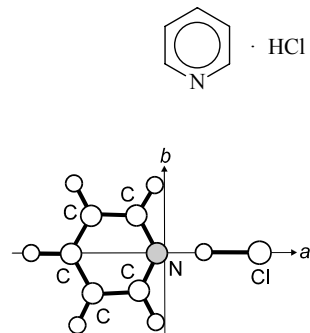


634  
MW $C_5H_5ClN$ **Pyridine – hydrogen chloride (1/1)**  
(weakly bound complex) $C_{2v}$   
(effective symmetry class)  
(large-amplitude motion)

Isotopic species	$r_0(R_{cm})$ [ $\text{\AA}$ ] <sup>a)</sup>	$r_0(N...Cl)$ [ $\text{\AA}$ ] <sup>a)</sup>
$C_5H_5^{14}N \cdot H^{35}Cl$	4.3556(30)	2.9993(30)
$C_5H_5^{14}N \cdot H^{37}Cl$	4.3576(30)	2.9994(30)
$C_5H_5^{14}N \cdot D^{35}Cl$	4.3341(30)	2.9963(30)

A detailed interpretation of the spectroscopic constants led to the conclusion that the observed complex has a planar  $C_{2v}$  geometry, with the HCl subunit forming a hydrogen bond to N and lying along the  $C_2$  axis of pyridine. The intermolecular stretching force constant is  $16.8 \text{ N m}^{-1}$ .



<sup>a)</sup> Uncertainties were not estimated in the original paper.

Cooke, S.A., Corlett, G.K., Lister, D.G., Legon, A.C.: J. Chem. Soc., Faraday Trans. **94** (1998) 837.