

Spectrometer	Bruker Optics IFS 125HR
Mid-IR source	Globar
Detector	Mercury–cadmium–telluride (MCT) D313*
Beam splitter	Potassium bromide (KBr)
Optical filter	$\sim 700\text{--}1400\text{ cm}^{-1}$ bandpass
Spectral resolution	$0.01\text{ to }0.03\text{ cm}^{-1}$
Aperture size	3.15 mm
Apodisation function	Boxcar
Phase correction	Mertz
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CCl ₃ F (Supelco)	99.9 % purity, natural-abundance isotopic mixture; freeze–pump–thaw-purified multiple times prior to use
Air, zero grade (BOC Gas)	Total hydrocarbons < 3 ppm, H ₂ O < 2 ppm, CO ₂ < 1 ppm, CO < 1 ppm; used “as is”
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Cell pathlength	26 cm
Cell windows	Potassium bromide (KBr) (wedged)
Pressure gauges	3 MKS-690A Baratrons (1, 10 & 1000 Torr) ($\pm 0.05\%$ accuracy)
Refrigeration	Julabo F95-SL Ultra-Low Refrigerated Circulator (with ethanol)
Thermometry	4 platinum resistance thermometers (PRTs), Labfacility IEC 751 Class A
Wavenumber calibration	N ₂ O
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