

since  
1980

2020

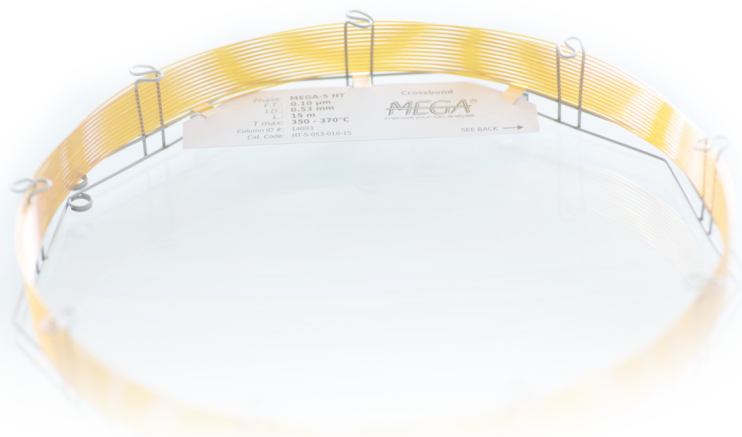
**MEGA**<sup>®</sup>  
**TECH**  
improve your GC analysis

**GC** columns  
accessories  
and solutions

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1980

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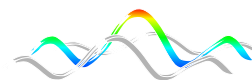


GC-MS  
columns

dex xeb  
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# About us



For more than 35 years, MEGA has developed and manufactured gas chromatography GC columns offering both general-purpose and application-specific solutions to analysts around the world. Today we produce and offer:

- one of the most complete range of analytical columns for GC, GC-MS, FAST-GC, Wide-Bore GC, Chiral-GC
- special and innovative products and accessories for Multidimensional-GC (including GCxGC), High Temperature GC and MEMS micro-fabricated "Lab-on-a-chip" GC
- excellent efficiency and inertness; we produce and test each column one-by-one to assure the maximum column-to-column reproducibility and quality
- custom products by request
- support and services for Your GC analysis

our experience in Gas Chromatography at Your service

# GC Columns Available Dimensions

|                   |                     |                     |                     |                     |
|-------------------|---------------------|---------------------|---------------------|---------------------|
| Internal Diameter | 0.05mm              | 0.075mm             | 0.10mm              | 0.15mm              |
| Length*           | from 1 to 5m        | from 1 to 10m       | from 1 to 20m       | from 1 to 40m       |
| Film Thickness**  | from 0.05 to 0.25µm | from 0.05 to 0.50µm | from 0.05 to 1.40µm | from 0.05 to 2.00µm |

**FAST**

|                   |                     |                     |                     |                      |
|-------------------|---------------------|---------------------|---------------------|----------------------|
| Internal Diameter | 0.18mm              | 0.20mm              | 0.25mm              | 0.32mm               |
| Length*           | from 5 to 60m       | from 5 to 105m      | from 5 to 105m      | from 5 to 105m       |
| Film Thickness**  | from 0.05 to 2.00µm | from 0.05 to 2.00µm | from 0.05 to 3.00µm | from 0.05 to 10.00µm |

**CONVENTIONAL**

|                   |               |               |
|-------------------|---------------|---------------|
| Internal Diameter | 0.45mm        | 0.53mm        |
| Length*           | from 5 to 75m | from 5 to 75m |
| Film Thickness**  | up to 7.00µm  | up to 10.00µm |

**WIDE-BORE**

Completely customize your column by selecting every combination of sizes and asking for out-of-catalog configurations. Since 1980 we develop ad-hoc solutions for your specific analytical problem. We are also able to tune the selectivity of the stationary phase to respond to particular needs.

All our stationary phases are available for FAST, Conventional, Wide-Bore and Multidimensional-GC, including solutions and kits for GCxGC.

\*: shorter and special lengths are available for GCxGC solutions and kits

\*\*: the maximum film thickness depends on the stationary phase type

# Products Highlight

**Metal MTX** capillary columns for high temperature GC (up to 420-430°C with our HT phases). You can require almost every stationary phase (not HT too) to be coated onto the high inertness metal capillary tubing. Contact us to have more details and send your request

**metalMTX**  
GC columns

**MEGA-WAX Plus** column is a new high stable and inert PEG phase (270°C max Temperature) excellent also for GC-MS analysis, truly equivalent to InnoWax columns. Crossbonded and water resistant

**mega**  
**WAX plus**

**MEGA-FFAP EXT** column is a crossbonded and water resistant version of the well known MEGA-ACID (FFAP) phase with also an extended working temperature range

**mega**  
**FFAP EXT**

**MEGA-2D** single column is a revolutionary unique tubing column coated with two in series different stationary phases for GCxGC and MD-GC applications. No connections are needed. Contact us to have more information and discover new selectivities using MEGA-2D technology applied to conventional 1D GC too

**mega<sup>2D</sup>**  
columns

**MEGA-XMLB** column is a new selectivity low polarity phase ideal as confirmation column. MEGA-XMLB is a low bleeding and high temperature stable column (up to 360°C) excellent for Pesticides, PCBs and PAHs analysis for example

**mega**  
**XMLB**

**MEGA-PAH 2** column arrives beside MEGA-PAH column to solve EU-regulated PAHs isomers separation. High thermal stability and low bleeding assure an excellent signal-to-noise ratio

**mega**  
**PAH 2**

**MEGA-WAX BA** is a basic treated PEG column specifically designed for basic compounds analysis, including alkylamines, diamines, triamines etc.

