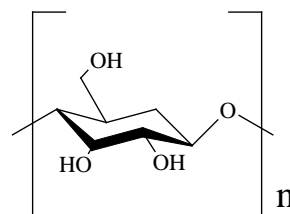


# Analysis of Cyclodextrins Using HPLC with a Differential Refractive Index Detector

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.

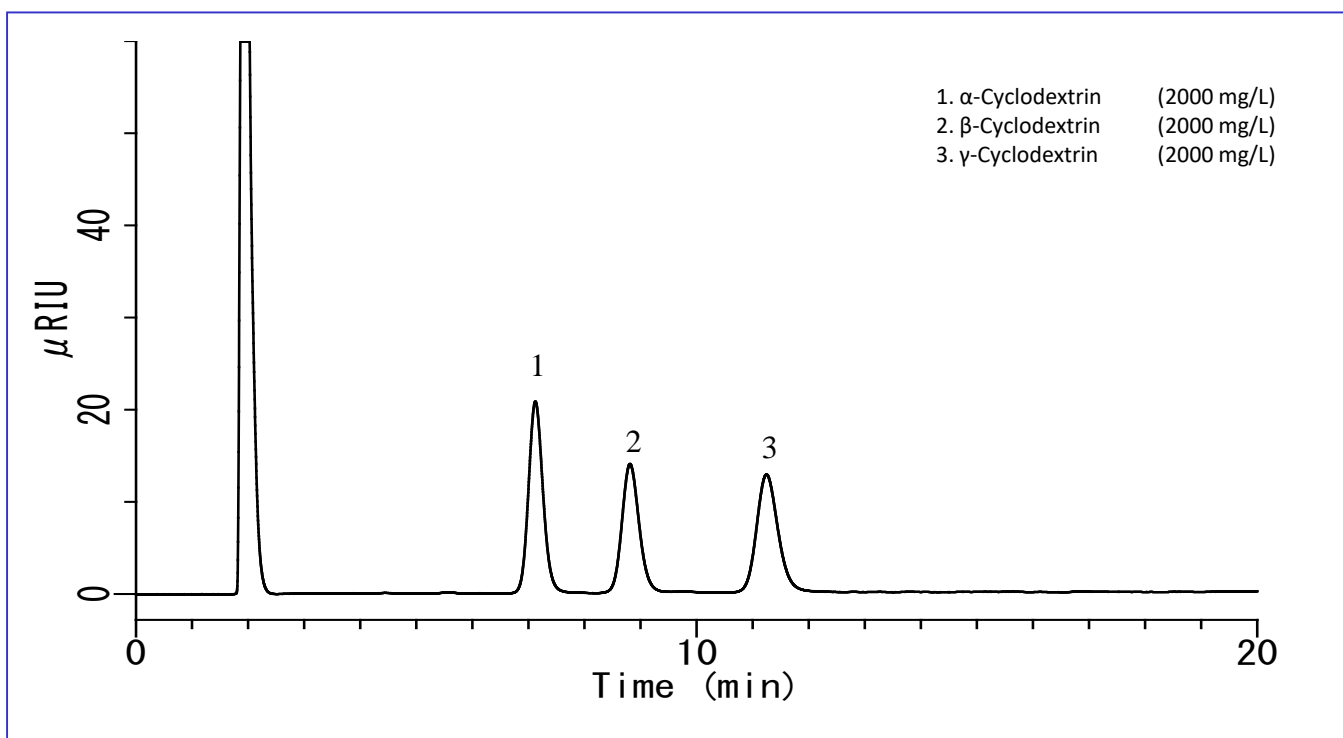
In this report,  $\alpha$ -,  $\beta$ -, and  $\gamma$ -CD in soft drinks was analyzed using HPLC and a differential refractive index detector (RI) with good results. (K.Suzuki)

## Structural formula

N=6: $\alpha$ -CDN=7: $\beta$ -CDN=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.)

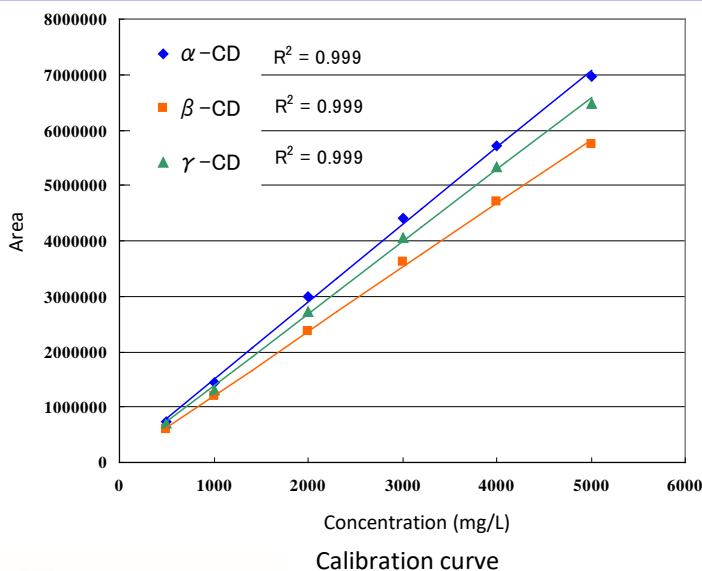
**Eluent** : A) CH<sub>3</sub> CN  
B) H<sub>2</sub>O  
A/B = 65/35, v/v

