

Thermal Desorption Consumables & Supplies





Own the Flow Path

Agilent provides a complete portfolio of consumables and accessories to support Markes thermal desorption systems coupled to Agilent GC and GC/MS platforms. From sorbent tubes and focusing traps to transfer lines, fittings, and preventive maintenance components, this guide consolidates the core items required to maintain analytical performance and system uptime.

Analysis by thermal desorption depends on the integrity of the entire flow path. Sorbent chemistry, surface inertness, sealing quality, and thermal stability all influence sensitivity, peak shape, carryover, and long-term reproducibility. This guide is organized by component family to simplify identification of compatible parts across, TD100-xr, UNITY-xr, Kori-xr, and related TD configurations.

In addition to instrument-aligned consumables, the portfolio includes proprietary surface coatings developed by Agilent. UltiMetal-treated TD tubes reduce active sites on metal surfaces, improving inertness in trace-level applications where adsorption or carryover may limit method performance.

Application-aligned tube and trap configurations are included to support regulatory and industry methods such as TO-15, TO-17, EPA 325, ASTM D8591, ISO 16000, and EN 16738.

Agilent Thermal Desorption Tubes



Features that support sample integrity

Unique tube identification

Each tube carries a unique ID in numeric and barcode format. This enables tracking of individual tubes through inventory, field sampling, analysis, and archiving. Barcode identification reduces transcription errors and limits manual data entry within LIMS and chain-of-custody workflows.

Sampling direction indicator

This helps ensure correct orientation during field deployment and promotes consistent collection practices.

Preconditioning

Prepacked tubes are supplied preconditioned to reduce background contamination and ready to use. Residual artifact levels are controlled to remain below typical reporting thresholds.

Certificate of conformance

Each lot of prepacked tubes includes a Certificate of Conformance documenting manufacturing controls, material specifications, and preparation processes. Quality verification includes dimensional checks, sorbent confirmation, preconditioning verification, and performance testing to support regulatory documentation and audit requirements.

UltiMetal deactivation

Select tube configurations are available with UltiMetal surface coating to further enhance inertness for surface-sensitive applications.

Empty thermal desorption tubes

Empty TD tubes support custom sorbent packing and direct desorption workflows. Laboratories may configure single- or multi-bed sorbent combinations tailored to a specific volatility range, unique method, or internal SOP. These tubes are also suitable for direct thermal desorption of solid and semi-solid materials when used with appropriate inserts.

Description	Part Number
TD Tubes, SST, Empty, 10/pk	5190-1100
TD Tubes, UltiMetal, Empty, 10/pk	5190-1110
TD Tubes, Glass, Empty, 10/pk	C-GT010
PTFE Inserts for Direct Desorption, 10/pk	C-PL010

Single-sorbent TD tubes

Prepacked single-sorbent tubes are configured with a single, defined sorbent bed to target specific volatility ranges. This format supports predictable retention characteristics and consistent performance across routine monitoring and regulated analytical programs.

These tubes are supplied preconditioned and include a certificate of conformance.

Description	Part Number
TD Tubes, SST, Tenax TA, 10/pk	5190-1102
TD Tubes, SST, Carbograph 1, 10/pk	5190-1103
TD Tubes, SST, Carbograph 5, 10/pk	5190-1104
TD Tubes, SST, Carbopack X, 10/pk	5190-1105

UltiMetal single-sorbent TD tubes

UltiMetal-treated TD tubes incorporate a proprietary surface deactivation on internal stainless-steel surfaces, reducing active metal sites that can adsorb, catalyze, or degrade surface-sensitive analytes.

Compared to untreated stainless steel, UltiMetal tubes can improve recovery, reduce memory effects, and enhance reproducibility for polar, sulfur-containing, oxygenated, or otherwise reactive compounds, particularly in trace-level and regulated workflows.

These tubes are supplied preconditioned and include a certificate of conformance.

Description	Part Number
TD Tubes, UltiMetal, Tenax TA, 10/pk	5190-1112
TD Tubes, UltiMetal, Carbograph 1, 10/pk	5190-1113
TD Tubes, UltiMetal, Carbograph 5, 10/pk	5190-1114
TD Tubes, UltiMetal, Carbopack X, 10/pk	5190-1115

