

**CYCLOLAB**



*The Cyclodextrin Company*



**Single isomer cyclodextrins**

**for**

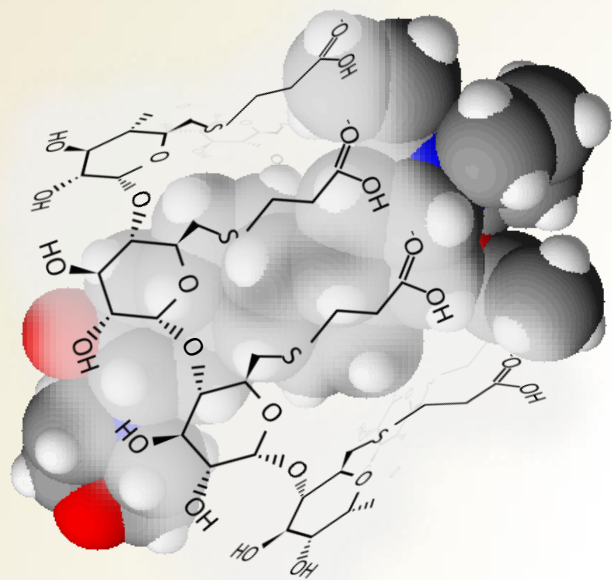
**chiral separation, studying of host-**

**guest interaction and specific**

**encapsulation of APIs**



# Single isomer cyclodextrins



**CycloLab offers a wide variety of selectively substituted, single isomer cyclodextrin derivatives (such as Sugammadex) excellent for selective encapsulation of target compounds, assessment and fine tuning of the interaction on the molecular level.**

**K Nag:** Sugammadex: A revolutionary drug in neuromuscular pharmacology

**P Tang:** Dimethyl- $\beta$ -cyclodextrin/salazosulfapyridine inclusion complex-loaded chitosan nanoparticles for sustained release

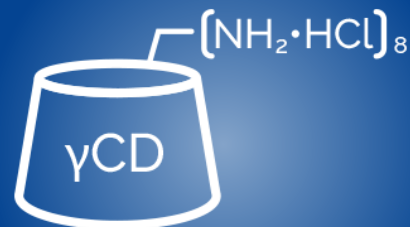
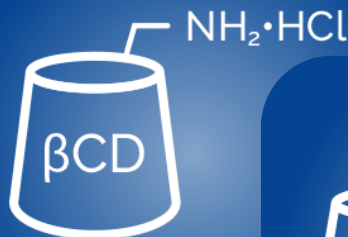
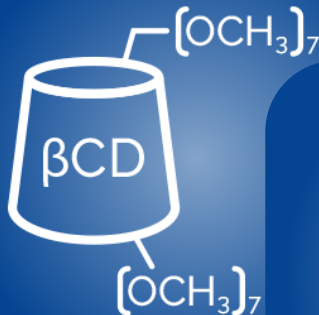
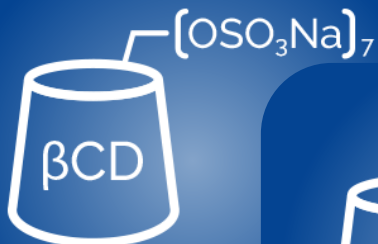
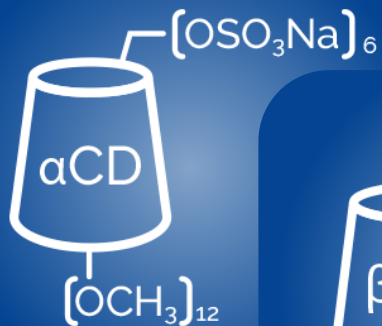
**MR Caira:** Inclusion complexes of 2-methoxyestradiol with dimethylated and permethylated  $\beta$ -cyclodextrins: models for cyclodextrin-steroid interaction

**HL Sun:** Polyanionic Cyclodextrin Induced Supramolecular Nanoparticle



# Single isomer cyclodextrins

**Single isomer CDs have particular importance in chiral analytical methods where they regularly outperform their randomly substituted analogues.**



**Gy Vigh:** A Family of Single-Isomer Chiral Resolving Agents for Capillary Electrophoresis. 1. Heptakis(2,3-diacetyl-6-sulfato)- $\alpha$ -cyclodextrin

