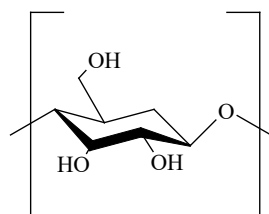


# Analysis of Cyclodextrins Using HPLC with a Differential Refractive Index Detector

The analysis of cyclodextrin (CD) is presented below. It is an oligosaccharides used in health foods and as a food additives. The hollows in their ring-shaped steric structures and the inclusion properties of other molecules have been studied in several cases.

In this report,  $\alpha$ -,  $\beta$ -, and  $\gamma$ -CD in soft drinks was analyzed using HPLC and a differential refractive index detector (RI) with good results.  
(K.Suzuki)

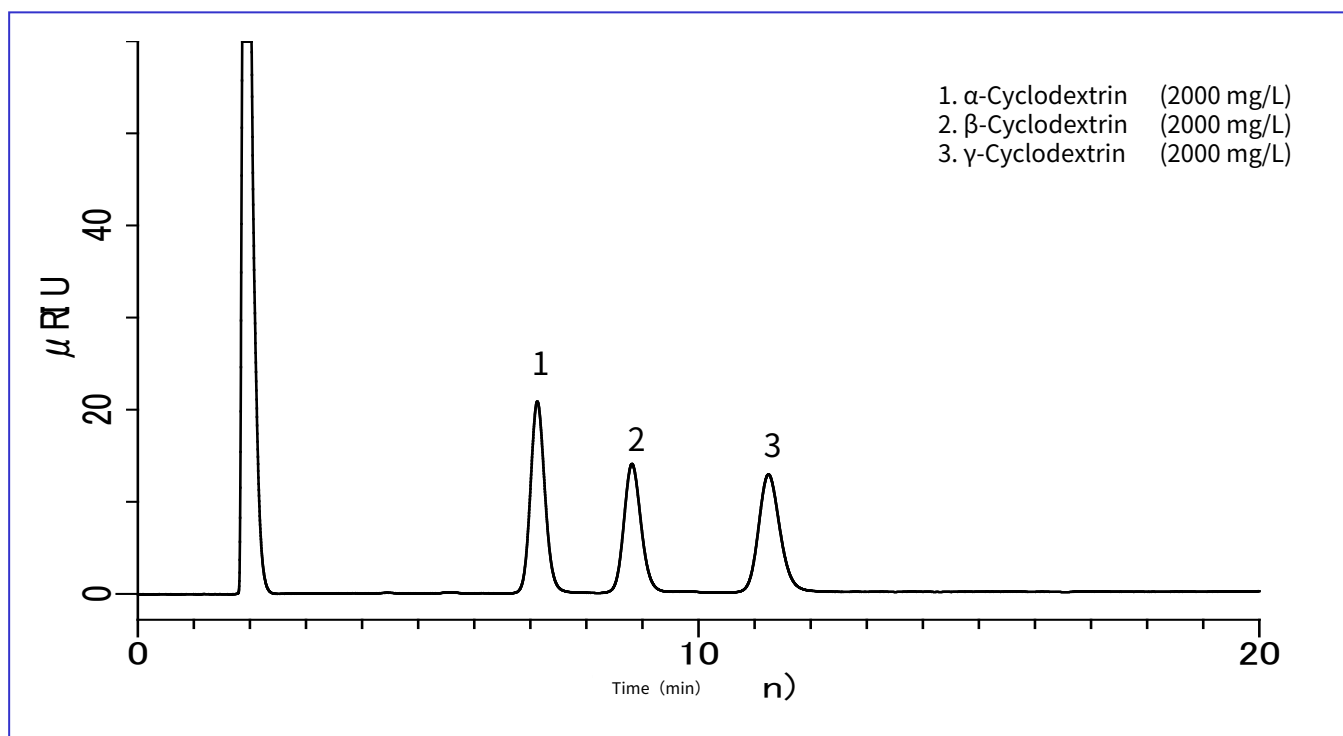
## Structural formula



N=6: $\alpha$ -CD  
N=7: $\beta$ -CD  
N=8: $\gamma$ -CD  
(all circular)

