

## ChiralCE and ChiralCD Column Brochure

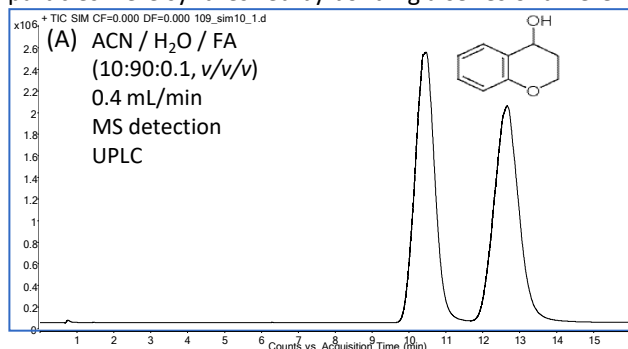
Please visit English website <http://chiraltek-column.com> for downloading the full product manual and application notes.



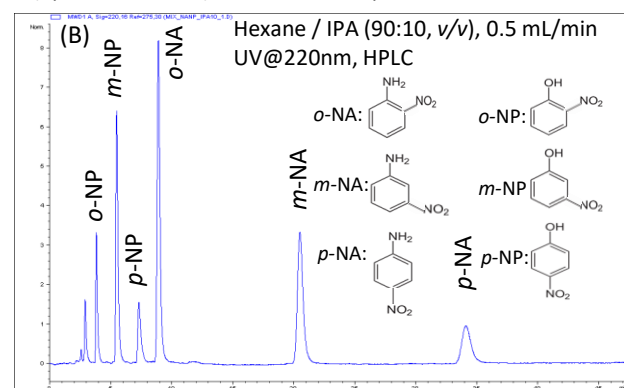
ChiralTek focuses on providing solutions for high-efficient chiral separations and automatic sample preparations. At present, ChiralTek manufactures novel types of cellulose-immobilized ChiralCE and cyclodextrin-immobilized ChiralCD chiral columns for analytical HPLC & UPLC and preparative HPLC. ChiralTek also manufactures a new type of HLE and UPE extraction cartridges and novel automated sample analyzers for automatic sample preparation and automatic sampling or automatic delivery of reagents to chemical & biological reactors at different time points.

### 1. Novel cellulose-immobilized ChiralCE and Cyclodextrin-immobilized ChiralCD Columns

ChiralCE columns are a new type of cellulose-immobilized chiral columns. By using a specially-designed procedure, the ChiralCE particles were prepared by bonding the chemically-modified celluloses containing both ChiralTek proprietary group and other common functional groups onto high-quality porous silica particles. The ChiralCD particles were synthesized by bonding a series of different



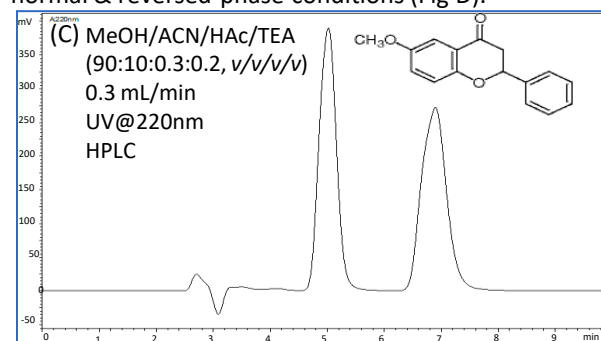
Fig(A). Chiral separation of 4-Chromanol on ChiralCD-1 column (3 $\mu$ m, 150 x 2mm) under reversed-phase condition in UPLC.