**Gy Vigh:** A Family of Single-Isomer, Sulfated  $\gamma$ -Cyclodextrin Chiral Resolving Agents for Capillary Electrophoresis. 1. Octakis(2,3-diacetyl-6-sulfato)- $\gamma$ -cyclodextrin

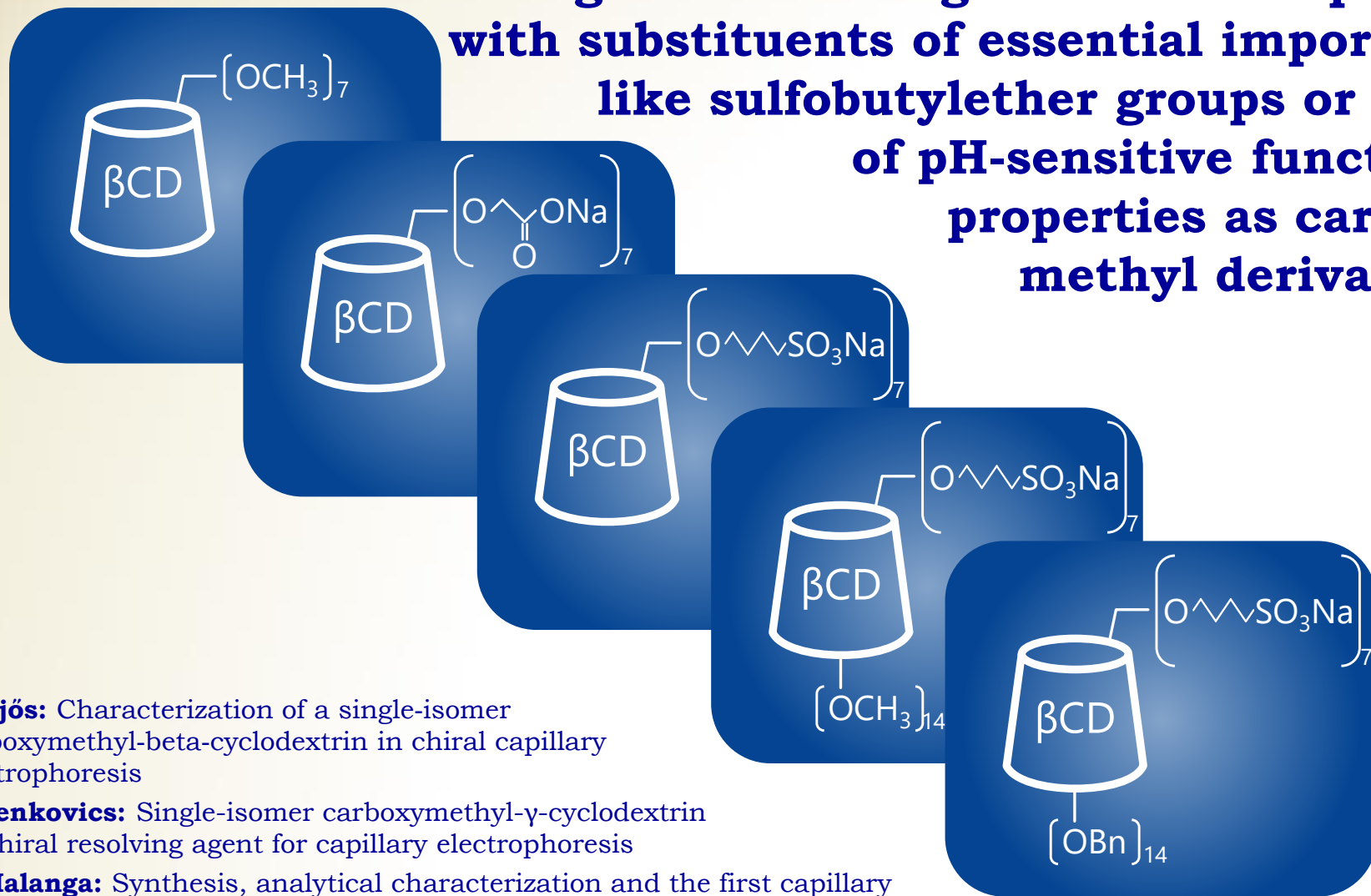
**E Varga:** Development of Electrophoretic Methods for Simultaneous Determination of Enantiomeric Ratio and Composition of Diastereomeric Salt Mixtures

