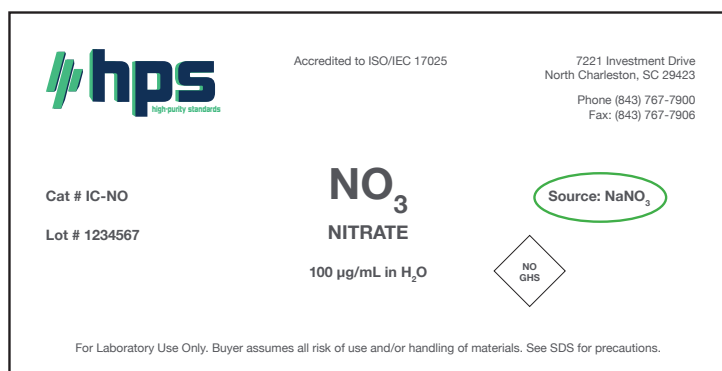


Nitrogen Oxide Standards for EPA Methods

Selecting a Nitrogen/Nitrate/Nitrite Standard for Ion Chromatography

At High-Purity Standards, we offer a diverse array of stock Certified Reference Materials (CRMs) with a quick turnaround and friendly staff to answer any questions, general or technical, that may arise regarding these CRMs. Some of these stock analytical standards use the same source to produce several analyte solutions, for instance sodium nitrate is used as the source for the nitrate in IC-NO as well as the Nitrate as Nitrogen in IC-NO3. This brief exposition will explain the nomenclature and shorthand used at High-Purity Standards to differentiate between several such CRMs sourced from identical materials, as well as provide a table summarizing the part numbers and analytes advertised in the High-Purity Standards catalog.



hps high-purity standards

Accredited to ISO/IEC 17025

7221 Investment Drive
North Charleston, SC 29423
Phone (843) 767-7900
Fax: (843) 767-7906

Cat # IC-NO

Lot # 1234567

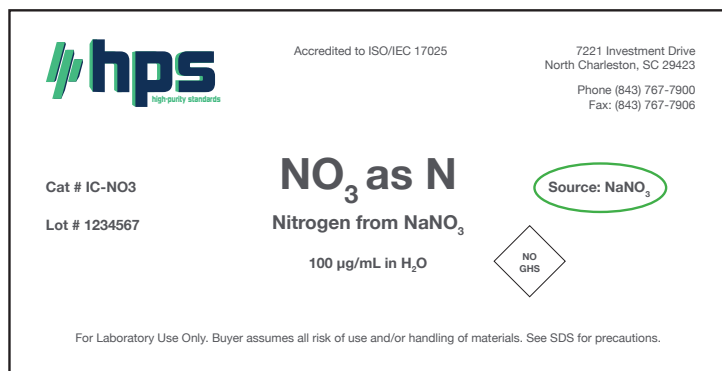
NO₃
NITRATE

100 µg/mL in H₂O

Source: NaNO₃

NO
GHS

For Laboratory Use Only. Buyer assumes all risk of use and/or handling of materials. See SDS for precautions.



hps high-purity standards

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7221 Investment Drive
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Fax: (843) 767-7906

Cat # IC-NO3

Lot # 1234567

NO₃ as N
Nitrogen from NaNO₃

100 µg/mL in H₂O

Source: NaNO₃

NO
GHS

For Laboratory Use Only. Buyer assumes all risk of use and/or handling of materials. See SDS for precautions.

Pictured above: Two CRMs from the same source, sodium nitrate.

A common example of a single molecule providing multiple CRMs is Sodium Nitrate, NaNO₃. This salt is used as a source of nitrate (NO₃⁻) in our product IC-NO (the standard mentioned in EPA Method 9056). In addition to nitrate, sodium nitrate is used as a source of nitrate as nitrogen (convenient for those who practice EPA Method 300 for drinking and wastewater analysis) in our product IC-NO3. To clarify the meanings of these concentrations, one liter of a 100 mg/L solution of nitrate as nitrogen (IC-NO3) contains 100 mg of nitrogen (N) sourced from sodium nitrate. To contrast this, consider that 1 liter of a 100 mg/L nitrate solution (IC-NO) contains 100 mg of nitrate (NO₃⁻), not nitrogen.

Nitrogen Oxide Standards for EPA Methods (cont'd)

Selecting a Nitrogen/Nitrate/Nitrite Standard for Ion Chromatography

Similar to how a single molecule can provide analytes for multiple CRMs, an analyte can come from several molecular sources. Nitrogen is an example of one such analyte. As was stated previously, sodium nitrate is the source of both nitrate (NO_3^-) and nitrogen from nitrate (NO_3 as N). Sodium nitrite (NaNO_2) is used in an identical fashion. NaNO_2 is the source of nitrite (NO_2^-) and the nitrogen from nitrite (NO_2 as N). To reiterate the meanings of these part numbers, one liter of a 100 mg/L solution of nitrite as nitrogen (IC-NO₂, mentioned in EPA Method 300) contains 100 mg of nitrogen sourced from sodium nitrite. To contrast this, consider that 1 liter of a 100 mg/L nitrite solution (IC-N, mentioned in EPA Method 9056) contains 100 mg of nitrite, not nitrogen! To summarize the meanings of these part numbers, as well as the EPA Method 300 and EPA Method 9056 nomenclature, please review the following table.

Part Number	EPA Method		Catalog Name	Analyte	Source
	300	9056			
IC-NO ₂	Nitrite-N (NO_2^- -N)	N/A	NO_2 as N	100 µg/mL Nitrogen (N)	Sodium Nitrite (NaNO_2)
IC-NO ₃	Nitrate-N (NO_3^- -N)	N/A	NO_3 as N	100 µg/mL Nitrogen (N)	Sodium Nitrate (NaNO_3)
IC-N	N/A	Nitrite (NO_2^-)	NO_2	100 µg/mL Nitrite (NO_2^-)	Sodium Nitrite (NaNO_2)
IC-NO	N/A	Nitrate (NO_3^-)	NO_3	100 µg/mL Nitrate (NO_3^-)	Sodium Nitrate (NaNO_3)

A brief review of how our catalog items relate to EPA Method 300 and EPA Method 9056

At High-Purity Standards we seek to continue our commitment to high quality spectrometric standards and certified reference materials to meet any consumer needs. Just as our customers are committed to their research, we are committed to providing the best possible standards and standing by our products. Our commitment does not end with the sale; if you have any questions regarding our standards and how they relate to EPA Method 300 and EPA Method 9056, we welcome them. Our knowledgeable staff will guide you to the right decision for your needs, simply contact us as info@highpuritystandards.com or 843.767.7900.

