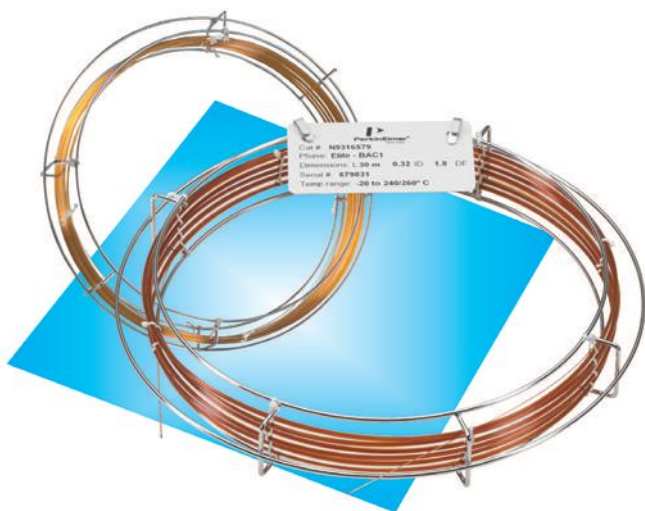




Why choose fused silica?

Many factors influence the quality of a column. Fused silica is considered to be the purest form of glass, with fewer metal oxides (Lewis acid sites) and hydrogen bonding (surface silanol) groups. The stationary phase is cross linked (polymerized) and also bonded to the surface of the column to provide a high degree of stability, resulting in lower bleeding of the stationary phase at elevated temperatures. The superior inertness of the column means that acidic and basic compounds can be analyzed on the same column.

Selecting the right Stationary Phase

The inherent efficiency (large number of theoretical plates) of capillary columns allows you to choose from relatively few types of phases, compared to the many varieties of packed columns previously required. Perhaps more importantly, because capillary columns are more efficient, you will see superior resolution resulting in narrower, taller peaks that allow easier integration from your data system. Identification of small peaks are facilitated by a reduced baseline bleed and lower baseline noise. Non-polar Elite-1 columns from PerkinElmer will preferentially retain non-polar compounds, whereas the PerkinElmer Elite-200 column phase provides high selectivity for analytes containing lone pair electrons, such as nitro and carbonyl groups. Elite-WAX polyethylene glycol columns are highly selective toward polar compounds such as alcohols.

What length do I need?

Typically capillary columns are available in lengths from 15 to 105 meters. The longer the column the more resolving power, but this also increases the analysis time. Doubling a column length only increases resolution by approximately 40% but, under isothermal conditions, will double the analysis time. If using a temperature programmed analysis retention times are more dependent on the temperature than on the column length. PerkinElmer provides columns in the most popular lengths of 5, 10, 12, 15, 25, 30, 50, 60, 75, 100 and 105 meters depending upon the column i.d.

