

# Product Specification.

## VERISEQ® Research liq Nitrogen CoA.



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Article no.: 104650  
 Product name: VERISEQ® Research liq Nitrogen CoA  
 Pharmaceutical industry, with Certificate of Analysis  
 Chemical formula: N<sub>2</sub>  
 Chemical name: Nitrogen

Component	Chemical formula	Unit	Linde specifications		Pharmacopoeia monographs			
			VERISEQ® Process Nitrogen <sup>1)</sup>	VERISEQ® Research Nitrogen <sup>1)</sup>	EP	EP low oxygen	USP/NF	JP
Nitrogen	N <sub>2</sub>	%	≥ 99.5	≥ 99.999 <sup>2)</sup>	≥ 99.5	≥ 99.5	≥ 99.0	≥ 99.5
Water	H <sub>2</sub> O	ppm	≤ 5	≤ 3	≤ 67			
Oxygen	O <sub>2</sub>	ppm	≤ 5	≤ 3	≤ 50	≤ 5	≤ 1.0%	
Carbon monoxide	CO	ppm	≤ 5	≤ 5	≤ 5		≤ 10	
Carbon dioxide	CO <sub>2</sub>	ppm	≤ 300	≤ 300	≤ 300		n.s. <sup>4)</sup>	
Argon	Ar	%	≤ 0.5	≤ 0.5	≤ 0.5			
Odour			n.d. <sup>3)</sup>	n.d. <sup>3)</sup>	n.d. <sup>3)</sup>			
Total hydrocarbons	C <sub>n</sub> H <sub>m</sub>	ppm		≤ 1				

1) The AGA product specifications are updated when the specifications in the pharmacopoeia monographs are changed.

2) Purity including rare gases.

3) n.d. = not detectable.

4) n.s. = not specified. Wet chemistry method to detect the level of carbon dioxide.