Purification Media – Gases Purified and Specifications

NANOCHEM® Gas Types Purification Summary Table

GASES PURIFIED	CHEMICAL FORMULA	PURIFICATION MEDIUM	PURIFICATION MEDIUM DESCRIPTION	IMPURITIES REMOVED	EFFICIENCY	END POINT DETECTION
Inerts						
Nitrogen Argon Helium Xenon Krypton Neon	N_2 Ar He Xe Kr Ne	OMX-Plus™	Reactive agents on a polymeric support w/ inorganic agent for NMHC removal	H_2O, O_2, CO_2, THC except CH_4 Halocarbons except CF_4	< 100 ppt, LDL	AC or DC
				CO at Low Flow	< 1 ppb	
		HCX™	High surface area inorganic medium	Hydrocarbons except CH_4 Halocarbons except CF_4	< 100 ppt, LDL	Not available
Flammables - Partial List						
Methane Ethane Cyclopropane Propane Butane	CH_4 C_2H_6 C_3H_6 C_3H_8 C_4H_{10}	OMX-Plus™	Reactive agents on a polymeric support w/inorganic agent for NMHC removal	H_2O, O_2, CO_2, THC except CH_4 Halocarbons except CF_4	< 100 ppt, LDL	DC only
				CO at Low Flow	< 1 ppb	
		OMX™	Reactive agents on a polymeric support	H_2O, O_2, CO_2	< 100 ppt, LDL	DC only
				CO at Low Flow	< 1 ppb	
Hydrogen Deuterium	H_2 D_2	OMX-Plus™	Reactive agents on a polymeric support w/inorganic agent for NMHC removal	H_2O, O_2, CO_2, THC except CH_4 Halocarbons except CF_4	< 100 ppt, LDL	DC only
				CO at Low Flow	< 1 ppb	
		HCX™	High surface area inorganic medium	Hydrocarbons except CH_4, Halocarbons except CF_4	< 100 ppt, LDL	Not available
Please contact customer service for other flammables, that can be purified.						
Halocarbons - Partial List						
Carbon Tetrafluoride	CF_4	OMX-Plus™	Reactive agents on a polymeric support w/inorganic agent for NMHC removal	H_2O, O_2, CO_2, THC except CH_4 & Other Halocarbons	< 100 ppt, LDL	AC or DC
				CO at Low Flow	< 1 ppb	
Hexafluoroethane	C_2F_6	OMX™	Reactive agents on a polymeric support	H_2O, O_2, CO_2 CO	< 100 ppt, LDL < 1 ppb	AC or DC
Perfluoropropane	C_3F_8	OMX™	Reactive agents on a polymeric support	H_2O, O_2, CO_2	< 100 ppt, LDL	AC or DC
Please contact customer service for other halocarbons, that can be purified.						
Hydrides						
Ammonia	NH_3	NHX-Plus™	Reactive agents on an inorganic support	H_2O	< 45 ppb, LDL	Not available
				CO_2	< 11 ppb, LDL	
				O_2	< 50 ppb, LDL	
				GeH_4	< 0.5 ppb, LDL	
				SiH_4	< 3 ppb, LDL	
				TEOS	< 40 ppb, LDL	
		OMA™	Reactive agents on a polymeric support	H_2O, O_2, CO_2 in inert gas, LDL	< 100 ppt, LDL	DC only
				H_2O in ammonia, LDL	< 100 ppb, LDL	
Silane	SiH_4	OMX™	Reactive agents on a polymeric support	H_2O, O_2, CO_2, CO	< 100 ppt, LDL	DC only
Arsine	AsH_3	ASX-II™	High surface are inorganic medium	< 75 ppb H_2O in AsH_3, LDL		Not available
Phosphine	PH_3	PHX™	Reactive agents on an inorganic support	< 33 ppb H_2O in PH_3, LDL		Not available

THC = Total Hydrocarbons
LDL = Lower Limit of Detection by state-of-the-art analytical instrumentation.
Please contact customer service for other gases not included in this list

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NANOCHEM® Gas Types Purification Summary Table *(continued)*

GASES PURIFIED	CHEMICAL FORMULA	PURIFICATION MEDIUM	PURIFICATION MEDIUM DESCRIPTION	IMPURITIES REMOVED	EFFICIENCY	END POINT DETECTION
Hydride/Inert Mixes (N_2, Ar, He, Xe, Kr, Ne, & H_2)						
1-10% Arsine 1-10% Germane 1-10% Phosphine	AsH_3 GeH_4 PH_3	OMX™	Reactive agents on a polymeric support	H_2O, O_2, CO_2	< 1 ppb	Not available
Corrosives						
Boron Trichloride Chlorine Silicon Tetrachloride Trichlorosilane Dichlorosilane Hydrogen Bromide Hydrogen Chloride	BCl_3 Cl_2 $SiCl_4$ $SiHCl_3$ SiH_2Cl_2 HBr HCl	Metal-X™	High purity high surface area inorganic medium	H_2O < 100 ppb, LDL Volatile Metals-Fe, Mo, Cr, Ti, Ni, Mn		Not available
Others						
Carbon Monoxide Nitric Oxide	CO NO	Metal-X™	High purity high surface area inorganic medium	H_2O < 100 ppb, LDL Volatile Metals-Fe, Mo, Cr, Ti, Ni, Mn		Not available
Carbon Dioxide Nitrous Oxide	CO_2 N_2O	OPX™	High surface area inorganic medium	H_2O	< 10 ppb	Not available
		HCX™	High surface area inorganic medium	Hydrocarbons except CH_4 Halocarbons except CF_4	< 100 ppt, LDL	Not available
Oxygen	O_2	OPX	High surface area inorganic medium	H_2O	< 10 ppb	Not available
Dimethyl Ether	$(CH_3)_2O$	OMX™	Reactive agents on a polymeric support	H_2O, O_2, CO_2	< 100 ppt, LDL	DC only
Sulfur Hexafluoride	SF_6	OMS™	Reactive agents on a polymeric support	H_2O, O_2	< 10 ppb, LDL	AC or DC

THC = Total Hydrocarbons
LDL = Lower Limit of Detection by state-of-the-art analytical instrumentation.
Please contact customer service for other gases not included in this list