

## A ROTATIONAL STUDY OF 6-APA <sup>a</sup>

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6-Aminopenicillanic acid (6-APA) is one of the essential intermediates in synthesizing semisynthetic and naturally occurring penicillins. We have transferred 6-APA into the gas phase using laser ablation techniques and characterized its conformational panorama using chirped-pulse Fourier transform microwave (LA-CP-FTMW) spectroscopy. The spectroscopic parameters derived from the spectrum analysis conclusively identify the existence of four conformers of 6-APA. The <sup>14</sup>N nuclear quadrupole coupling constants have been analyzed, allowing an accurate structural determination. The observed structures correlate nicely with the biological function of 6-APA.

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