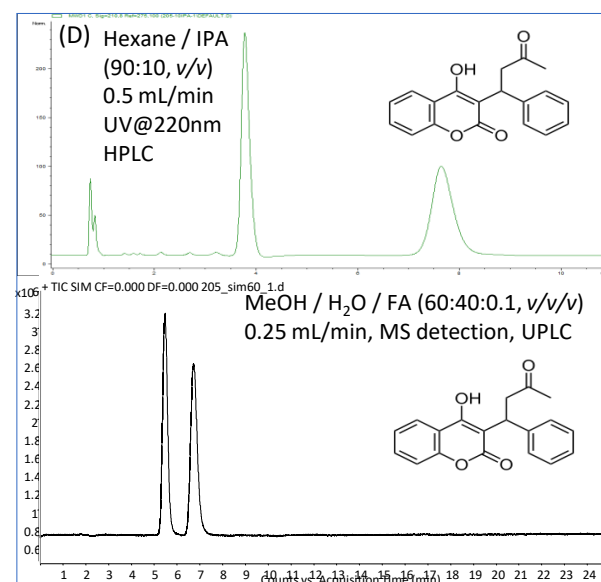
Fig(B). Separation of positional isomers *o*-, *m*-, *p*-Nitrophenols (NP) and *o*-, *m*-, *p*-Nitroanilines (NA) on ChiralCE-2 column (3 $\mu$ m, 150 x 2mm) under normal-phase condition in HPLC.

functional groups-substituted  $\alpha$ -,  $\beta$ -, or  $\gamma$ -cyclodextrins onto the porous silica by linking ChiralTek proprietary spacer arms at the wider torus rims of the cyclodextrins. These novel ChiralCE and ChiralCD particles-packed columns can be used in UPLC (Fig A) and HPLC (Fig B).

Since the chemical structure and bonding procedure are different from other suppliers' columns, ChiralCE and ChiralCD columns can provide different and usually better chiral separations than other suppliers' columns. Moreover, the single ChiralCE or ChiralCD column can be used under both polar organic condition (Fig C) and normal & reversed-phase conditions (Fig D).



Fig(C). Chiral separation of 6-Methoxyflavanone on ChiralCD-5 column (3 $\mu$ m, 150 x 2mm) under polar organic mode in HPLC.



Fig(D). Chiral separation of Warfarin on the same single ChiralCE-2 column (3 $\mu$ m, 150 x 2mm) under both normal and reversed-phase conditions in HPLC and UPLC.

### 2. ChiralTek columns with special chiral selectors for excellent performance and durability

Due to the contribution of special chiral selectors and unique bonding procedure, the ChiralCE and ChiralCD columns exhibited excellent column capacity, versatility, and durability under polar organic, normal, and reversed-phase conditions for separation of up to 80% chiral

chemicals and almost all types of non-chiral organic compounds. When your existing chiral columns are not able to solve your problem, you may have a perfect solution with one of the ChiralCE or ChiralCD column from ChiralTek.