FINEST QUALITY HIGH-STRENGTH FUSED SILICA

Phase Cross Reference Chart

Phase/Description	Equivalent Capillary Phase
Elite-1, Elite-1ht 100% Dimethyl	DB-1, DB-1ht, HP-1, HP-101, Ultra-1, SPB-1, CP-Sil 5CB, CI-Sil5CBMS, RSL-150, RSL-160, Rtx-1, BP-1, CB-1, OV-1, 007-1MS, SP-2100, SE-30
Elite-200 Trifluoropropylmethyl	DB-210, AT-210, VF-200MS, 007-210, Rtx-200
Elite-5, Elite 5ms, Elite -5ht 5% Diphenyl – 95% Dimethyl	DB-5, DB-5ms, DB-5ht, Ultra-2, SPB-5, CP-Sil8CB, RSL-200, Rtx-5, BP-5, CB-5, OV-5, 007-2(MPS-5), SE-52, SE-54, XTI-5, Rtx-5ms, PTE-5, HP-5ms
Elite-5Amine 5% Diphenyl – 95% Dimethyl Polysiloxane	PTA-5
Elite-35, Elite-35ms 35% Phenyl – 65% Methyl	DB-35, DB-35ms, Rtx-35, SPB-35, AT-35, Sup-Herb
Elite-17, Elite-17ms, Elite-17ht 50% Phenyl – 50% Methyl	DB-17, DB-17ht, HP-17, RSL-300, Rtx-50, 007-17(MPS-50), SP-2250, HP-50+
Elite-1301 6% Cyanopropylphenyl	DB-1301, Rtx-1301, CP-624
Elite-1701 14% Cyanopropylphenyl – 86% Dimethyl	DB-1701, SPB-7, CP-Sil 19CB, Rtx-1701, BP-10, CB-1701, OV-1701, 007-1701
Elite-225 50% Cyanopropylphenyl – 50% Phenyl methyl	DB-225, HP-225, SP-2330, CP-Sil 43CB, RSL-500, Rtx-225, BP-225, CB-225, OV-225, 007-225
Elite-WAX Polyethylene Glycol	DB-FFAP, HP-20M, SUPELCOWAX 10, CP-WAX 52CB, SUPEROX II, CB-WAX, STABILWAX, BP-20, Elite-CW 007-CW, Carbowax, HP-Innowax
Elite-FFAP Polyethylene Glycol – Acid Modified	DB-WAX, HP-FFAP, Nukol, SUPEROX FA, STABI LWAX-DA, 007-FFAP, OV-351, DB-FFAP
Elite-608 Specialty phase for semi-volatile pesticides (EPA 608)	SPB-608, NON_PAKD Pesticide, DB-608, 007-608, HP-608
Elite-624, Elite-Volatiles Volatiles, Specialty phase for volatiles	DB-624, DB_VRX, VOCOL, NONPAKD AT-624, Rtx-Rtx-502.2, 007-624, HP-624, CP-624, Rtx-624
Elite-CLPesticides Specialty Phase for Chlorinated Pesticides	Rtx-CLPesticides
Elite-VMS Specialty Phase for Volatile Organics on GC/MS	Rtx-VMS
Elite-PONA Dimethyl polysiloxane processed for the detailed analysis of petroleum naphtha	DB-Petro100, Petrocol DH, HP-PONA, SPB-1, 007-1, Rtx-1PONA

Elite-1 Dimethylpolysiloxane 100% Dimethyl Polysiloxane phase:

The 100% Dimethyl Polysiloxane is a highly versatile phase that is extremely rugged, exhibiting long column lifetime, low bleed, and high maximum operating temperatures.

Primary Applications: Elite columns are ideal for the analysis of non-polar petrochemical samples, such as detailed hydrocarbon analysis, hydrocarbon gases, petroleum oxygenates, petroleum aromatics, fuels, waxes, oils, sulfur compounds, mercaptans, and carbon disulfide. It also is an excellent phase for solvents, chemicals, flavors, fragrances, essential oils, air toxins, chlorofluorocarbons, arson analysis, pesticides, hydrocarbons and high-temperature applications.

Features and Benefits

- Thermal stability to 350 °C
- Low Bleed
- Low baseline noise

Description	Dimensions	Part No.
ELITE-1	30 M x 0.32 mm x 0.25 µm	N9316023
ELITE-1	30 M x 0.32 mm x 1.0 µm	N9316024
ELITE-1	15 M x 0.25 mm x 1.0 µm	N9316008
ELITE-1	30 M x 0.25 mm x 0.25 µm	N9316010
ELITE-1	30 M x 0.32 mm x 3.0 µm	N9316025
ELITE-1	60 M x 0.25 mm x 0.25 µm	N9316013
ELITE-1	60 M x 0.25 mm x 1.0 µm	N9316014
ELITE-1	60 M x 0.35 mm x 5.0 µm	N9316031

Elite-5 (5% Diphenyl) Dimethylpolysiloxane

General purpose columns for semivolatiles, phenols, amines, residual solvents, drugs of abuse, pesticides, PCB congeners (e.g. Aroclor mixes), solvent impurities. Most inert column on the market. Elite-5MS ultra-low bleed columns improves signal-to-noise ratio for better sensitivity and mass spectral integrity. Temperature limits to 310-400°C depending on column size.

Equivalent to USP G27 phase

Description	Dimensions	Part No.
Elite 5	30 M x 0.25 mm x 0.25 µm	N9316076
Elite 5	30 M x 0.32 mm x 0.25 µm	N9316086
Elite 5	30 M x 0.32 mm x 1.0 µm	N9316087
Elite 5	30 M x 0.53 mm x 0.5 µm	N9316102
Elite 5	30 M x 0.53 mm x 1.50 µm	N9316103
Elite 5 MS	30 M x 0.25 mm x 0.25 µm	N9316282
Elite 5 MS	30 M x 0.32 mm x 0.25 µm	N9316293
Elite 5 MS	30 M x 0.25 mm x 0.50 µm	N9316284
Elite 5 MS	30 M x 0.25 mm x 1.0 µm	N9316283
Elite 5 MS	60 M x 0.25 mm x 1.0 µm	N9316287
Elite 5 HT	15 M x 0.32 mm x 0.10 µm	N9316274
Elite 5 HT	30 M x 0.32 mm x 0.10 µm	N9316275