**I Fejős:** Comparative evaluation of the chiral recognition potential of single-isomer sulfated beta-cyclodextrin synthesis intermediates in non-aqueous capillary electrophoresis



# Single isomer cyclodextrins

CycloLab is deeply involved in the development of next generation single isomer compounds with substituents of essential importance like sulfobutylether groups or those of pH-sensitive functional properties as carboxymethyl derivatives.



**I Fejős:** Characterization of a single-isomer carboxymethyl-beta-cyclodextrin in chiral capillary electrophoresis

**G Benkovics:** Single-isomer carboxymethyl-γ-cyclodextrin as chiral resolving agent for capillary electrophoresis

**M Malanga:** Synthesis, analytical characterization and the first capillary electrophoretic use of the single-isomer heptakis-(6-O-sulfobutyl)-beta-cyclodextrin



# Why single isomer cyclodextrins?

## **The main advantages are:**

- **Improved batch-to-batch robustness and reproducible analytical/functional results**
- **Straightforward pharmacokinetics and toxicity**
- **More reliable prediction and outcome of chiral separations**
- **Easier assessment of functional properties and interactions on the molecular level**



# Single isomer cyclodextrins

## List of available products at CycloLab

| Product code | Product name                                   |
|--------------|--|
| CY-2003      | Heptakis(2,3,6-tri- <i>O</i> -methyl)-BCD      |
| CY-2004.3    | Heptakis(2,6-di- <i>O</i> -methyl)-BCD         |
| CY-2024      | 6-Monodeoxy-6-monoamino-BCD                    |
| CY-2065      | Heptakis(6-deoxy-6-amino)-BCD                  |
| CY-3065      | Octakis(6-deoxy-6-amino)-GCD                   |
| CY-2200      | Heptakis(6-sulfo)-BCD                          |
| CY-2201      | Heptakis(2,3-di- <i>O</i> -acetyl-6-sulfo)-BCD |
| CY-2202      | Heptakis(2,3-di- <i>O</i> -methyl-6-sulfo)-BCD |
| CY3202       | Octakis(2,3-di- <i>O</i> -methyl-6-sulfo)-GCD  |

| Product code | Product name  |
|--------------|---|
| CY-2211      | Heptakis(6- <i>O</i> -methyl)-BCD                                 |
| CY-2212      | Heptakis(6- <i>O</i> -carboxymethyl)-BCD                          |
| CY-2213      | Heptakis(2,3-di- <i>O</i> -methyl-6- <i>O</i> -carboxymethyl)-BCD |
| CY-3213      | Octakis(2,3-di- <i>O</i> -methyl-6- <i>O</i> -carboxymethyl)-GCD  |
| CY-2214      | Heptakis(6- <i>O</i> -sulfobutyl)-BCD                             |
| CY-2215      | Heptakis(2,3-di- <i>O</i> -methyl-6- <i>O</i> -sulfobutyl)-BCD    |
| CY-2216      | Heptakis(2,3-di- <i>O</i> -benzyl-6- <i>O</i> -sulfobutyl)-BCD    |

**For any other specific derivative to be designed, please reach out to us for discussion at [info@cyclolab.hu](mailto:info@cyclolab.hu)**



# Single isomer cyclodextrins

## Company contacts:

**CycloLab Cyclodextrin Research & Development Laboratory Ltd.**

Budapest, P.O. Box 435, H-1525 Hungary

**Location: Illatos út 7., Budapest, H-1097 Hungary**

**TEL: (+36) 1-347-60-60 or -70; FAX: (+36) 1-347-60-68**

**E-mail: [info@cyclolab.hu](mailto:info@cyclolab.hu); Homepage: <http://www.cyclolab.hu>**

**Contact person: Zita Vincze**

**Sales Executive**

**[info@cyclolab.hu](mailto:info@cyclolab.hu)**

**Tel: (+36) 1-347-60-62**