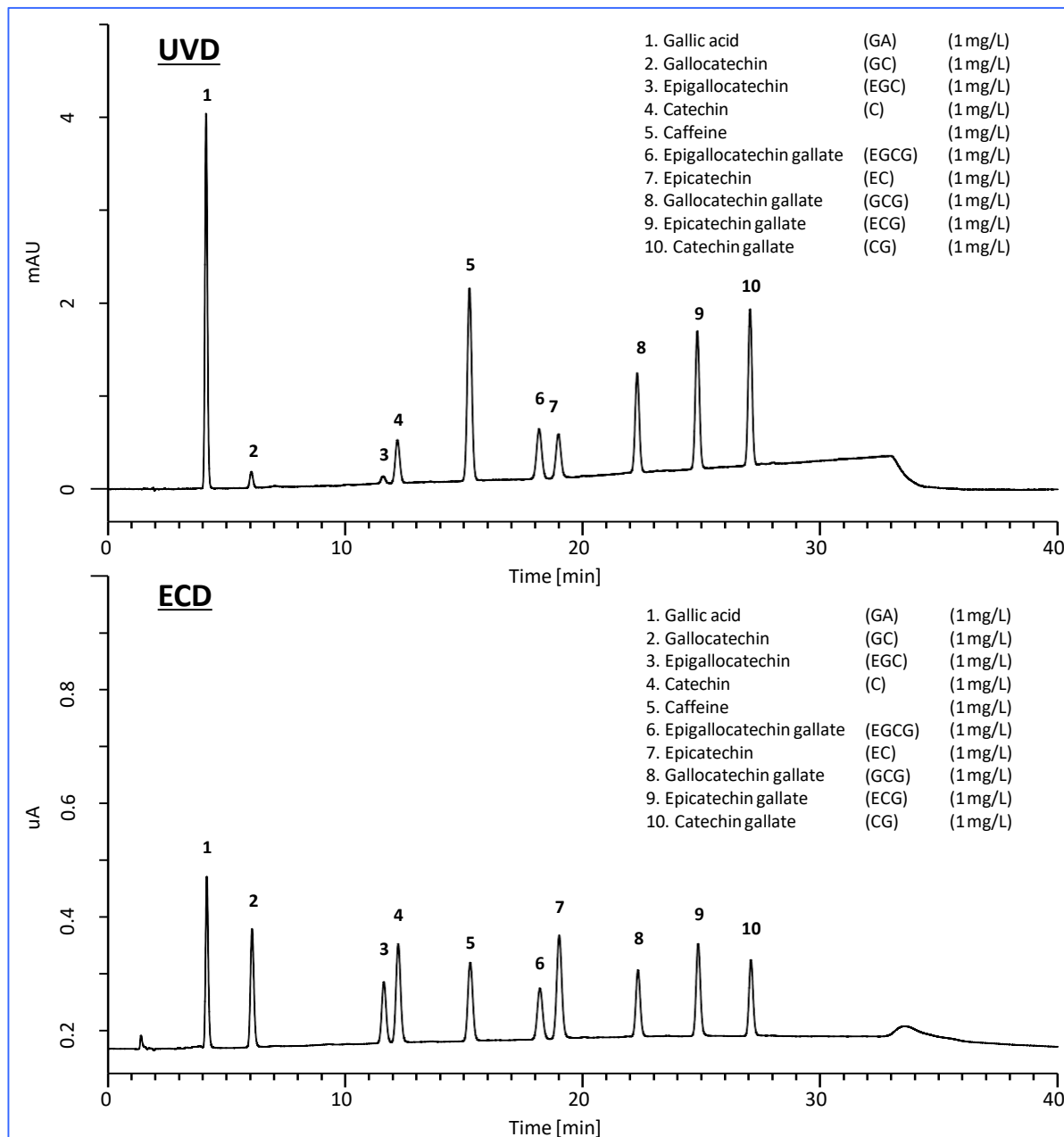


Analysis of Catechins in Soft Drink (2)

A determination method for 8 catechins, caffeine, and gallic acid (total 10 compounds) is described in this LC Technical Note. By connecting a UVD (ultraviolet detector) and an ECD (electrochemical detector) in series, Gallocatechin and Epigallocatechin were detected with sufficient sensitivity compared to using only UV detector.