ELITE-1, ELITE-5, ELITE-WAX, AND ELITE-624

Elite-Wax

The Elite-Wax columns have a lower minimum temperature and a higher maximum temperature than non-bonded polyethylene glycols due to extensive cross linking, delivering higher resolution of low boiling point analytes. Ideal for EPA and ASTM methods. Temperature limits to 240°C.

Primary Applications: This column is suitable for the analysis of fatty acid methyl esters (FAMES), food, flavor and fragrance compounds, alcohols and aromatics. Chemically compatible with water and other injection solvents, but solvents such as water and methanol must be vaporized before reaching the column inlet. Avoid these solvents when using on-column injection techniques. Sensitive to strong inorganic acids. Also meets USP G16 requirements.

Description	Dimensions	Part No.
Elite Wax	30 M x 0.32 mm x 0.25 µm	N9316412
Elite Wax	30 M x 0.25 mm x 0.25 µm	N9316403
Elite Wax	30 M x 0.32 mm x 0.50 µm	N9316413
Elite Wax	30 M x 0.53 mm x 1.0 µm	N9316427
Elite Wax	60 M x 0.25 mm x 0.25 µm	N9316406
Elite Wax	60 M x 0.32 mm x 0.50 µm	N9316417
Elite Wax ETR	50 M x 0.32 mm x 1.0 µm	N9316558
Elite Wax ETR	60 M x 0.32 mm x 1.0 µm	N9316561

Elite-624

We offer a selection of advanced polymer chemistries for the increasingly demanding volatiles applications. Elite-624 columns are recommended for EPA methods 502.2 and 8021, as well as for fast GC/MS volatiles analysis. Temperature limits to 240°C.

Primary Applications: Specifically designed for the analysis of volatile priority pollutants, superb inertness for active compounds. Excellent for U.S. EPA Methods 501.3, 502.2, 503.1, 524.2, 601, 602, 8010, 8015, 8020, 8240 and 8260

Description	Dimensions	Part No.
Elite 624	30 M x 0.53 mm x 3.0 µm	N9316207
Elite 624	30 M x 0.25 mm x 1.4 µm	N9316201
Elite 624	30 M x 0.32 mm x 1.8 µm	N9316203
Elite 624	60 M x 0.25 mm x 1.4 µm	N9316202
Elite 624	60 M x 0.32 mm x 1.8 µm	N9316204
Elite 624	75 M x 0.53 mm x 3.0 µm	N9316208
Elite 624 SIL MS	20 M x 0.18 mm x 1.0 µm	N9315067
Elite 624 SIL MS	30 M x 0.25 mm x 1.4 µm	N9315068
Elite 624 SIL MS	30 M x 0.32 mm x 1.8 µm	N9315069
Elite 624 SIL MS	60 M x 0.32 mm x 1.8 µm	N9315070

For our complete selection of columns please visit our web site at www.perkinelmer.com/gcsupplies

Elite-BAC Blood Alcohol Analysis Columns for GC and High-Speed Headspace Gas Chromatography

Now using the PerkinElmer Blood Alcohol columns, standard separations and automated separations of less than 1.5 minutes can be accomplished. Sample concentrations range from 0.01 to 0.05% with quantitative precision of <3% RSD. A full range of analytes with a choice of internal standards can be used – with excellent quantitative performance. Two columns may be used in parallel for confirmation of peak identity.

Description	Dimensions	Part No.
Elite BAC-1	10 M x 0.18 mm x 1.00 µm	N9316573
Elite BAC-2	10 M x 0.18 mm x 0.63 µm	N9316574
Elite BAC-3	10 M x 0.18 mm x 0.30 µm	N9316575

Standard Blood Alcohol GC Columns

Description	Dimensions	Part No.
Elite BAC-1	30 M x 0.32 mm x 1.80 µm	N9316579
Elite BAC-1	30 M x 0.53 mm x 3.00 µm	N9316578
Elite BAC-2	30 M x 0.32 mm x 1.20 µm	N9316577
Elite BAC-2	30 M x 0.53 mm x 2.00 µm	N9316576

Elite-200 Trifluoropropylmethyl Polysiloxane Capillary Column

Elite-200 is considered to be one of the best capillary columns in the market today, solving many difficult separation problems not possible on any other bonded stationary phase. Due to the electrophilic nature of the fluorine-containing polymer, Elite-200 trifluoropropyl stationary phase has a unique selectivity creating interactions with compounds that contain groups displaying lone-pair electrons, or with electron-rich molecules.