**Flow rate** : 1.0 mL/min

**Column temperature**: 40 °C

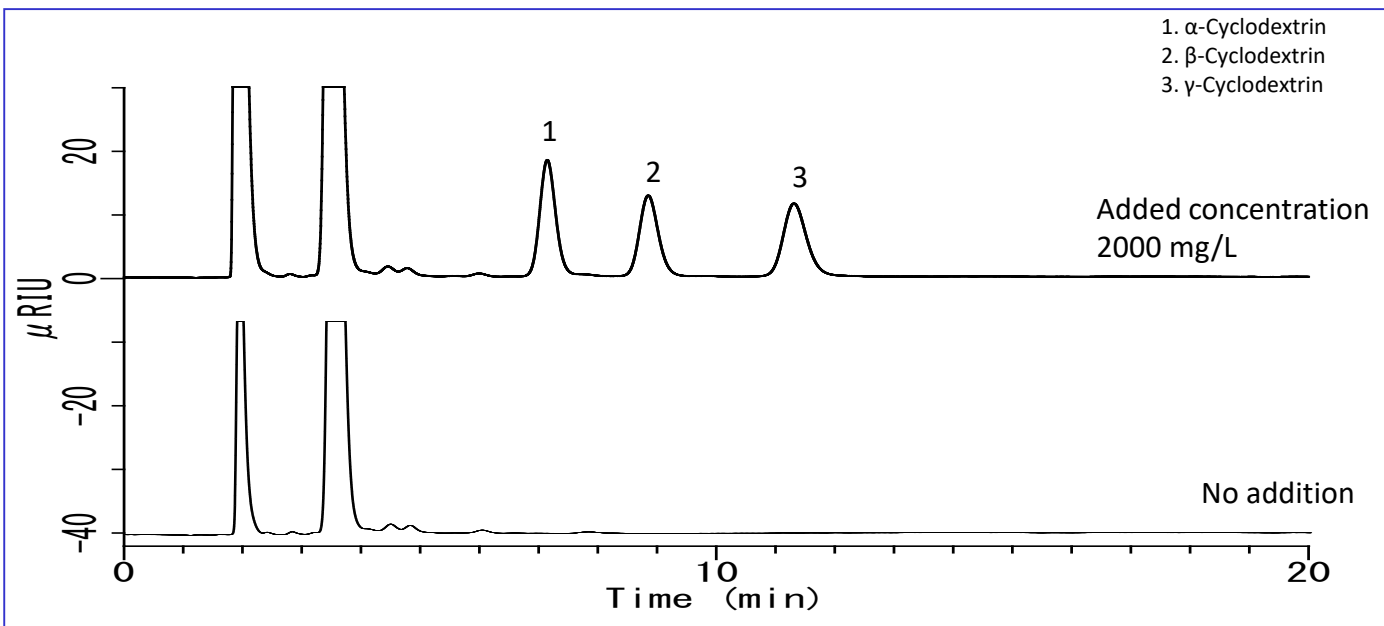
**Detection** : RI

**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.



GL Sciences disclaims any and all responsibility for any injury or damage which may be caused by this data directly or indirectly. We reserve the right to amend this information or data at any time and without any prior announcement.

### GL Sciences, Inc. Japan

22-1 Nishishinjuku 6-Chome  
Shinjuku-ku, Tokyo,  
163-1130, Japan  
Phone: +81-3-5323-6620  
Fax: +81-3-5323-6621  
Email: [world@glsc.co.jp](mailto:world@glsc.co.jp)  
Web: [www.glsciences.com](http://www.glsciences.com)

### GL Sciences B.V.

De Sleutel 9  
5652 AS Eindhoven  
The Netherlands  
Phone: +31 (0)40 254 95 31  
Email: [info@glsciences.eu](mailto:info@glsciences.eu)  
Web: [www.glsciences.eu](http://www.glsciences.eu)

### GL Sciences (ShangHai) Ltd.

Tower B, Room 2003,  
Far East International Plaza,  
NO,317 Xianxia Road,  
Changning District.  
Shanghai, China P.C. 200032  
Phone: +86 (0)21-6278-2272  
Email: [contact@glsciences.com.cn](mailto:contact@glsciences.com.cn)  
Web: [www.glsciences.com.cn](http://www.glsciences.com.cn)

### GL Sciences, Inc. USA

4733 Torrance Blvd. Suite 255  
Torrance, CA 90503  
Phone: 310-265-4424  
Fax: 310-265-4425  
Email: [info@glsciencesinc.com](mailto:info@glsciencesinc.com)  
Web: [www.glsciencesinc.com](http://www.glsciencesinc.com)

### International Distributors

Visit our Website at [www.glsciences.com/distributors](http://www.glsciences.com/distributors)