

**substance: Nb<sub>2</sub>O<sub>5</sub>**

**property: wavenumbers of lattice modes**

(RT data)

H-Nb<sub>2</sub>O<sub>5</sub>

<i>v/c</i>	995 cm <sup>-1</sup> (s)	( <i>v/c</i> ) <sub>1</sub> (LO) mode region	Nb–O stretch in edge-shared octahedron	76M
	883 cm <sup>-1</sup> (m)	( <i>v/c</i> ) <sub>1</sub> (LO) mode region	Nb–O stretch in corner-shared octahedron	
	850 cm <sup>-1</sup> (w)	( <i>v/c</i> ) <sub>1</sub> (A1) mode	NbO <sub>4</sub> tetrahedra	
	670 cm <sup>-1</sup> (doublet, m)	( <i>v/c</i> ) <sub>2</sub> (TO) region (s: strong, m: medium, w: weak)		
	625 cm <sup>-1</sup> (doublet, s)	( <i>v/c</i> ) <sub>2</sub> (TO) region		
	550 cm <sup>-1</sup> (w)	( <i>v/c</i> ) <sub>5</sub> (T <sub>2g</sub> ) region		
	470 cm <sup>-1</sup> (w)			
	350 cm <sup>-1</sup> (w)			
	260 cm <sup>-1</sup> (s)	( <i>v/c</i> ) <sub>6</sub> (T <sub>2u</sub> ) region		
	232 cm <sup>-1</sup> (s)			
	204 cm <sup>-1</sup> (m)			

N-Nb<sub>2</sub>O<sub>5</sub>

<i>v/c</i>	995 cm <sup>-1</sup> (s)	( <i>v/c</i> ) <sub>1</sub> (LO) mode		76M
	885 cm <sup>-1</sup> (m)			
	670 cm <sup>-1</sup> (m)	( <i>v/c</i> ) <sub>2</sub> (TO) mode		
	618 cm <sup>-1</sup> (s)			
	550 cm <sup>-1</sup> (w)	( <i>v/c</i> ) <sub>5</sub> (T <sub>2g</sub> ) region		
	485 cm <sup>-1</sup> (w)			
	350 cm <sup>-1</sup> (w)			
	260 cm <sup>-1</sup> (s)	( <i>v/c</i> ) <sub>6</sub> (T <sub>2u</sub> ) region		
	200 cm <sup>-1</sup> (m)			

B-Nb<sub>2</sub>O<sub>5</sub>

<i>v/c</i>	935 cm <sup>-1</sup> (w)	( <i>v/c</i> ) <sub>1</sub> (LO) mode		76M
	760 cm <sup>-1</sup> (s)			
	625 cm <sup>-1</sup> (m)	( <i>v/c</i> ) <sub>2</sub> (TO) mode		
	605 cm <sup>-1</sup> (m)			
	550 cm <sup>-1</sup> (s)	( <i>v/c</i> ) <sub>5</sub> (T <sub>2g</sub> ) mode		
	475 cm <sup>-1</sup> (m)			
	450 cm <sup>-1</sup> (m)			
	370 cm <sup>-1</sup> (s)			
	260 cm <sup>-1</sup> (s)	( <i>v/c</i> ) <sub>6</sub> (T <sub>2u</sub> ) region		
	200 cm <sup>-1</sup> (s)			

**References:**

76M    McConnell, A. A., Anderson, J. S., Rao, C. N. R.: Spectrochim. Acta A32 (1976) 1067.