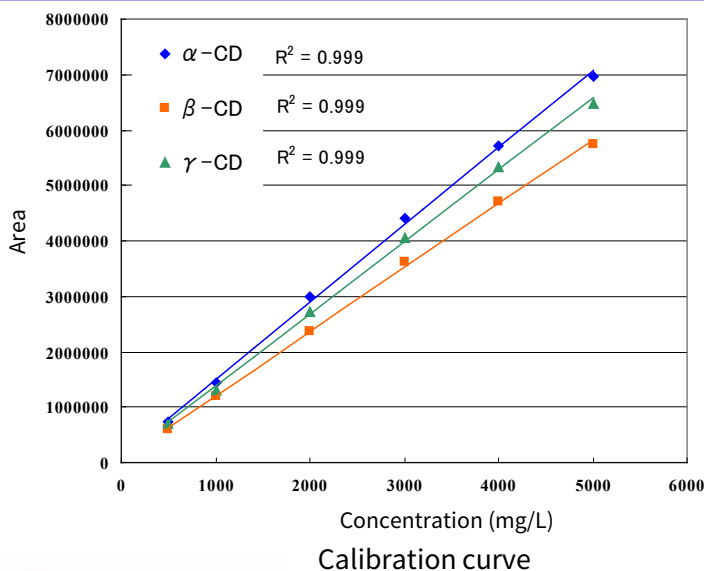
Structures are created using Chemistry 4-D Draw which is provided by ChemInnovation Software, Inc.

## Example: Measurement of standard



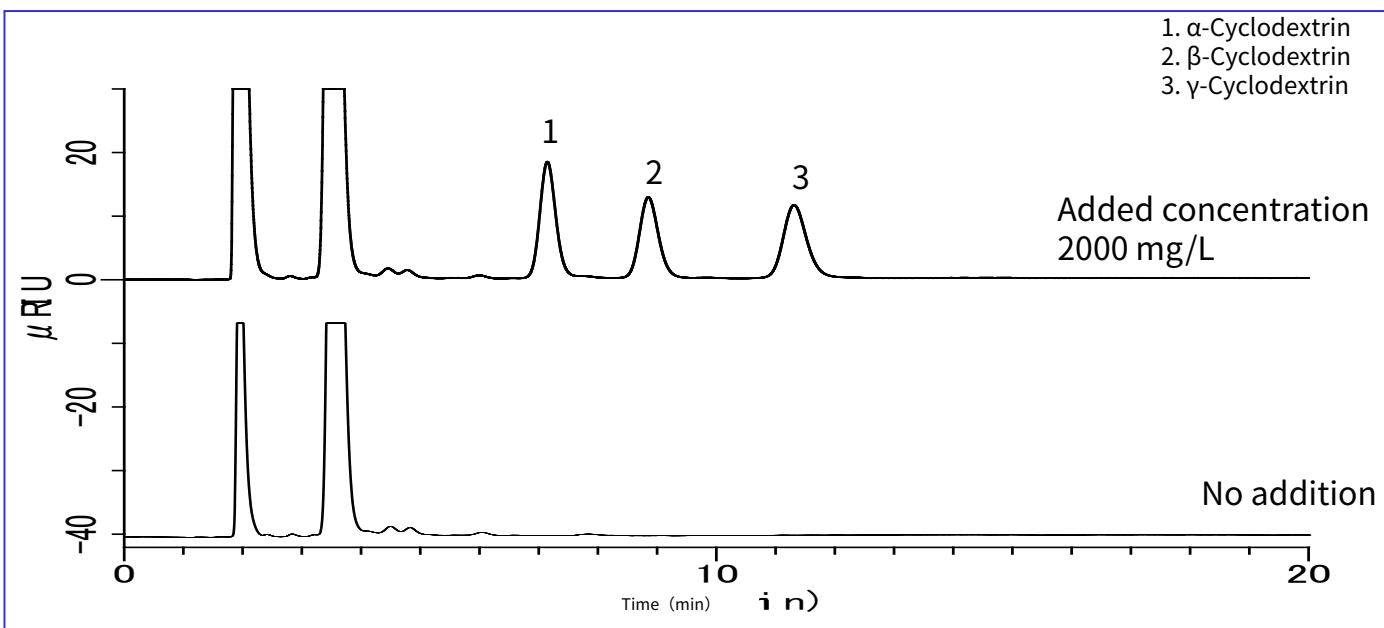
### HPLC conditions

**Column** : Inertsil NH2  
(5  $\mu$ m, 150 x 4.6 mm I.D.)  
**Eluent** : A) CH<sub>3</sub> CN  
B) H<sub>2</sub>O  
A/B = 65/35, v/v  
**Flow rate** : 1.0 mL/min  
**Column temperature** : 40 °C  
**Detection** : RI  
**Injection volume** : 20  $\mu$ L



## Examples of analysis of soft drinks

Soft drinks were filtered through a 0.45  $\mu\text{m}$  filter for analysis.



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