



NANO CHEM® 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 | OMX-Plus™ | Reactive agents on a polymeric support w/ inorganic agent for NMHC removal | H ₂ O, O ₂ , CO ₂ , THC except CH ₄ | < 100 ppt, LDL | AC or DC |
| | | | | Halocarbons except CF ₄ | | |
| | | | | CO at Low Flow | | |
| | Kr Ne | HCX™ | High surface area inorganic medium | Hydrocarbons except CH ₄ | < 100 ppt, LDL | Not available |
| | | | | Halocarbons except CF ₄ | | |
| | | | | | | |
| Flammables - Partial List | | | | | | |
| Methane Ethane Cyclopropane Propane Butane | CH ₄ C ₂ H ₆ C ₃ H ₆ | OMX-Plus™ | Reactive agents on a polymeric support w/ inorganic agent for NMHC removal | H ₂ O, O ₂ , CO ₂ , THC except CH ₄ | < 100 ppt, LDL | DC only |
| | | | | Halocarbons except CF ₄ | | |
| | | | | CO at Low Flow | | |
| | C ₃ H ₈ C ₄ H ₁₀ | OMX™ | Reactive agents on a polymeric support | H ₂ O, 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 ₂ O, O ₂ , CO ₂ , THC except CH ₄ | < 100 ppt, LDL | DC only |
| | | | | Halocarbons except CF ₄ | | |
| | | HCX™ | High surface area inorganic medium | Hydrocarbons except CH ₄ | < 100 ppt, LDL | Not available |
| | | | | Halocarbons except CF ₄ | | |
| <i>Please contact customer service for other flammables, that can be purified.</i> | | | | | | |
| Halocarbons - Partial List | | | | | | |
| Carbon Tetrafluoride | CF ₄ | OMX-Plus™ | Reactive agents on a polymeric support w/ inorganic agent for NMHC removal | H ₂ O, O ₂ , CO ₂ , THC except CH ₄ & Other Halocarbons | < 100 ppt, LDL | AC or DC |
| | | | | CO at Low Flow | < 1 ppb | |
| Hexafluoroethane | C ₂ F ₆ | OMX™ | Reactive agents on a polymeric support | H ₂ O, O ₂ , CO ₂ | < 100 ppt, LDL | AC or DC |
| | | | | CO | < 1 ppb | |
| Perfluoropropane | C ₃ F ₈ | OMX™ | Reactive agents on a polymeric support | H ₂ O, O ₂ , CO ₂ | < 100 ppt, LDL | AC or DC |
| <i>Please contact customer service for other halocarbons, that can be purified.</i> | | | | | | |
| Hydrides | | | | | | |
| Ammonia | NH ₃ | NHX-Plus™ | Reactive agents on an inorganic support | H ₂ O | < 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 ₂ O, O ₂ , CO ₂ in inert gas, LDL | < 100 ppt, LDL | DC only |
| | | | H ₂ O in ammonia, LDL | < 100 ppb, LDL | | |
| Silane | SiH ₄ | OMX™ | Reactive agents on a polymeric support | H ₂ O, O ₂ , CO ₂ , CO | < 100 ppt, LDL | DC only |
| Arsine | AsH ₃ | ASX-II™ | High surface are inorganic medium | < 75 ppb H ₂ O in AsH ₃ , LDL | | Not available |
| Phosphine | PH ₃ | PHX™ | Reactive agents on an inorganic support | < 33 ppb H ₂ O 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



Purification Media – Gases Purified and Specifications

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 (N₂, Ar, He, Xe, Kr, Ne, & H₂) | | | | | | |
| 1-10% Arsine | AsH ₃ | OMX™ | Reactive agents on a polymeric support | H ₂ O, O ₂ , CO ₂ | < 1 ppb | Not available |
| 1-10% Germane | GeH ₄ | | | | | |
| 1-10% Phosphine | PH ₃ | | | | | |
| Corrosives | | | | | | |
| Boron Trichloride | BCl ₃ | Metal-X™ | High purity high surface area inorganic medium | H ₂ O < 100 ppb, LDL Volatile Metals-Fe, Mo, Cr, Ti, Ni, Mn | | Not available |
| Chlorine | Cl ₂ | | | | | |
| Silicon Tetrachloride | SiCl ₄ | | | | | |
| Trichlorosilane | SiHCl ₃ | | | | | |
| Dichlorosilane | SiH ₂ Cl ₂ | | | | | |
| Hydrogen Bromide | HBr | | | | | |
| Hydrogen Chloride | HCl | | | | | |
| Others | | | | | | |
| Carbon Monoxide | CO | Metal-X™ | High purity high surface area inorganic medium | H ₂ O < 100 ppb, LDL Volatile Metals-Fe, Mo, Cr, Ti, Ni, Mn | | Not available |
| Nitric Oxide | NO | | | | | |
| Carbon Dioxide | CO ₂ | OPX™ | High surface area inorganic medium | H ₂ O | < 10 ppb | Not available |
| | | HGX™ | High surface area inorganic medium | Hydrocarbons except CH ₄ Halocarbons except CF ₄ | < 100 ppt, LDL | Not available |
| Nitrous Oxide | N ₂ O | | | | | |
| Oxygen | O ₂ | OPX | High surface area inorganic medium | H ₂ O | < 10 ppb | Not available |
| Dimethyl Ether | (CH ₃) ₂ O | OMX™ | Reactive agents on a polymeric support | H ₂ O, O ₂ , CO ₂ | < 100 ppt, LDL | DC only |
| Sulfur Hexafluoride | SF ₆ | OMS™ | Reactive agents on a polymeric support | H ₂ O, 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