THE MICROWAVE SPECTRUM AND STRUCTURE OF VINYLSELENOL

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The microwave spectrum vinylselenol, $H_2C{=}CHSeH$, has been investigated using a Fourier transform microwave spectrometer in the 6 - 18 GHz region. The ground state of the parent species have been assigned for the two most stable conformers: the syn and the gauche forms. The ground state of several Se and ^{13}C isotopomers were also observed in natural abundance, and deuterated species in enriched samples. For the most abundant species the millimeter wave spectra were also analyzed, leading to a centrifugal distortion analysis. Some structural parameters were determined (including C-Se bond length) and compared to ab initio calculations.