

What is a NIST Traceable Certified Value?

The certification of the GasMix system is built upon a rigorous unbroken chain of traceability.

THE CALIBRATION HIERARCHY

An Unbroken Chain of Comparisons

Traceability is defined as an unbroken chain of comparisons leading back to a primary standard. Our process follows these critical steps:

- 1 Mass Flow Controllers (MFCs): The GasMix accuracy starts with the calibration of its internal MFCs. These are adjusted using certified volumetric flowmeters.
- 2 These flowmeters are returned to the factory twice a year for recertification. The tools used for their verification and adjustment are themselves certified against higher-level reference standards.
- 3 The Primary Standard: At the root of this chain is a primary standard maintained by a National Metrology Institute (NMI), such as NIST or NIST equivalent.

STEP 1 — MFCS

Mass Flow Controllers (MFCs)

The GasMix accuracy starts with the calibration of its internal MFCs.

These are adjusted using certified volumetric flowmeters — the first critical link in the traceability chain.

THE PRIMARY STANDARD

Rooted in a National Institute

At the root of this chain is a primary standard maintained by a National Metrology Institute (NMI), such as NIST or NIST equivalent.

NIST — USA

LNE — France

VSL — Netherlands

PTB — Germany

NPL — UK

METROLOGICAL TRACEABILITY

Not Just Accurate — Provably Valid

The goal of this process is metrological validity.

By documenting every link in the chain from the GasMix in the lab to the primary standards at a national institute, we guarantee that the measurements are not just accurate, but legally and scientifically valid.

INTERNATIONAL EQUIVALENCE

Accepted Worldwide

Because national institutes like NIST, LNE, VSL and others participate in international mutual recognition agreements, a certificate traceable to one is considered equivalent to the others. This allows GasMix results to be accepted in regulatory environments worldwide.

NIST

USA

LNE

France

VSL

Netherlands

TRANSPARENCY & DOCUMENTATION

Every Link Documented

Metrological traceability is only as good as its documentation.



All calibration records and certificates are archived



Available for consultation at any time



Ensures a thorough audit at any moment

Accuracy you can prove.

From the lab bench to the national primary standard — every measurement, every link, fully documented and internationally recognised.