## 3. Pricelist and order information for some common chiral columns from ChiralTek for UPLC and HPLC

Order Information and Pricelist for Some Typical Chiral Columns				
Part Number	Type	Dimension	Description	
812-CE1-01	ChiralCE-1	2 $\mu$ m, 50 x 2mm	Cellulose-1 bonded analytical column	
812-CE1-02	ChiralCE-1	2 $\mu$ m, 100 x 2mm	Cellulose-1 bonded analytical column	
812-CE1-03	ChiralCE-1	2 $\mu$ m, 150 x 2mm	Cellulose-1 bonded analytical column	
813-CE2-01	ChiralCE-2	3 $\mu$ m, 50 x 2mm	Cellulose-2 bonded analytical column	
813-CE2-02	ChiralCE-2	3 $\mu$ m, 100 x 2mm	Cellulose-2 bonded analytical column	
813-CE2-03	ChiralCE-2	3 $\mu$ m, 150 x 2mm	Cellulose-2 bonded analytical column	
813-CE2-04	ChiralCE-2	3 $\mu$ m, 200 x 2mm	Cellulose-2 bonded analytical column	
813-CE2-05	ChiralCE-2	3 $\mu$ m, 250 x 2mm	Cellulose-2 bonded analytical column	
813-CE3-01	ChiralCE-3	3 $\mu$ m, 50 x 2mm	Cellulose-3 bonded analytical column	
813-CE3-02	ChiralCE-3	3 $\mu$ m, 100 x 2mm	Cellulose-3 bonded analytical column	
813-CE3-03	ChiralCE-3	3 $\mu$ m, 150 x 2mm	Cellulose-3 bonded analytical column	
813-CE3-04	ChiralCE-3	3 $\mu$ m, 200 x 2mm	Cellulose-3 bonded analytical column	
813-CE3-05	ChiralCE-3	3 $\mu$ m, 250 x 2mm	Cellulose-3 bonded analytical column	
822-CD1-01	ChiralCD-1	2 $\mu$ m, 50 x 2mm	$\beta$ -Cyclodextrin-1 bonded analytical column	
822-CD1-02	ChiralCD-1	2 $\mu$ m, 100 x 2mm	$\beta$ -Cyclodextrin-1 bonded analytical column	
822-CD1-03	ChiralCD-1	2 $\mu$ m, 150 x 2mm	$\beta$ -Cyclodextrin-1 bonded analytical column	
822-CD2-04	ChiralCD-2	2 $\mu$ m, 200 x 2mm	$\beta$ -Cyclodextrin-2 bonded analytical column	
822-CD2-05	ChiralCD-2	2 $\mu$ m, 250 x 2mm	$\beta$ -Cyclodextrin-2 bonded analytical column	
823-CD2-01	ChiralCD-2	3 $\mu$ m, 50 x 2mm	$\beta$ -Cyclodextrin-2 bonded analytical column	
823-CD3-02	ChiralCD-3	3 $\mu$ m, 100 x 2mm	$\gamma$ -Cyclodextrin-3 bonded analytical column	
823-CD3-03	ChiralCD-3	3 $\mu$ m, 150 x 2mm	$\gamma$ -Cyclodextrin-3 bonded analytical column	
823-CD4-01	ChiralCD-4	3 $\mu$ m, 50 x 2mm	$\alpha$ -Cyclodextrin-4 bonded analytical column	
823-CD4-02	ChiralCD-4	3 $\mu$ m, 100 x 2mm	$\alpha$ -Cyclodextrin-4 bonded analytical column	
823-CD5-03	ChiralCD-5	3 $\mu$ m, 150 x 2mm	$\beta$ -Cyclodextrin-5 bonded analytical column	
823-CD5-04	ChiralCD-5	3 $\mu$ m, 200 x 2mm	$\beta$ -Cyclodextrin-5 bonded analytical column	
823-CD6-03	ChiralCD-6	3 $\mu$ m, 150 x 2mm	$\beta$ -Cyclodextrin-6 bonded analytical column	
823-CD6-04	ChiralCD-6	3 $\mu$ m, 200 x 2mm	$\beta$ -Cyclodextrin-6 bonded analytical column	
905-CE2-13	ChiralCE-2	5 $\mu$ m, 150 x 10mm	Cellulose-2 bonded semi-preparative column	
910-CE2-25	ChiralCE-2	10 $\mu$ m, 250 x 20mm	Cellulose-2 bonded preparative column	
833-SK1-03	ChiralKit-1	3 $\mu$ m, 150 x 2mm	Screening Kit-1 ( 3 analytical columns )	
833-SK2-03	ChiralKit-2	3 $\mu$ m, 150 x 2mm	Screening Kit-2 ( 6 analytical columns )	

Chiral columns with other dimensions are also available. Singapore ChiralTek can provide free screening tests for chiral separation if customer can provide test compounds with clear chemical structure. Please kindly contact ChiralTek Pte Ltd (Tel: 65-93656129, Email: [sales@chiraltek-column.com](mailto:sales@chiraltek-column.com) or [info@chiraltek-column.com](mailto:info@chiraltek-column.com)) for details.