

Enantiomers Analysis

Cyclodextrin Columns for Analyzing Many Chiral Compounds

By adding β or γ cyclodextrin to our bonded Rtx®-1701 stationary phase, we greatly enhance overall utility and column lifetime for our chiral columns, compared to columns that have pure cyclodextrin stationary phases. Separations of more than one hundred chiral compounds have been achieved using our unique DEX columns, and our columns continue to demonstrate stability after hundreds of temperature program cycles. Refer to the applications section of this catalog for examples, or call our Technical Service chemists or your Restek representative for assistance in matching a column to your chiral analysis.

Rt™- β DEXm Columns (fused silica)

(permethylated beta cyclodextrin doped into 14% cyanopropylphenyl/86% dimethyl polysiloxane)

ID	df (μ m)	temp. limits	30-Meter
0.25mm	0.25	40 to 230°C	13100
0.32mm	0.25	40 to 230°C	13101

Uses: General purpose chiral phase with many published applications.

Rt™- β DEXsm Columns (fused silica)

(2,3-di-O-methyl-6-O-*tert*-butyl dimethylsilyl beta cyclodextrin doped into 14% cyanopropylphenyl/86% dimethyl polysiloxane)

ID	df (μ m)	temp. limits	30-Meter
0.25mm	0.25	40 to 230°C	13105
0.32mm	0.25	40 to 230°C	13104

Uses: Excellent column for most chiral compounds in essential oils.

Rt™- β DEXse Columns (fused silica)

(2,3-di-O-ethyl-6-O-*tert*-butyl dimethylsilyl beta cyclodextrin doped into 14% cyanopropylphenyl/86% dimethyl polysiloxane)

ID	df (μ m)	temp. limits	30-Meter
0.25mm	0.25	40 to 230°C	13107
0.32mm	0.25	40 to 230°C	13106

Uses: Similar in performance to Rt™- β DEXsm but provides better resolution for limonene, linalool, linalyl acetate, ethyl-2-methylbutyrate, 2,3-butane diol, and styrene oxides.

Rt™- β DEXsp Columns (fused silica)

(2,3-di-O-propyl-6-O-*tert*-butyl dimethylsilyl beta cyclodextrin doped into 14% cyanopropylphenyl/86% dimethyl polysiloxane)

ID	df (μ m)	temp. limits	30-Meter
0.25mm	0.25	40 to 230°C	13111
0.32mm	0.25	40 to 230°C	13110

Uses: Often useful in dual-column configurations, with the Rt™- β DEXsm column, for complex enantiomeric separations.

Rt™- β DEXsa Columns (fused silica)

(2,3-di-acetoxy-6-O-*tert*-butyl dimethylsilyl beta cyclodextrin doped into 14% cyanopropylphenyl/86% dimethyl polysiloxane)

ID	df (μ m)	temp. limits	30-Meter
0.25mm	0.25	40 to 230°C	13109
0.32mm	0.25	40 to 230°C	13108

Uses: Unique selectivity for esters, lactones, and other fruit flavor components.

Rt™- β DEXcst Columns (fused silica)

(Proprietary cyclodextrin material doped into 14% cyanopropylphenyl/86% dimethyl polysiloxane)

ID	df (μ m)	temp. limits	30-Meter
0.25mm	0.25	40 to 230°C	13103
0.32mm	0.25	40 to 230°C	13102

Uses: Proprietary stationary phase, developed specifically for the fragrance industry. Also used for pharmaceutical applications.

Rt™- γ DEXsa Columns (fused silica)

(2,3-di-acetoxy-6-O-*tert*-butyl dimethylsilyl gamma cyclodextrin doped into 14% cyanopropylphenyl/86% dimethyl polysiloxane)

ID	df (μ m)	temp. limits	30-Meter
0.25mm	0.25	40 to 230°C	13113
0.32mm	0.25	40 to 230°C	13112

Uses: Larger organic molecules. Also useful for flavor compounds in fruit juices.

free literature

A Guide to the Analysis of Chiral Compounds by GC

Many example chromatograms in our 24-page chiral analysis guide will help you find the best chiral columns for your applications.

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Technical Guide
lit. cat.# 59889

please note

Application-specific chiral column kits are available! See [page 62](#).

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Grape Flavor Analysis, Using an Rt™- γ DEXsa GC Column

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Applications Note
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GC Analysis of Chiral Flavor Compounds in Apple Juices, Using Rt™- β DEXsm and Rt™- β DEXse Columns

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Applications Note
lit. cat.# 59546