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Title:	Nitrogen isotope analysis of NaNO3 and KNO3 by nano secondary ion mass spectrometry using the 15N16O2−/14N16O2− ratio
Authors:	Sinha, B. (/jspui/browse?type=author&value=Sinha%2C+B.)
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Abstract:	The authors demonstrate that the Cameca NanoSIMS 50 ion probe is capable of measuring species specific stable nitrogen isotope ratios accurately on bulk sodium nitrate (NaNO3) and potassium nitrate (KNO3) standards deposited on gold substrate by using a Cs+ primary ion beam and the secondary molecular ion ratio 15N16O2−/14N16O2−. The typical precision in a given session is ±1.3‰ and the accuracy for long term measurements on the in-house NaNO3 standard is ±1.9‰ for a raster size of 5 × 5 μm2. The difference in the matrix specific instrument mass fractionation between NaNO3 and KNO3 is 7.1 ± 0.9‰. The results shown in this paper indicate that single micrometer sized nitrate particles can be measured accurately for N isotopic composition. This method can be used to conduct laboratory studies to better understand the isotope fractionation during reactions of NO on sea salt and dust surfaces.
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