NANOCHEM® Purification Media

NANOCHEM® purification media have long been the industry standards for purifying inert gases, such as nitrogen, argon, and sulfur hexafluoride, as well as reactive gases, such as hydrogen, hydrocarbons, and hydride gases (including ammonia, silane, arsine and phosphine). Applications include biotech, chemical processing, aerospace, analytical, petroleum refining, and semiconductor / compound semiconductor processes, including low temperature SiGe Epi, SiN and GaN MOCVD processes. Over twelve (**12**) different purification media are available to purify about **37** different gases.

NANOCHEM® Media -- Gases Purified & Specifications

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	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
		In2Go™	Reactive agents on an inorganic support	H_2O, O_2, CO, CO_2 THC except CH_4 Halocarbons	< 100 ppt, LDL	DC only
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
		In2Go™	Reactive agents on an inorganic support	H_2O, O_2, CO, CO_2 THC except CH_4 Halocarbons	< 100 ppt, LDL	DC only
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 CO at Low Flow	< 100 ppt, LDL < 1 ppb	DC only
Hexafluoroethane	C_2F_6	OMX™	Reactive agents on a polymeric support	H_2O, O_2, CO_2 CO	< 100 ppt, LDL < 1 ppb	DC only
Perfluoropropane	C_3F_8	OMX™	Reactive agents on a polymeric support	H_2O, O_2, CO_2	< 100 ppt, LDL	DC only
Please contact customer service for other halocarbons, that can be purified.						

ppb = Part per billion
ppt = Part per trillion
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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The Gas Professionals

NANOCHEM® Media -- Gases Purified & Specifications *(continued)*

GASES PURIFIED	CHEMICAL FORMULA	PURIFICATION MEDIUM	PURIFICATION MEDIUM DESCRIPTION	IMPURITIES REMOVED	EFFICIENCY	END POINT DETECTION
Hydrides						
Ammonia	NH_3	In2Go™	Reactive agents on an inorganic support	H_2O	< 10 ppb, LDL	DC only
				CO_2	< 11 ppb, LDL	
				O_2	< 5 ppb, LDL	
				GeH_4	< 1 ppb, LDL	
				SiH_4	< 1 ppb, LDL	
				TEOS	< 40 ppb, LDL	
		OMA™	Reactive agents on a polymeric support	H_2O, O_2, CO_2 in inert gas	< 100 ppt, LDL	DC only
				H_2O in ammonia	< 10 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 area 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
Germane	GeH_3	Desicore™	Reactive agents on an inorganic support	< 5 ppb H_2O in GeH_3, LDL		Not available
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
Hydrogen Fluoride	HF	CleanCorr™	High high surface area inorganic medium	H_2O < 2 ppm, LDL		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	DC only
Acetylene	C_2H_2	AcetyClean™	High high surface area inorganic medium	H_2O	< 1 ppm, LDL	Not available

ppm = Part per million
ppb = Part per billion
ppt = Part per trillion
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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