**mega**  
**WAX BA**

| Stationary Phase   | T max *            | Equivalent/Alternative to  | EPA/USP Methods **   | Applications   |
|--|--------------------|--|--|--|
| <b>MEGA-I</b><br>100% methyl polysiloxane                              | up to <b>350°C</b> | DB-I, HP-I, AT-I(+), ZB-I, 007-I, Rtx-I, BP-I, SPB-I, CP Sil 5 CB                        | EPA: 504.1, 505, 551, 606, 612, 8141A/B, etc.**<br><b>USP: G1, G2, G9, G38</b>                                   | <b>General purpose column</b><br>Solvent impurities, PCBs, SimDist, drugs, natural gases, essential oils, semivolatiles, pesticides, phenols, etc.   |
| <b>MEGA-5</b><br>5% phenyl,<br>95% methyl polysiloxane                 | up to <b>350°C</b> | DB-5, HP-5, AT-5(+), ZB-5, 007-5, Rtx-5, BP-5, SPB-5, CP Sil 8 CB                        | EPA: 506, 611, 604, 607, 608, 8015, 8041, 8082, 8091, etc.**<br><b>USP: G27, G36, G41</b>                        | <b>General purpose column</b><br>Solvent impurities, PCBs, hydrocarbons, essential oils, semivolatiles, pesticides, phenols, etc.  |
| <b>MEGA-SE52</b><br>5% phenyl,<br>95% methyl polysiloxane              | up to <b>350°C</b> | SE52   | <b>USP: G27, G36, G41</b>  | <b>General purpose column</b><br>Solvent impurities, PCBs, hydrocarbons, essential oils, semivolatiles, triglycerides, pesticides, poly-waxes, etc.  |
| <b>MEGA-SE54</b><br>5% phenyl, 1% vinyl,<br>94% methyl polysiloxane    | up to <b>350°C</b> | SE54   | <b>USP: G27, G36, G41</b>  | <b>General purpose column</b><br>Solvent impurities, PCBs, hydrocarbons, essential oils, semivolatiles, allergens, pesticides, etc.  |
| <b>MEGA-I701</b><br>14% cyanopropylphenyl,<br>86% methyl polysiloxane  | up to <b>280°C</b> | DB-I701, HP-I701, AT-I701(+), ZB-I701, 007-I701, Rtx-I701, BP-I0, SPB-I701, CP Sil 19 CB | EPA: 513, 515.2, 552.2, 607, 619, 622, 8091, 8121, etc.**<br><b>USP: G46</b>                                     | <b>General purpose column</b><br>Residual solvents, oxygenated pesticides, essential oils, allergens, etc.<br><b>Ideal as confirmation column and GCxGC applications</b>   |
| <b>MEGA-I7</b><br>50% phenyl,<br>50% methyl polysiloxane               | up to <b>340°C</b> | DB-I7, DB-608, HP-I7, AT-50(+), ZB-50, 007-17, Rtx-17, BPX-50, SPB-50, CP Sil 24 CB      | EPA: 604, 608, 619, 8060, 8081, etc.**<br><b>USP: G3, G17</b>  | <b>General purpose column</b><br>Phthalate esters, herbicides, pharmaceuticals, etc.<br><b>Ideal as confirmation column and GCxGC applications</b>   |
| <b>MEGA-624</b><br>6% cyanopropylphenyl,<br>94% methyl polysiloxane    | up to <b>280°C</b> | DB-624, HP-624, AT-624(+), ZB-624, 007-624, Rtx-624, Vocol, SPB-624, VF-624 ms           | EPA: 501.3, 502.1, 502.2, 601, 624, 1624, 8020, 8021, etc.**<br><b>USP: G43, 467 (OVIs)</b>                      | <b>General purpose column</b><br>Volatile organic pollutants, purgeable aromatics, purgeable hydrocarbons, VOCs, pharmaceuticals, etc.   |
| <b>MEGA-WAX</b><br>polyethylene glycol (PEG)                           | up to <b>250°C</b> | DB-Wax, HP-Wax, AT-Wax(+), ZB-Wax, 007-CW, Rtx-Wax, BP-20, CP Wax 52 CB                  | EPA: 602, 603, 619, 8015C, etc.**<br><b>USP: G14, G15, G16, 467 (OVIs)</b>                                       | <b>General purpose column</b><br>FAMES, flavor compounds, essential oils, BTEX aromatics, solvents, alcohols, etc.<br><b>Tune your Wax column polarity (i.e. WAX-20M, WAX-400, WAX-8M and more!). Ask us for more info</b> |
| <b>MEGA-I MS</b><br>low bleeding<br>100% methyl polysiloxane           | up to <b>350°C</b> | DB-I ms (UI), HP-I ms, AT-I ms(+), ZB-I ms, Rtx-I ms, Equity-I, CP Sil 5 CB ms           | EPA: 504.1, 505, 606, etc.**<br><b>USP: G1, G2, G9, G38</b>  | <b>General purpose column for GC-MS</b><br>See MEGA-I phase on this page   |
| <b>MEGA-5 MS</b><br>low bleeding 5% phenyl,<br>95% methyl polysiloxane | up to <b>360°C</b> | DB-5 ms (UI), HP-5 ms, AT-5 ms(+), ZB-5 ms, 007-5 ms, Rtx-5 ms, Equity-5, BPX-5          | EPA: 513, 528, 552, 610, 613, 1625, 1653, 8015B, 8091, 8100, 8141A/B, 8280A, etc.**<br><b>USP: G27, G36, G41</b> | <b>General purpose column for GC-MS</b><br>See MEGA-5 phase on this page   |

