All data taken at Pacific Northwest National Laboratory (PNNL)
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Version 1.0, May, 04

Composite spectrum for HONO_25T
Effective burden of composite spectrum: 1 part-per-million-meter (ppm-meter) at 296 K
Equivalent concentration x path-length of composite spectrum: 1.936×10^{-6} grams/liter-meter
Spectrum is NOT a composite fit to individual spectra and the intensity is scaled to agree with literatures value. See R. H. Kagnan and A. G. Maki, *J. Quant. Spectrosc. Radiat. Transfer* Vol. 30, No. 1, pp. 37-44 (1983). Considerable contamination: NO_2, NO, N_2O, NOCl, CO_2 and H_2O.

Sample Conditions-
- Chemical name and CAS number: Nitrous acid, HONO : [7782-77-6]
- Physical properties: M.W. 47.0134 amu, F.P. ?° C, B.P. ?° C
- Supplier and stated purity: Nitrous acid synthesized *in situ*. via HCl + $NaNO_2$
- Sample class: III (PNNL scale).
- Temperature of White cell (815.76 cm optical path length) 25 ± 2 C
- Diluent (high purity nitrogen, ambient atmospheric pressure 760 ± 5 Torr.
- Preparation: Synthesized *in situ*.

Instrument Parameters-
- Bruker-66V FTIR, evacuated optics bench.
- Modified to include second aperture, between interferometer output and White cell. This substantially reduces both "ghosting" and warm aperture effects.
- Spectral range: 6,500 to 550 cm^{-1} (1.538 to 18.182 microns)
- Instrumental resolution based on maximum interferometer displacement is 0.112 cm^{-1}
- Spectral interval after 2X zero-filling interferogram and FFT: 0.06 cm^{-1}
- Interferogram zero-fill: 2X
- Apodization: Boxcar
- Phase correction: Mertz
- Beam splitter: Potassium bromide (KBr)
- IR source: Carbide glowbar (22 V)
- Scanner velocity: 60KHz (HeNe crossing frequency)
- Number of interferograms averaged per single channel spectra: 256
- Detector: Mid-band HgCdTe, photoconductive, 77K operation
- Folding limits: 15798 to 0 cm^{-1}

Post Processing and Related Parameters-
- Non-linearity detector correction (Bruker proprietary) applied to interferogram (α=0.90, ε=500)
- Calculated and estimated errors: Type A = ?, Type B ≤ 10%
- Frequency correction (already applied): V(corrected)=V(instrument)*0.9999987-4.24224×10^{-4}
- Axis units: X=wavenumbers (cm^{-1}), Y=Absorbance (base-10)
- Baseline correction via 7^{th} order polynomial subtraction