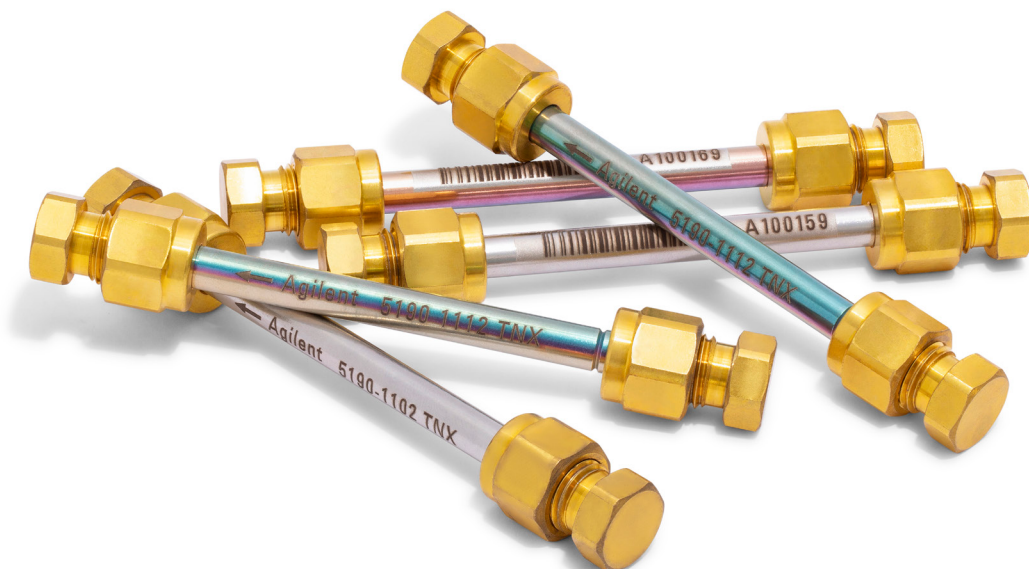
UltiMetal application-specific TD tubes

Application-based UltiMetal tube configurations combine targeted sorbent selection with enhanced surface inertness. This pairing supports demanding workflows such as air toxics, PFAS, PAH emissions, materials off-gassing, and odor analysis, where both sorbent performance and metal surface interaction influence analytical results.

In methods operating at low detection limits or under regulatory scrutiny, minimizing surface activity within the sampling tube can improve robustness and reproducibility.

These tubes are supplied preconditioned and include a certificate of conformance.

Description	Part Number
TD Tubes, UltiMetal, Universal, 10/pk	5190-1131
TD Tubes, UltiMetal, Hydrophobic, 10/pk	5190-1132
TD Tubes, UltiMetal, Air Toxics, 10/pk	5190-1133
TD Tubes, UltiMetal, Material Emissions, 10/pk	5190-1134
TD Tubes, UltiMetal, Odor / Sulfur, 10/pk	5190-1135
TD Tubes, UltiMetal, PAH, 10/pk	5190-1136
TD Tubes, UltiMetal, PFAS, 10/pk	5190-1137



Sampling Flow Path Components

Focusing traps

Focusing traps concentrate analytes following primary desorption and prior to GC separation. Proper trap selection improves peak shape, defines volatility cutoffs, and supports regulatory method alignment for tube or canister applications. Compatible with Markes -xr series instruments.

Description	Part Number
Focusing Trap, Empty	U-T7EMP-2S
Focusing Trap, High Boilers (C6-C20)	MKI-U-T1HBL-2S
Focusing Trap, General Purpose / Hydrophobic	MKI-U-T2GPH-2S
Focusing Trap, Sulfur Compounds	MKI-U-T6SUL-2S
Focusing Trap, Tenax TA	MKI-U-T9TNX-2S
Focusing Trap, Chemical Weapons Agents	MKI-U-T10CW-2S
Focusing Trap, General Purpose / Carbon	MKI-U-T11GPC-2S
Focusing Trap, Material Emissions	MKI-U-T12ME-2S
Focusing Trap, DHS Applications	MKI-U-T13DHS-2S
Focusing Trap, Hydrogen Sulfide	MKI-U-T14H2S-2S
Focusing Trap, Air Toxics (TO-15, TO-17)	MKI-U-T15ATA-2S
Focusing Trap, Greenhouse Gases	MKI-U-T16GHG-2S
Focusing Trap, Ozone Precursors	MKI-U-T17O3P-2S
Focusing Trap, Benzene / EPA 325	MKI-U-T18325-2S
Focusing Trap, PAMS	MKI-U-T20PAM
Focusing Trap, China Air 117	MKI-U-T22117-2S
Focusing Trap, Trace TO-15, Kori-xr	MKI-U-TO15-KXR
Focusing Trap, Empty, Kori-xr	MKI-U-T1KORI

Find answers faster

Get answers to common thermal desorption questions, discover practical tips, and strengthen your GC and GC/MS workflows with expert guidance.

[Explore FAQs](#)

Capillary column connectors

A leak-free, low-dead-volume connection between the transfer line and analytical column is essential for reproducible analytical performance.

Glass press-fit connectors with Agilent Ultra Inert deactivation provide a compact solution for fixed installations.

For routine column maintenance at the transfer line interface, the Agilent Ultimate Union offers a mechanically secured connection incorporating Capillary Flow Technology (CFT) and an UltiMetal surface coating. Proper ferrule selection and installation are critical to maintain seal integrity and protect capillary column ends.

Glass capillary column connectors

Description	Part Number
Universal Press-Fit, Glass Union, Ultra Inert, 10/pk	5190-6979
Capillary Sealing Resin, 5g	500-1200

Agilent Ultimate Union

Description	Part Number
Ultimate Union Kit, UltiMetal	G3182-61580
CFT Flexible Metal Ferrule, Gold, 0.4mm ID, for 0.25mm ID columns	G2855-28501
CFT Flexible Metal Ferrule, Gold, 0.5mm ID, for 0.32mm ID columns	G2855-28502
CFT Flexible Metal Ferrule, Gold, 0.8mm ID, for 0.53mm ID columns	G2855-28503

Tube caps & storage components

Caps are critical to preserving sample integrity from collection through analysis. Proper sealing minimizes analyte loss, contamination, and diffusive transfer, particularly in low-level environmental and regulatory workflows.