Primary Applications: Ideal for solvents, Freon®, fluorocarbons, alcohols, ketones, silanes and glycols, environmental analytes and CFCs.

Features and Benefits

- Low bleed
- Superior inertness
- Equivalent to USP G6 phase
- Thermally stable to 340 °C

Dimensions	Part No.
Elite-200	
15 M x 0.25 mm x 0.10 µm	N9316616
15 M x 0.32 mm x 1.50 µm	N9316632
30 M x 0.25 mm x 0.25 µm	N9316619
30 M x 0.53 mm x 1.00 µm	N9316642
60 M x 0.53 mm x 0.25 µm	N9316637
60 M x 0.53 mm x 1.00 µm	N9316643

Elite-CLPesticides

Elite-CLPesticides is specially designed to overcome the coelutions and analyte breakdown typically encountered in chlorinated pesticide analyses for U.S. EPA methods 8081, 608, and CLP. Column bleed measured by ECD is extremely low at temperatures greater than 300 °C, which is critical for baking out the column to remove high-boiling compounds commonly found in pesticide/PCB extracts.

Primary Applications: Chlorinated Pesticides and Herbicides. U.S. EPA Methods 504, 608, 619, 8081, 8151, and CLP.

Features and Benefits

- Thermally stable to 340 °C
- Low column bleed – ideal for ECD or GC/MS analysis
- Exceeds performance criteria for U.S. EPA Methods 8081, 608, CLP
- Baseline separation in less than 15 minutes

Dimensions	Part No.
Elite-CLPesticides	
15 M x 0.25 mm x 0.25 µm	N9316661
30 M x 0.25 mm x 0.25 µm	N9316662
15 M x 0.32 mm x 0.50 µm	N9316663
30 M x 0.32 mm x 0.50 µm	N9316664
15 M x 0.53 mm x 0.50 µm	N9316665
30 M x 0.53 mm x 0.50 µm	N9316666
Elite-CLPesticides 2	
15 M x 0.25 mm x 0.20 µm	N9316667
30 M x 0.25 mm x 0.20 µm	N9316668
15 M x 0.32 mm x 0.25 µm	N9316669
30 M x 0.32 mm x 0.25 µm	N9316670
15 M x 0.53 mm x 0.42 µm	N9316671
30 M x 0.53 mm x 0.42 µm	N9316672

Elite-SimDist

Dimensions	Temperature Limits (°C)	Part No.
Elite-HT SimDist for High-Temperature Simulated Distillation		
6 M x 0.53 mm x 0.15 µm	-60 to 400	N9316572
Elite-SimDist Dimethylpolysiloxane Processed for Simulated Distillation		
10 M x 0.45 mm* x 2.55 µm	-60 to 360	N9316261
10 M x 0.53 mm x 3.00 µm	-60 to 360	N9316262

* Ferrule size same as 0.53 mm.

VELOCITY-1, VELOCITY-5, AND VELOCITY-WAX

PerkinElmer Velocity columns are excellent for standard daily test applications. They combine quality and affordability with reproducible results.

Features and Benefits

- Excellent results for theoretical plates, selectivity, & tailing factor tests
- Robust column cage
- Low baseline noise

Velocity-1 — 100% Dimethyl Polysiloxane

General purpose columns with a highly versatile phase that is extremely rugged, exhibiting long column lifetime, and high operating temperatures. Ideal for the analysis of non-polar petrochemical samples, such as detailed hydrocarbon analysis, hydrocarbon gases, petroleum oxygenates, petroleum aromatics, fuels, waxes, oils, sulfur compounds, mercaptans, and carbon disulfide. It also is an excellent phase for solvents, chemicals, flavors, fragrances, essential oils, air toxins, chlorofluorocarbons, arson analysis, pesticides, and hydrocarbons. Thermal stability to 350 °C.

