

Macherey-Nagel manufacture two series of phases, LIPODEX® and HYDRODEX®, which are well suited for GC enantiomer analyses. These are based on derivatized cyclodextrins with varying enantioselectivity. Phases in the HYDRODEX range are diluted with optimised polysiloxane. These phases are summarised below.

Material	Description	Recommended Applications
LIPODEX A	Hexakis-(2,3,6-tri-O-pentyl)- α -cyclodextrin (CD)	Carbohydrates, polyols, diols, hydroxycarboxylic acid esters, alcohols, glycerol derivatives, ketones, alkyl halides
LIPODEX B	Hexakis-(2,6-di-O-pentyl-3-O-acetyl)- α -CD	Lactones, diols, aminols, aldols, glycerol derivatives
LIPODEX C	Heptakis-(2,3,6-tri-O-pentyl)- β -CD	Alcohols, cyanohydrins, olefins, hydroxycarboxylic acid esters, alkyl halides
LIPODEX D	Heptakis-(2,6-di-O-pentyl-3-O-acetyl)- β -CD	Amines, aminols, trans-cycloalkane-1,2-diols, trans-cycloalkane-1,3-diols, β -amino acid esters
LIPODEX E	Octakis-(2,6-di-O-pentyl-3-O-butyryl)- γ -CD	α -amino acids, α - and β -hydroxycarboxylic acid esters, alcohols, diols, ketones, pheromones, amines, lactones
LIPODEX G	Octakis-(2,3-di-O-pentyl-6-O-methyl)- γ -CD	Menthol isomers, ketones, alcohols, carboxylic acid esters, terpenes
HYDRODEX β -PM	Heptakis-(2,3,6-tri-O-methyl)- β -CD	Hydroxycarboxylic acid esters, alcohols, diols, olefins, lactones, acetals
HYDRODEX β -3P	Heptakis-(2,6-di-O-methyl-3-O-pentyl)- β -CD	Terpenes, dienes, allenes, 1,2-epoxyalkanes, esters, pharmaceuticals, pesticides
HYDRODEX β -6TBDM	Heptakis-(2,3-di-O-methyl-6-O-t-butyl-dimethyl-silyl)- β -CD	γ -lactones, cyclopentanones, terpenes, esters, tartrates
HYDRODEX β -TBDAC	Heptakis-(2,3-di-O-acetyl-6-O-t-butyl-dimethyl-silyl)- β -CD	Alcohols, esters, ketones, aldehydes, δ -lactones
HYDRODEX γ -TBDAC	Octakis-(2,3-di-O-acetyl-6-O-t-butyl-dimethyl-silyl)- γ -CD	Cyclic ketones, aromatic ketones, oxiranes, aromatic esters, aromatic amides

Figures 1 and 2 show the separation of enantiomers of whisky lactone on a LIPODEX E column and essential oils on a HYDRODEX γ -TBDAC column respectively.

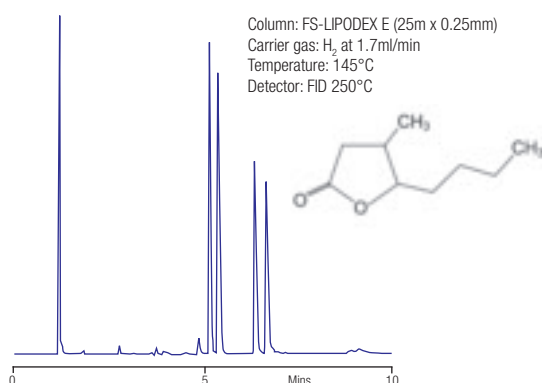


Figure 1. Enantiomer separation of 4-butyl-3-methylbutyrolactone (Whisky lactone)

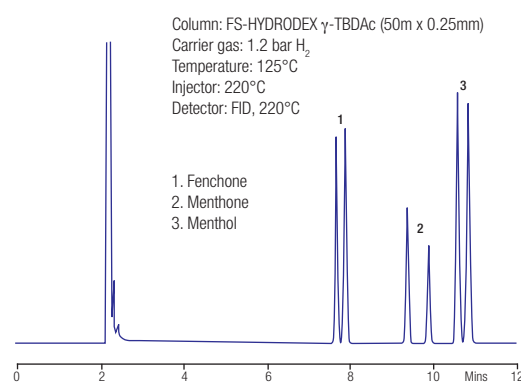


Figure 2. Enantiomer separation of essential oils

Ordering Information – Macherey-Nagel Chiral GC Columns

Phase	Column Dimensions		
	10m x 0.1mm	25m x 0.25mm	50m x 0.25mm
FS-LIPODEX A	-	723360.25	723360.50
FS-LIPODEX B	-	723362.25	723362.50
FS-LIPODEX C	-	723364.25	723364.50
FS-LIPODEX D	-	723366.25	723366.50
FS-LIPODEX E	723382.10	723368.25	723368.50
FS-LIPODEX G	-	723379.25	723379.50
FS-HYDRODEX β -PM	-	723370.25	723370.50
FS-HYDRODEX β -3P	-	723358.25	723358.50
FS-HYDRODEX β -6TBDM	723383.10	723381.25	723381.50
FS-HYDRODEX β -TBDAC	-	723384.25	723384.50
FS-HYDRODEX γ -TBDAC	-	723387.25	723387.50



In addition to the above chiral GC columns, Macherey-Nagel also manufacture the OPTIMA range of capillary GC columns, for a wide polarity range of non-chiral separations, as well as a comprehensive range of GC supplies and derivatization reagents. Please enquire for further details on all Macherey-Nagel GC products not listed here.