Markes DiffLok™ caps are used during sampling, transport, and short-term storage. They provide an effective seal to limit diffusive losses while supporting routine field and laboratory handling. For samples requiring extended storage or archival retention prior to analysis, long-term storage caps are recommended. DiffLok caps are best suited for short-term use aligned with prompt analysis schedules.

Description	Part Number
Markes DiffLok Caps, SST, 10/pk	MKI-MTD-1169
Markes DiffLok Caps, Inert, 10/pk	MKI-MTD-1204
Diffusive Sampling Caps, 10/pk	C-DF010
Long-Term Storage Caps, Brass, 20/pk	C-CF020
Replacement PTFE Ferrules for Long-Term Storage Caps, 20/pk	C-FP020

Transfer lines

Transfer lines provide the heated connection between the thermal desorption system and the Agilent GC inlet, enabling controlled transport of analytes from the focusing trap onto the GC column.

Transfer lines should be inspected routinely with the fused silica replaced approximately every 12 months, or sooner depending on usage and method demands, to maintain flow integrity and analytical performance.

OEM fused silica transfer lines are available for direct replacement. For applications sensitive to surface activity, Agilent Ultimate Plus inert fused silica capillary may be used as an upgrade to further reduce analyte interaction within the transfer path. When using alternative fused silica, the original PTFE sleeve must be reused to maintain proper thermal insulation and mechanical protection.

Description	Part Number
OEM Transfer Line, Fused Silica, 1.4m, 0.25 mm ID	G8126-67003
OEM Transfer Line, Fused Silica, 1.9m, 0.25 mm ID, PTFE Sleeve	MKI-UTE-5099
Agilent Ultimate Plus, Inert Fused Silica, 10m, 0.25 mm ID	CP802510

Routine Maintenance Products

TD gang fittings

TD gang fitting assemblies interface the Markes TD platform with the Agilent GC inlet and its integrated electronic pneumatic control (EPC) system, supporting controlled carrier gas delivery and consistent transfer onto the GC column.

Description	Part Number
TD Gang Fitting for Agilent 8890 / 8860 GCs	G3450-60114
TD Gang Fitting for Agilent 7890 / 7820 GCs	G3430-60011

Complete your thermal desorption workflow

Explore Agilent thermal desorption supplies, including sorbent tubes, cold traps, and accessories designed to support reliable, reproducible GC and GC/MS analysis.

[Browse supplies](#)

O-rings

Critical sealing components for valves, trap interfaces, and manifold assemblies. O-rings should be checked and replaced at least every 12 months as part of routine maintenance.

Description	Part Number
Viton O-ring, Size 10. Compatible with DiffLok caps and used at the sample and split tube inlet and receiver interfaces for industry-standard tubes. Also installed on Kori-to-Unity transfer lines on the split side.	5190-1131
Viton O-ring, Size 7. Used in tube autosamplers to seal the TD flow path against the external face of a DiffLok cap.	5190-1132
Viton O-Ring, Viton O-ring, Size 6. Used within trap pneumatics assemblies to maintain seal integrity around the focusing trap.	5190-1133

PTFE filter discs

Filter disks protect downstream flow paths from particulate contamination. Instrument filters should be checked and replaced at least every 12 months as part of routine maintenance.

Description	Part Number
Filter disk, PTFE, 5.1 mm, 10/pk. Used within the trap module to minimize restrictions.	MKI-U-DISK1
Filter disk, PTFE, 6.3 mm, 10/pk. Used in the tube receivers to prevent flow path blockages.	MKI-U-DISK3

Tools

Support proper installation, alignment, and serving of TD system components.

Description	Part Number
CapLOK tool for Long-Term Storage Caps, 1PK	MKI-C-CPLOK
Focusing Trap Alignment Tool	MKI-UTD-5064
O-Ring Insertion Tool	MKI-Z-0285
O-Ring Extraction Tool	MKI-Z-0351
O-Ring Insertion Tool for Autosamplers	MKI-MTD-1382
O-Ring Insertion Tool for Heated Valve	G8125-67004

Preventative maintenance kits

Preventative maintenance kits bundle commonly replaced wear components into instrument-specific packages designed to support approximately one year of typical laboratory use.

Contents may include seals, O-rings, ferrules, filters, and other routine service parts. Scheduled replacement helps maintain leak integrity, stable flow conditions, and overall system reliability.

Description	Part Number
PM Kit, Markes TC-20 Tube Conditioner	G8133-67007
PM Kit, Markes Kori-xr	G8154-67000
PM Kit, Markes Tube-Based Systems	G8127-67008
PM Kit, Markes Canister-Based Systems	G8131-67005
PM Kit, Markes HT Micro Chamber	G8126-67007

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