THE PURE ROTATIONAL SPECTRUM OF PIVALOYL CHLORIDE, $(CH_3)_3CCOCl$, BETWEEN 800 MHz AND 18800 MHz

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A search accelerated correct intensity Fourier transform microwave (SACI-FTMW) spectrometer has been used to rapidly record the rotational spectrum of pivaloyl chloride between 8 and 18 GHz. A low frequency, cavity-based instrument has then been used to obtain high resolution measurements below 4 GHz. Rotational constants, centrifugal distortion constants and chlorine nuclear quadrupole coupling constants have been determined for both the ^{35}Cl and ^{37}Cl isotopologues. The spectrum provides no evidence concerning internal rotation in the molecule.