

NITROGEN- nitrogen gas
Messer LLC

Messer LLC - Nitrogen NF Bulk Liquid

Plant
123 Messer St, Anytown, USA

Certificate of Analysis - Stall 1

Product: Nitrogen NF
Date: 10/27/2025
Lot#: 5138-1-1992-102725-04
Tare Weight: 31800 lbs.
Gross Weight: 48500 lbs.
Net Weight: 16700 lbs.
Net Volume: 230.51 kscf

Batch #: AIT-81-6-102725-01
Logon Time: 2025-10-27 11:17:42
Analysis Finish: 2025-10-27 11:30:18
Logoff Time: 2025-10-27 11:31:57

Final Analysis Results

Analyzer #

Test/Units

LIN1 Specs

Analysis Results

Limit of Detection

Organoleptic

Odor

None

None

AIT-81-6

PPM O₂

≤ 5.00

1.14

0.10

AIT-81-2

PPM CO

≤ 10.00

0.35

0.10

LAB

PPM CO₂

N/A

NT

0.10

AIT-81-4A

PPM H₂O

N/A

NT

0.10

AIT-80-2A

PPM THC

N/A

NT

0.10

LAB

PPM H₂

N/A

NT

0.20

Assay Results (by difference)

Nitrogen Min %

≥ 99.0 (Messer Spec ≥ 99.999%)

99.99985

NT = Not Tested

PPM O₂ Method Used: Electrochemical Manufacturer/Model#: Teledyne 3000TA-XL

PPM CO Method Used: Infrared Manufacturer/Model#: Siemens Ultramat 6

These analyzers have been validated by Messer as acceptable alternatives to the official NF for Nitrogen Assay. Validation study documentation is maintained by Messer at the corporate office. LIN NDA: 205766, LIN NADA: 14136

This document contains an electronic signature.

Analyst

Date

Sample Results Obtained from Messer Validated Analyzers

10/27/2025

Quality Reviewer

Date

John Doe

10/27/2025

Should the material not be delivered to an NF customer, the material is "Not Approved for Human Drug Use"

LOX1



Plant

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Final Analysis Results

Analyzer #	Test/Units	LIN1 Specs	Analysis Results	Limit of Detection
Organoleptic	Odor	None	None	
AIT-81-6	PPM O2	≤ 5.00	1.14	0.10
AIT-81-2	PPM CO	≤ 10.00	0.35	0.10
LAB	PPM CO2	N/A	NT	0.10
AIT-81-4A	PPM H2O	N/A	NT	0.10
AIT-80-2A	PPM THC	N/A	NT	0.10
LAB	PPM H2	N/A	NT	0.20
Assay Results (by difference)	Nitrogen Min %	≥ 99.0 (Messer Spec ≥ 99.999%)	99.99985	

NT = Not Tested

PPM O2 Method Used: Electrochemical

Manufacturer/Model#: Teledyne 3000TA-XL

PPM CO Method Used: Infrared

Manufacturer/Model#: Siemens Ultramat 6

These analyzers have been validated by Messer as acceptable alternatives to the official NF for Nitrogen Assay. Validation study documentation is maintained by Messer at the corporate office. LIN NDA: 205766, LIN NADA: 14136

This document contains an electronic signature.

Analyst	Date:
Sample Results Obtained from Messer Validated Analyzers	10/27/2025
Quality Reviewer	Date:
John Doe	10/27/2025

LOX1

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NITROGEN

nitrogen gas

Product Information

Product Type	HUMAN PRESCRIPTION DRUG	Item Code (Source)	NDC:52438-016
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Route of Administration RESPIRATORY (INHALATION)

Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
NITROGEN (UNII: N762921K75) (NITROGEN - UNII:N762921K75)	NITROGEN	995 mL in 1 L

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:52438-016-20	25000 L in 1 TANK; Type 0: Not a Combination Product	01/01/1960	

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
NDA	NDA205766	01/01/1960	

Labeler - Messer LLC (001368141)

Registrant - Messer LLC (001368141)

Establishment

Name	Address	ID/FEI	Business Operations
Messer LLC		002123321	api manufacture(52438-016) , manufacture(52438-016)

Establishment

Name	Address	ID/FEI	Business Operations
Messer LLC		003000197	manufacture(52438-016) , api manufacture(52438-016)

Establishment

Name	Address	ID/FEI	Business Operations
Messer LLC		004212362	manufacture(52438-016) , api manufacture(52438-016)

Establishment

Name	Address	ID/FEI	Business Operations
Messer LLC		019983468	manufacture(52438-016) , api manufacture(52438-016)

Establishment

Name	Address	ID/FEI	Business Operations
Messer LLC		026946218	manufacture(52438-016) , api manufacture(52438-016)

Establishment

Name	Address	ID/FEI	Business Operations
Messer LLC		041268947	manufacture(52438-016) , api manufacture(52438-016)

Establishment

Name	Address	ID/FEI	Business Operations
Messer LLC		042263707	manufacture(52438-016) , api manufacture(52438-016)

Establishment

Name	Address	ID/FEI	Business Operations
Messer LLC		079481211	manufacture(52438-016) , api manufacture(52438-016)

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Name	Address	ID/FEI	Business Operations
Messer LLC		081695020	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		092191712	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		093220150	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		101889988	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		102835006	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		108034669	api manufacture(52438-016) , manufacture(52438-016)

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Messer LLC		147344667	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		192602431	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		791242337	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		799311001	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		809794592	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		839692303	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		872699181	manufacture(52438-016) , api manufacture(52438-016)

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Messer LLC		940070527	manufacture(52438-016) , api manufacture(52438-016)

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Name	Address	ID/FEI	Business Operations
Messer LLC		943812438	manufacture(52438-016) , api manufacture(52438-016)

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Name	Address	ID/FEI	Business Operations
Messer LLC		945417111	manufacture(52438-016) , api manufacture(52438-016)

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Name	Address	ID/FEI	Business Operations
Messer LLC		969312248	manufacture(52438-016) , api manufacture(52438-016)

Establishment

Name	Address	ID/FEI	Business Operations
Messer LLC		119239875	api manufacture(52438-016) , manufacture(52438-016)