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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 8979-2025

Replacing GB/T 8979-2008

Pure nitrogen, high purity nitrogen and ultra pure nitrogen

纯氮、高纯氮和超纯氮

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1 Scope

This document specifies the technical requirements, sampling, test methods, inspection rules, marking, packaging, filling, transportation, and storage requirements for pure nitrogen, high purity nitrogen, and ultra pure nitrogen; and provides safety information for these products.

This document applies to gaseous and liquid pure nitrogen, high purity nitrogen, and ultra pure nitrogen obtained from or purified from air.

2 Normative References

GB 190

GB/T 3864

GB/T 5099

GB/T 5832.2

GB/T 5832.3

GB/T 6285

GB/T 7144

GB/T 8170

GB/T 11640

GB/T 14194

GB 15258

GB/T 16804

GB/T 24159

GB/T 28726

GB/T 33145

GB/T 34528

GB/T 43306

3 Terms and Definitions

This document does not contain any terms or definitions that require further clarification.

4 Technical Requirements

The technical requirements for pure nitrogen, high purity nitrogen, and ultra pure nitrogen shall conform to the provisions of Table 1.

5 Sampling

Sampling shall conform to the provisions of GB/T 43306.

6.1.1.1 The total impurity content in gaseous pure nitrogen, high purity nitrogen, and

ultra pure nitrogen is calculated according to formula (1). Where.

x1 -- Hydrogen content (mole fraction);

x2 -- Oxygen content (mole fraction);

x3 -- Carbon monoxide content (mole fraction);

x4 -- Carbon dioxide content (mole fraction);

x5 -- Methane content (mole fraction);

28726, GB/T 37182, or other equivalent methods. In case of disagreement over the determination results, the method specified in GB/T 6285 shall be the arbitration method.

6.2.1.3 The contents of hydrogen, argon, carbon monoxide, carbon dioxide, and

methane may also be determined according to other equivalent methods specified in 6.2.2
In case of disagreement over the determination results, the method specified in GB/T

28726 shall be the arbitration method.

6.2.2.1 The content of hydrogen, argon, carbon monoxide, carbon dioxide, and methane

can be determined according to the method specified in GB/T 37182.

6.2.2.2 The content of hydrogen, carbon monoxide, and methane can be determined

according to the method specified in GB/T 28124.

6.2.2.3 The content of carbon monoxide, carbon dioxide, and methane can be

determined according to the method specified in GB/T 8984.

6.3.1 Determination of Moisture Content in Pure Nitrogen

Perform the determination according to GB/T 5832.2. It can also be determined according to GB/T 5832.1, GB/T 5832.4, or other equivalent methods. In case of disagreement over the determination results, the method specified in GB/T 5832.2 shall be the arbitration method.

6.3.2 Determination of Moisture Content in High purity Nitrogen and Ultra Pure

Nitrogen Perform the determination according to GB/T 5832.3. The results may be determined according to GB/T 5832.1, GB/T 5832.2, GB/T 5832.4, or other equivalent methods.

In case of disagreement regarding the test results, the method specified in GB/T 5832.3 shall be the arbitration method.

6.4 Exhaust Gas Treatment

During the test, the accumulation of pure nitrogen, high purity nitrogen, and ultra pure nitrogen in the room shall be prevented.

7.1 Batching, Sampling, Judgment, and Re-inspection of Bottled Pure Nitrogen

and High purity Nitrogen