Making our world more productive

Linde Nitrous Oxide Plant Production Quality GRADE 2.5 (99.5%)

Sampling point	Purity / Impurities	Unit	Medical quality according to European Pharmacopoeia (Ph. Eur.) [1]	Medical quality produced by the plant [3]
Purity in storage tank liquid phase	N_2O	% (V/V)	> 98,0	> 99,5
Impurities in storage tank liquid phase	N_2	ppm (V/V)	not specified [2]	< 5000,0
	O_2 + Ar	ppm (V/V)	not specified [2]	< 1000,0
	CO	ppm (V/V)	< 5,0	< 1,0
	CO_2	ppm (V/V)	< 300,0	< 5,0
	H_2O	ppm (V/V)	< 67,0	< 10,0
	NO + NO_2	ppm (V/V)	< 2,0	< 2,0

[1] Analysis of gaseous phase, with containers (cylinders/ bundles) in the vertical position with the outlet valve uppermost, kept at room temperature for at least 6 hours before carrying out the analysis and only if the product temperature in the container is 15°C.
[2] There are no specification limits for analysis of N_2 and O_2 + Ar in Ph.Eur.
[3] Analysis of storage tank liquid phase.

Linde Nitrous Oxide UHP Production Quality GRADE 5.0 (99.999%)

Sampling point	Purity / Impurities	Unit	UHP raw material quality Before UHP purification	UHP (industrial quality) After UHP purification
Purity in storage tank liquid phase	N_2O	% (V/V)	> 99,8	> 99,999
Impurities in storage tank liquid phase	N_2	ppm (V/V)	< 5000,0	< 2,0 [2]
	O_2	ppm (V/V)	< 1000,0	< 1,0
	CO	ppm (V/V)	< 0,5	[2]
	CO_2	ppm (V/V)	< 0,5	
	H_2O	ppm (V/V)	< 1,0	
	CH_4	ppm (V/V)	< 1,0	
	H_2	ppm (V/V)	< 0,5	
	NH_3	ppm (V/V)	< 1,0	
	NO-NO_2	ppm (V/V)	< 1,0	

[1] UHP unit can remove N2 and O2 gases from the raw material produced by the production plant
[2] The impurities quantity in the final UHP product is equal with the impurities measured in the raw material.

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