimental measurements were analyzed using the methods described in W. H. Kirchhoff, 1972, *J. Mol. Spect.* **41**, 333, and W. H. Kirchhoff and D. R. Johnson, 1973, *J. Mol. Spect.* **45**, 159. The measurements were taken from: J. Burie, J. Demaison, A. Dubrulle, and D. Boucher, 1978, *J. Mol. Spect.* **72**, 275; D. R. Johnson, F. J. Lovas, C. A. Gottlieb, E. W. Gottlieb, M. M. Litvak, M. Guelin, and P. Thaddeus, 1977, *Astrophys. J.* **218**, 370; F. J. Lovas, 1982, *J. Phys. Chem. Ref. Data* **11**, 251; H. Mäder, H. M. Heise, and H. Dreizler, 1973, *Z. Naturforsch.* **29a**, 164; J. C. Pearson, K. V. L. N. Sastry, E. Herbst and F. C. De Lucia, 1994, *Astrophys. J. Suppl.* **93**, 589; Y. Fukuyama, H. Odashima, K. Takagi, S. Tsunekawa, 1996, *Astrophys. J. Suppl.* **104** 329.

The dipole moment was taken from H. M. Heise, H. Lutz, and H. Dreizler, 1974, *Z. Naturforsch.* **29a**, 1345.

The methyl torsion and the ^{14}N hyperfine have been resolved in ethyl cyanide, but were not included in the calculation since the effects are small and usually not observable in the millimeter and submillimeter. For analysis see Heise *et al.* and D. Boucher, A. Dubrulle, J. Demaison, and H. Dreizler, 1980, *Z. Naturforsch.* **35a**, 1136.