| Stationary Phase   | T max *            | Equivalent/Alternative to  | EPA/USP Methods **  | Applications   |
|--|--------------------|--|---|--|
| <b>MEGA-5 MS Xi</b><br>low bleeding<br>silphenylene based MS phase                         | up to <b>360°C</b> | DB-5 ms (UI),<br>Rtx-5 Sil ms,<br>SLB-5 ms, ZB-5 ms                          | EPA: 513, 515.2, 521, 525, 529, 552.2,<br>604, 610, 625, 1613, 1625, 8041<br>8061A, 8081A, 8121, 8270C, etc.**<br><b>USP: G27, G36, G41</b> | <b>General purpose column for GC-MS</b><br>Dioxins and furans, herbicides,<br>phthalate esters, POCs, chlorinated acids,<br>etc. |
| <b>MEGA-35 MS</b><br>low bleeding 35% phenyl,<br>65% methyl polysiloxane                   | up to <b>340°C</b> | DB-35 ms, BPX-35,<br>BPX-608, ZB-MultiResidue-2,<br>Rtx-35 Sil ms            | EPA: 507, 508, 552, 614,<br>615, 622, 8141A, 8151A, etc.**<br><b>USP: G28, G32, G42</b>   | <b>General purpose column for GC-MS</b><br>See MEGA-35 phase on the next page  |
| <b>MEGA-17 MS</b><br>low bleeding 50% phenyl,<br>50% methyl polysiloxane                   | up to <b>340°C</b> | DB-17 ms, Rtx-17 Sil ms  | EPA: 505, 610, 614, 619,<br>8040, 8041, etc.**<br><b>USP: G3, G17</b>   | <b>General purpose column for GC-MS</b><br>See MEGA-17 phase on the previous page  |
| <b>MEGA-225 MS</b><br>low bleeding 25% cyanopropyl,<br>25% phenyl, 50% methyl polysiloxane | up to <b>240°C</b> | DB-225 ms  | EPA: 8095, etc.**<br><b>USP: G7, G19</b>  | <b>General purpose column for GC-MS</b><br>See MEGA-225 phase on the next page   |
| <b>MEGA-624 MS</b><br>low bleeding 6% cyanopropylphenyl,<br>94% methyl polysiloxane        | up to <b>280°C</b> | VF-1301 ms,<br>VF-624 ms   | EPA: 8260B, etc.**<br><b>USP: G43, 467 (OVIs)</b>   | <b>General purpose column for GC-MS</b><br>See MEGA-624 phase on the previous<br>page  |
| <b>MEGA-WAX MS</b><br>low bleeding<br>polyethylene glycol (PEG)                            | up to <b>270°C</b> | Stabilwax, ZB-Wax plus,<br>InnoWax, VF-WAX ms                                | EPA: 602, 603, 619,<br>8015C, 8121, etc.**<br><b>USP: G14, G15, G16, etc.**</b>   | <b>General purpose column for GC-MS</b><br>See MEGA-WAX phase on the previous<br>page  |
| <b>MEGA-10</b><br>100% cyanopropyl polysiloxane  | up to <b>260°C</b> | HP-88, AT-Silar, Silar 10<br>Rtx-2560, SP-2560, BPX-70<br>CP Sil 88, ZB-FAME | EPA: 613, 1613, 8290B, etc.**<br><b>USP: G5, G8, G48</b>  | High polarity column ideal for<br><i>cis/trans</i> FAMES isomers analysis,<br>available also for FAST-GC                         |
| <b>MEGA-13</b><br>13% phenyl,<br>87% methyl polysiloxane                                   | up to <b>350°C</b> | CP Sil 13 CB   | EPA: 601, 602, 624, etc.**  | <b>General purpose column,<br/>ideal as confirmation column</b>  |
| <b>MEGA-20</b><br>20% phenyl<br>80% methyl polysiloxane                                    | up to <b>340°C</b> | AT-20(+), 007-7,<br>Rtx-20, SPB-20   | <b>USP: G28, G32</b>  | <b>General purpose column,<br/>ideal as confirmation column</b>  |
| <b>MEGA-200</b><br>trifluoropropyl,<br>methyl polysiloxane                                 | up to <b>250°C</b> | DB-200, DB-210, AT-210(+),<br>007-210, Rtx-200,<br>SP-2401, VF-200 ms        | EPA: 551, 612, 625,<br>8095, etc.**<br><b>USP: G6</b>   | <b>Unique selectivity column,</b><br>Freon fluorocarbons, ketones, alcohols,<br>organophosphorus pesticides, etc.                |