Description	Dimensions	Part No.
Velocity-1	15 M x 0.25 mm x 0.25 µm	N9306319
Velocity-1	15 M x 0.25 mm x 1.00 µm	N9306310
Velocity-1	30 M x 0.25 mm x 0.25 µm	N9306312
Velocity-1	30 M x 0.25 mm x 1.00 µm	N9306323
Velocity-1	30 M x 0.32 mm x 0.25 µm	N9306318
Velocity-1	30 M x 0.32 mm x 1.00 µm	N9306321
Velocity-1	30 M x 0.32 mm x 3.00 µm	N9306329
Velocity-1	60 M x 0.25 mm x 0.25 µm	N9306320
Velocity-1	60 M x 0.25 mm x 1.00 µm	N9306328
Velocity-1	60 M x 0.32 mm x 1.00 µm	N9306324

Velocity-5 — 5% Diphenyl and 95% Dimethyl Polysiloxane

This column is ideal for general purpose analysis of drugs, pesticides, hydrocarbons, essential oils and semi-volatiles and solvent impurities. Low polarity phase with thermal stability to 350°C.

Description	Dimensions	Part No.
Velocity-5	15 M x 0.32 mm x 0.25 µm	N9306325
Velocity-5	30 M x 0.25 mm x 0.25 µm	N9306311
Velocity-5	30 M x 0.32 mm x 0.25 µm	N9306313
Velocity-5	30 M x 0.32 mm x 1.00 µm	N9306316
Velocity-5	30 M x 0.53 mm x 0.50 µm	N9306326
Velocity-5	30 M x 0.53 mm x 1.50 µm	N9306327

Velocity-Wax — Polyethylene Glycol

This column is ideal for intermediate to high polarity compounds. Thermal stability to 250 °C.

Description	Dimensions	Part No.
Velocity-Wax	30 M x 0.32 mm x 0.25 µm	N9306314
Velocity-Wax	30 M x 0.25 mm x 0.25 µm	N9306315
Velocity-Wax	30 M x 0.32 mm x 0.50 µm	N9306317
Velocity-Wax	30 M x 0.53 mm x 1.00 µm	N9306322

MAINTAIN THE INTEGRITY OF YOUR CAPILLARY COLUMN WITH A FUSED SILICA GUARD COLUMN

Using the Elite-Guard or Elite-Siltek® guard column lengthens the life of the capillary column and improves the analyte focusing. The 5 M length of deactivated uncoated fused silica is connected to the inlet end of the capillary column and traps nonvolatile residues, preventing them from collecting at the head of the analytical column. This length of fused silica does not contain stationary phase adding only a minimal amount of time to the analysis.

Features and Benefits

- Increase column life and performance
- Elite-Guard temperature range to 325 °C
- Elite-Siltek® guard temperature range to 380 °C

Description	Dimensions	Part No.
Elite-Guard	5 M x 0.10 mm	N9316601
Elite-Guard	5 M x 0.18 mm	N9316602
Elite-Guard	5 M x 0.25 mm	N9301356
Elite-Guard	5 M x 0.32 mm	N9301357
Elite-Guard	5 M x 0.45 mm	N9316605
Elite-Guard	5 M x 0.53 mm	N9301358
Elite-Siltek® Guard	5 M x 0.25 mm	N9316607
Elite-Siltek® Guard	5 M x 0.32 mm	N9316608
Elite-Siltek® Guard	5 M x 0.53 mm	N9316609

Wide-Bore Adapter Kit

Contains all the parts necessary to adapt packed column injectors quickly and easily for use with wide-bore capillary columns. Includes 0–20 mL/min flow controller element, wide-bore adapter with 1/16 inch fitting, wide-bore glass liner and column support hanger.



Description	Part No.
Wide-Bore Adapter Kit	N6120001

UNIVERSAL CONNECTORS



Dimension	Part No.
Universal Connector (pkg. 5)	N9302149
Metal Universal Connectors: 0.25 mm i.d. (pkg. 10)	N9301167
Universal Y Splitter (pkg. 1)	N9303448
Polyimide Sealing Resin (5 g)	N9301343
Undeactivated Prestight Column Connectors (pkg. 5)	N9303962

Wafer Scribes

The PerkinElmer ceramic wafer scribe is inexpensive and ideal for cutting polyimide fused silica capillary columns and guard columns. The scribe is easy to hold and simple to use. All four sides can be used as a cutting tool.



Dimension	Part No.
Wafer Scribes (pkg. 10)	N9301376