| Stationary Phase  | T max *                         | Equivalent/Alternative to   | EPA/USP Methods **  | Applications   |
|---|---------------------------------|---|---|--|
| <b>MEGA-225</b><br>25% cyanopropyl, 25% phenyl<br>50% methyl polysiloxane             | up to <b>260°C</b>              | DB-225, HP-225, AT-225(+),<br>007-225, Rtx-225,<br>BP-225, CP Sil 43 CB                 | EPA: 8095, etc.**<br><b>USP: G7, G19, G26</b>                               | <b>Mid-to-high polarity phase</b><br>Carbohydrates, sterols, flavor<br>compounds, etc.   |
| <b>MEGA-35</b><br>35% phenyl,<br>65% methyl polysiloxane                              | up to <b>340°C</b>              | DB-35, HP-35, AT-35(+),<br>ZB-35, 007-11, ZB-MultiResidue-2,<br>Rtx-35, SPB-35, SPB-608 | EPA: 507, 508, 513, 551.1,<br>615, 622, etc.**<br><b>USP: G28, G32, G42</b> | <b>General purpose column</b><br>Pesticides, PCBs, substituted polar<br>compounds, phenols, etc.<br><b>Ideal as confirmation column</b>  |
| <b>MEGA-50</b><br>50% cyanopropyl,<br>50% methyl polysiloxane                         | up to <b>260°C</b>              | DB-23, Silar-5,<br>Rtx-2330, SP-2330  | <b>USP: G8</b>  | <b>Mid-to-high polarity phase</b><br>Carbohydrates, sterols, FAMES, flavor<br>compounds, etc.  |
| <b>MEGA-ALC I&amp;2</b><br>proprietary specific phases                                | up to <b>280°C</b>              | DB-ALC I&2,<br>Rtx-BAC I&2  | -   | <b>Application specific column</b><br>for blood alcohols testing<br>(see application notes on <a href="http://www.mega.mi.it">www.mega.mi.it</a> )   |
| <b>MEGA-BASIC</b><br>proprietary specific phase                                       | <b>n.d.</b>                     | <b>unique column</b>  | -   | <b>Application specific column</b><br>for basic compounds (e.g. amines)<br>(see application notes on <a href="http://www.mega.mi.it">www.mega.mi.it</a> )  |
| <b>MEGA-BIODIESEL</b><br>phases for biodiesel analysis                                | up to <b>380°C</b><br>(EN14105) | Biodiesel Columns   | EN 14105 (ASTM 6584),<br>EN 14103, EN 14110,<br>EN 14331                    | <b>Application specific column</b><br>for free and total glycerine (phase stable<br>up to 380°C) and for FAMES in<br>biodiesel analysis<br>(see application notes on <a href="http://www.mega.mi.it">www.mega.mi.it</a> )                              |
| <b>MEGA-DAI I&amp;2</b><br>proprietary unique phases for<br>Direct Aqueous Injections | up to <b>320°C</b>              | <b>unique columns</b>   | -   | <b>Application specific column</b><br>for direct introduction of aqueous<br>samples, thus minimizing sample<br>preparation<br>(see application notes on <a href="http://www.mega.mi.it">www.mega.mi.it</a> )   |
| <b>MEGA-FFAP EXT</b><br>acid modified<br>polyethylene glycol (PEG)                    | up to <b>260°C</b>              | DB-FFAP, AT-1000(+),<br>ZB-FFAP, 007-FFAP, Stabilwax-DA,<br>BP-21, Nukol, CP Wax 57 CB  | EPA: 8032, etc.**<br><b>USP: G14, G15, G16,<br/>G25, G35, G39</b>           | <b>General purpose column</b><br>ideal for free acids, FAMES, BTEX<br>aromatics, flavor compounds, alcohols,<br>spirits, polar compounds, etc.<br><b>Extended temperature range phase,</b><br><b>crossbonded.</b><br><b>Aqueous samples compatible</b> |
| <b>MEGA-JXR</b><br>100% methyl polysiloxane   | up to <b>350°C</b>              | <b>no equivalent<br/>on the market</b>  | <b>USP: G1, G2, G9, G38</b>   | General purpose apolar column  |
| <b>MEGA-LAP</b><br>proprietary unique phase<br>for Lipids Analysis                    | up to <b>370°C</b>              | <b>unique column</b>  | -   | <b>Application specific column</b><br>for lipids, sterols and triglycerides<br>analysis<br>(see application notes on <a href="http://www.mega.mi.it">www.mega.mi.it</a> )  |



| Stationary Phase  | T max *            | Equivalent/Alternative to                        | EPA/USP Methods **   | Applications   |
|---|--------------------|--|--|--|
| <b>MEGA-PAH</b><br>unique phase for Polycyclic Aromatic Hydrocarbons                      | up to <b>350°C</b> | unique column                                    | EPA: 610, 8100, etc.**   | <b>Application specific column</b><br>for polycyclic aromatics hydrocarbons<br>(see application notes on <a href="http://www.mega.mi.it">www.mega.mi.it</a> )  |
| <b>MEGA-PLUS</b><br>copolymer polyethylene glycol + methyl polysiloxane                   | n.d.               | Agilent "DX" columns series                      | EPA: 505, etc.**   | <b>Discover new selectivities</b><br>Choose also between MEGA-PLUS 25 (25% PEG), MEGA-PLUS 75 (75% PEG)... and others! We can customize these columns as you need!   |
| <b>MEGA-POF I&amp;2</b><br>proprietary phases for pesticides, herbicides and insecticides | n.d.               | unique columns<br>ZB-MultiResidue-I (MEGA-POF I) | EPA: 622, etc.**   | <b>Application specific columns</b><br>developed for pesticides, herbicides, insecticides analysis etc.<br>(see application notes on <a href="http://www.mega.mi.it">www.mega.mi.it</a> )  |
| <b>MEGA-I PONA</b><br>PDMS optimized for hydrocarbons analysis                            | up to <b>350°C</b> | DB-Petro, HP-Pona, Rtx-I Pona, Petrocol          | ASTM D6730-01, etc.**  | <b>Optimized phase</b><br>for DHA (Detailed Hydrocarbons Analysis), PONA, PIANO and PNA analysis   |
| <b>MEGA-PS255</b><br>1% vinyl, 99% methyl polysiloxane                                    | up to <b>350°C</b> | no equivalent on the market                      | -  | Apolar phase, suitable for high film thickness columns, to analyze solvents, alcohols, volatiles, etc.   |
| <b>MEGA-PS264</b><br>5.8% phenyl, 0.2% vinyl, 94% methyl polysiloxane                     | up to <b>350°C</b> | no equivalent on the market                      | -  | Apolar phase, suitable for high film thickness columns, to analyze solvents, alcohols, volatiles, etc.   |
| <b>MEGA-SE30</b><br>100% methyl polysiloxane  | up to <b>350°C</b> | SE30   | EPA: 504.1, 505, 606, 8141A, etc.**<br><b>USP: G1, G2, G9, G38</b>                       | General purpose apolar column  |
| <b>MEGA-SOLVE I&amp;2</b><br>proprietary unique phases for complex solvents mix analysis  | n.d.               | unique columns<br>TCEP (MEGA-SOLVE 2)            | -  | <b>Application specific columns</b><br>developed for complex solvents mixtures analysis. MEGA-SOLVE 2 is ideal for aromatics and oxygenates in gasoline<br>(see application notes on <a href="http://www.mega.mi.it">www.mega.mi.it</a> )  |
| <b>MEGA-TCEP</b><br>1,2,3-tris-(2-cyanoethoxy)propane                                     | up to <b>150°C</b> | CP-TCEP, Rt-TCEP, SPB-TCEP                       | -  | <b>Application specific columns</b><br>ideal for aromatics and oxygenates in gasoline  |
| <b>MEGA-VOC I&amp;2</b><br>proprietary phases for Volatile Organic Compounds              | n.d.               | unique columns                                   | EPA: 503.1, 504.1, 524.2, 551.1, 601, 602, 603, 1624, 8010B, 8021B, 8030A, 8260B, etc.** | <b>Application specific columns</b> for volatiles organic compounds (OVIs), solvents and purgeable compounds. Due to the high max. temperature, they are <b>ideals for two-parallel columns config. in the same oven</b><br>(see application notes on <a href="http://www.mega.mi.it">www.mega.mi.it</a> ) |

| Stationary Phase      | T max *     | Equivalent/Alternative to   | EPA/USP Methods **                 | Applications  |
|-----------------------|-------------|---|------------------------------------|---|
| MEGA-DEX<br>DAC Beta  | up to 230°C |    | chiral-enantiomeric<br>separations | <b>Diacetyl TBS Beta cyclodextrin</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes and<br>a database with hundreds chiral compounds<br>separated with MEGA-DEX columns        |
| MEGA-DEX<br>DAC Gamma | up to 230°C |    | chiral-enantiomeric<br>separations | <b>Diacetyl TBS Gamma cyclodextrin</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes and<br>a database with hundreds chiral compounds<br>separated with MEGA-DEX columns       |
| MEGA-DEX<br>DET Beta  | up to 230°C |    | chiral-enantiomeric<br>separations | <b>Diethyl TBS Beta cyclodextrin</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes and<br>a database with hundreds chiral compounds<br>separated with MEGA-DEX columns         |
| MEGA-DEX<br>DET Gamma | up to 230°C |    | chiral-enantiomeric<br>separations | <b>Diethyl TBS Gamma cyclodextrin</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes and<br>a database with hundreds chiral compounds<br>separated with MEGA-DEX columns        |
| MEGA-DEX<br>DMP Beta  | up to 230°C |    | chiral-enantiomeric<br>separations | <b>Dimethyl-pentyl TBS Beta cyclodextrin</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes and<br>a database with hundreds chiral compounds<br>separated with MEGA-DEX columns |
| MEGA-DEX<br>DMT Beta  | up to 230°C |    | chiral-enantiomeric<br>separations | <b>Dimethyl TBS Beta cyclodextrin</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes and<br>a database with hundreds chiral compounds<br>separated with MEGA-DEX columns        |
| MEGA-DEX<br>B-SE      | up to 230°C |    | chiral-enantiomeric<br>separations | <b>New cyclodextrin derivative</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes and<br>a database with hundreds chiral compounds<br>separated with MEGA-DEX columns           |
| MEGA-DEX<br>B-03      | up to 230°C |   | chiral-enantiomeric<br>separations | <b>New cyclodextrin derivative</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes and<br>a database with hundreds chiral compounds<br>separated with MEGA-DEX columns           |
| MEGA-DEX<br>G-01      | up to 230°C |  | chiral-enantiomeric<br>separations | <b>New cyclodextrin derivative</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes<br><b>Unique column on the market able<br/>to separate Bornyl Acetate enantiomers</b>         |
| MEGA-DEX<br>G-03      | up to 250°C |  | chiral-enantiomeric<br>separations | <b>New cyclodextrin derivative</b><br>based column. See and download on<br><a href="http://www.mega.mi.it">www.mega.mi.it</a> the application notes<br><b>Developed for pyrethroids and<br/>pesticides chiral separations</b>                     |

**dex FAST**  
qex FAST

MEGA has more than 35 years experience in manufacturing and developing chiral GC columns. Our MEGA-DEX GC columns line is growing; check on our website or contact us to have more info and application notes about, for example, our MEGA-DEX B-01 and B-02 chiral phases. A full line of MEGA-DEX FAST chiral columns is also available in order to speed up your enantiomeric separations while keeping excellent resolution efficiency.

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website for a more complete guide to choose your GC column on the basis of  
ve, USP requirements and/or ASTM method.

Website NEW : [www.chromalytic.net.au](http://www.chromalytic.net.au) E-mail : [info@chromtech.net.au](mailto:info@chromtech.net.au) Tel: 03 9762 2034 . . . in AUSTRALIA

| Stationary Phase  | T max *                | Equivalent/Alternative to                             | EPA/USP Methods ** | Applications  |
|---|------------------------|---|--------------------|---|
| <b>MEGA-I HT</b><br>100% methyl polysiloxane<br>for high temperature                      | up to <b>400°C</b>     | high temperature column<br>DB-I HT, ZB-I HT (Inferno) | -                  | High Temperature<br>general purpose column<br>See MEGA-I phase. High Molecular Weight<br>Waxes, Motor Oils, Polymers/Plastics,<br>Simulated Distillation            |
| <b>MEGA-5 HT</b><br>high temperature 5% phenyl,<br>95% methyl polysiloxane                | up to <b>400°C</b>     | high temperature column<br>DB-5 HT, ZB-5 HT (Inferno) | -                  | High Temperature<br>general purpose column<br>See MEGA-5 phase. High Molecular Weight<br>Waxes, Diesel Fuels, Simulated Distillation,<br>Surfactants, Triglycerides |
| <b>MEGA-8 HT</b><br>high temperature<br>low-to-mid polarity special phase                 | up to <b>400°C</b>     | high temperature column<br>HT8                        | -                  | High Temperature<br>general purpose column<br>Ideal for PCBs compounds, Pesticides,<br>environmental analysis   |
| <b>MEGA-35 HT</b><br>high temperature 35% phenyl,<br>65% methyl polysiloxane              | up to <b>370°C</b>     | high temperature column<br>ZB-35 HT (Inferno)         | -                  | High Temperature<br>general purpose column<br>See MEGA-35 phase.<br>Semi-volatiles analysis, Pesticides,<br>Pharmaceuticals   |
| <b>MEGA-17 HT</b><br>high temperature 50% phenyl,<br>50% methyl polysiloxane              | up to <b>370°C</b>     | high temperature column<br>DB-17 HT                   | -                  | High Temperature<br>general purpose column<br>See MEGA-17 phase. Ideal for confirmation<br>analysis, ideal as high polarity dimension in<br>GCxGC-HT configurations |
| <b>MEGA-65 HT</b><br>high temperature 65% phenyl,<br>35% methyl polysiloxane              | up to <b>360-370°C</b> | high temperature column<br>007-65HT, Rtx-65TG, TAP-CB | -                  | High Temperature column<br>Ideal for triglycerides separations based<br>on carbon number and degree of<br>unsaturation  |
| <b>MEGA-SE54 HT</b><br>high temperature 5% phenyl,<br>1% vinyl, 94% methyl polysiloxane   | up to <b>400°C</b>     | high temperature<br>unique column                     | -                  | High Temperature<br>general purpose column<br>See MEGA-SE54 phase.<br>High boiling petroleum products,<br>Long-chained hydrocarbons                                 |
| <b>MEGA-1701 HT</b><br>high temperature 14% cyanopropylphenyl,<br>86% methyl polysiloxane | up to <b>320°C</b>     | high temperature<br>unique column                     | -                  | High Temperature<br>general purpose column<br>See MEGA-1701 phase. Ideal for confirmation<br>analysis, ideal as mid-polar column in<br>GCxGC-HT configurations      |
| <b>MEGA-WAX HT</b><br>high temperature<br>polyethyleneglycol (PEG)                        | up to <b>300°C</b>     | high temperature<br>unique column                     | -                  | High Temperature<br>unique PEG phase<br>Extend the temperature limits of your<br>FAST-GC and GCxGC methods while<br>using a polar WAX phase                         |



For our MEGA-HT High Temperature Columns range with fused silica tubing, we use specifically engineered high resistance polyimide coating, resulting in high temperature endurance and flexure with superior bend radius.



All our stationary phases are available for FAST-GC. Contact us to have more details. You can download on [www.mega.mi.it](http://www.mega.mi.it) our free guide to FAST-GC with a tons of application notes and technical tips to perform and optimize your FAST-GC analysis. 0.15mm I.D., 0.18mm I.D. and 0.20mm I.D. tubing sizes are also available for all our columns.



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rature range may change depending on the stationary phase film thickness.  
website for a more complete guide to choose your GC column on the basis of  
ve, USP requirements and/or ASTM method.

## Built-in Retention Gap - No Connections needed

**MEGA-GAP columns line incorporates both guard column and analytical column** in a continuous length of tubing, eliminating the connection and all connection-associated problems. The guard column side is permanently marked with our oven temperature resistant labels.

Original Large Volume Gaps (UNCORET) columns (0.53mm, 12m Integrated Gap + 3m coated) are available from MEGA.

**Extend your column's lifetime with this connection-free solution!**



## Easy to handle - Excellent inertness - Easy to install

**Retention Gaps deactivated for any purpose:** our Retention Gaps are suitable for any GC analytical need. Use with polar solvents, apolar solvents, water containing samples injections and for general use. They are available in any internal diameter size (0.05, 0.075, 0.10, 0.15, 0.18, 0.20, 0.25, 0.32, 0.45 and 0.53mm I.D.) with our standard fused silica tubing or with our High-Temperature fused silica tubing. Any length available, also in pre-cut pieces individually packaged and ready to use. By request we also pre-install (with our Press-Fit connectors, see below) the selected retention gap on the GC column for a ready-to-install solution.

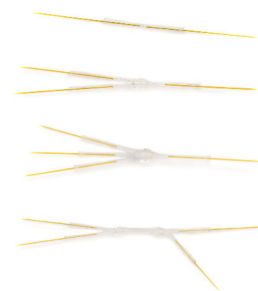
MEGA Retention Gaps have an unsurpassed chemical inertness. Use our Retention Gaps for focusing the analytes when a large (liquid) sample is introduced directly into the column and/or to protect the analytical column from contamination. Deactivated Retention Gaps are also useful as connecting pipes to various part of GC systems with different configurations.



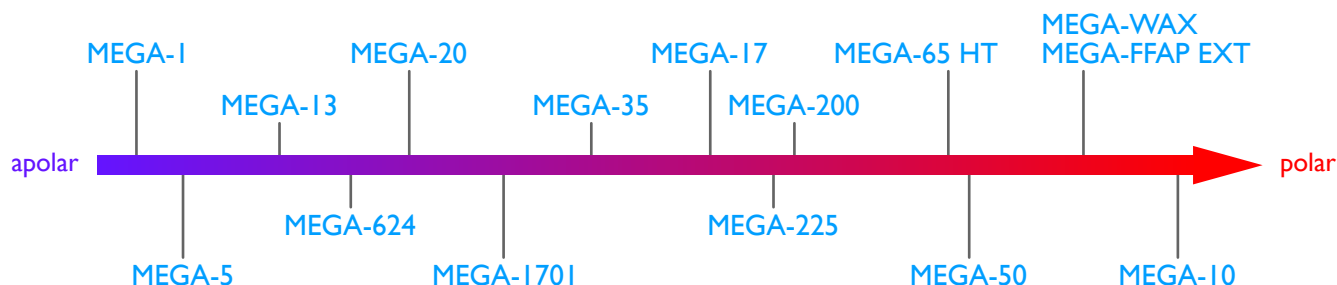
## Easy to handle - Easy to install

**A simple pressure to assure a perfect seal**

**MEGA Press-Fit Connectors** allow you to simply connect, with a tight seal, different columns or Retention Gaps in many ways. Our Press-Fit connectors are universal to fit any tubing size. Available as linear 2-ways union (to connect two columns or a Retention Gap to the analytical column), "Y" 3-ways (e.g. ideal to connect two columns to a single injector - double detector GC configuration) or personalized Multiways connectors for advanced analytical system configurations as MD-GC and other custom settings.



# Common Phases Polarity Quick View



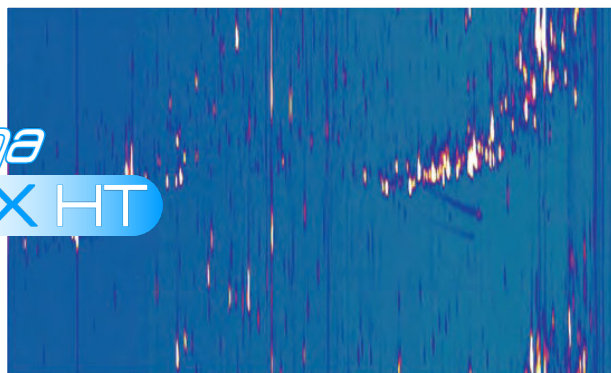
## GCxGC Solutions

MEGA offers unique and innovative products for your GCxGC analysis.

We can provide completely custom GCxGC solutions, including ready-to-use kits.

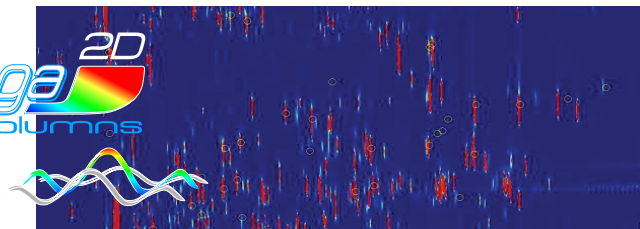
The selectivity of the stationary phase plays a fundamental role in GC and it is even more important in GCxGC. Ask us to tune the selectivity of the stationary phase thus to explore new and unique solutions and to optimize the orthogonality and the efficiency of your GCxGC configuration.

*mega*  
**WAX HT**



Kunzea essential oil GCxGC analysis using MEGA-WAX HT on 2<sup>nd</sup> dimension.  
Courtesy of R. Shellie et al.

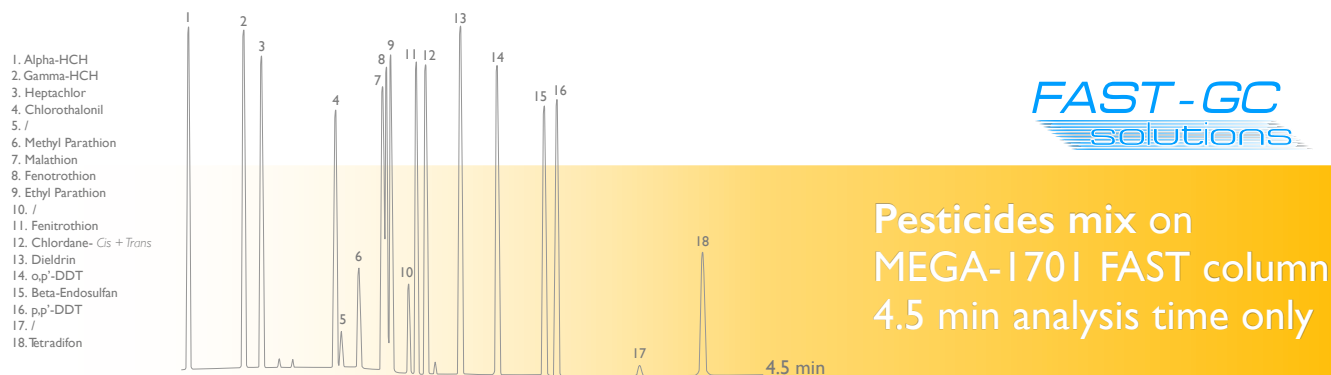
*mega*<sup>2D</sup>  
**columns**



Allergens standard mix GCxGC analysis using MEGA-2D unique column.  
Courtesy of University of Turin, Prof. C. Bicchi, Prof. C. Cordero et al.

# Application Notes

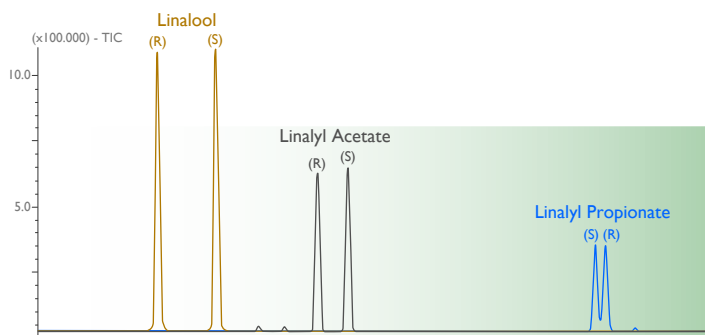
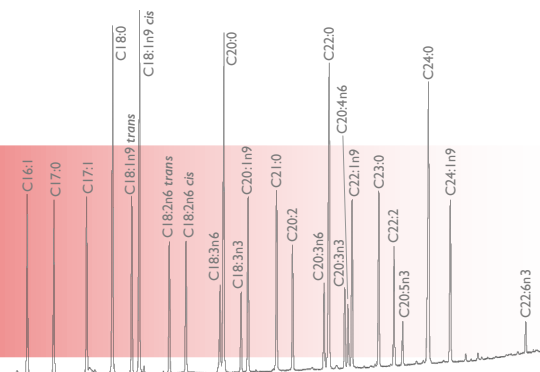
Visit our applications webpage to discover hundreds application notes and to find useful information on how to develop your analytical method. New technical notes are constantly added.



Courtesy of University of Turin - Prof. C. Bicchi et al.

## CUSTOM DEDICATED COLUMNS

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(available also in FAST-GC version)



**dex xeb**  
chiral columns

**Linalool - Linalyl Acetate**  
enantiomeric separation on  
MEGA-DEX DET Beta chiral column  
(available also in FAST-GC version)

Courtesy of University of Turin - Prof. C. Bicchi et al.



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