(H. Hirano)

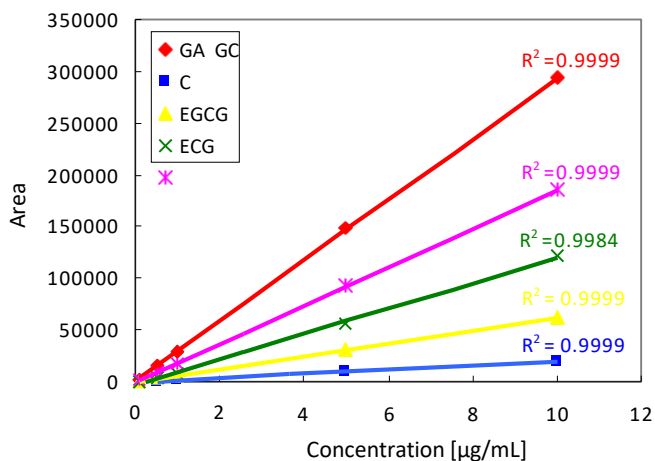
Standard Solutions**HPLC Conditions**

Column: InertSustain C18 5 μ m, 150 $\times$ 4.6 mm I.D.
Flow Rate: 1 mL/min 40°C
Col. Temp.: UV 280 nm
Detection: ECD 1200 mV vs Ag/AgCl (ED723, Diamond flow cell)
 10 μ L
Inj. Vol.:

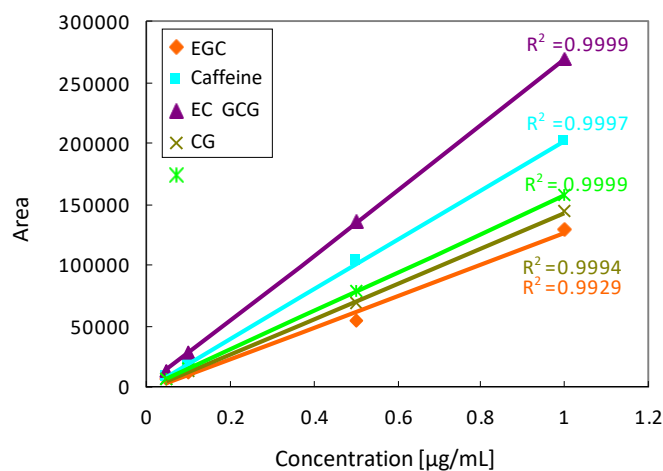
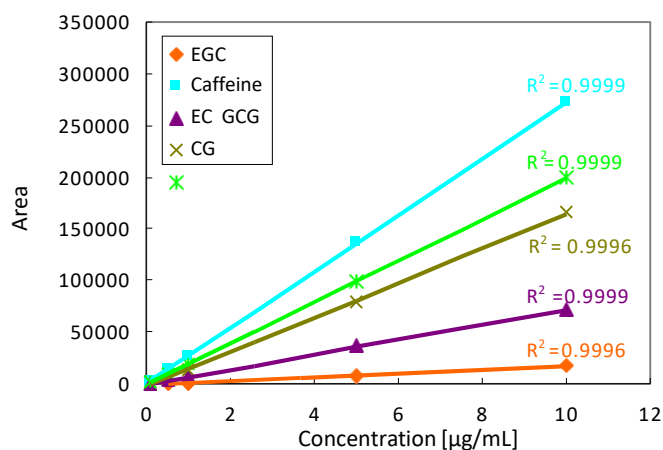
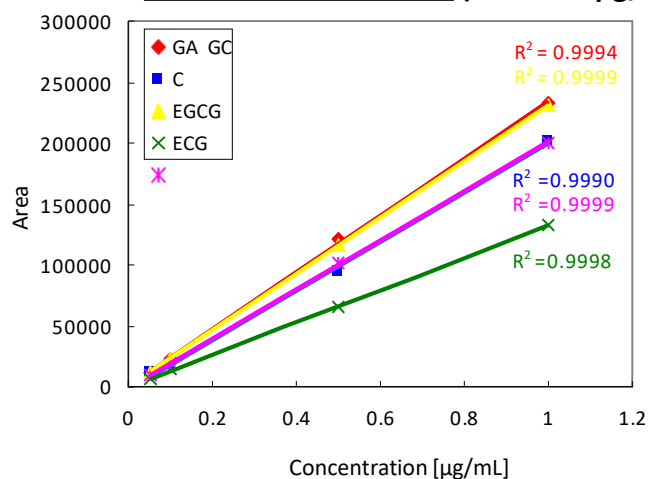
Eluent: A) 0.1% H₃PO₄ in H₂O (pH 2.1)*
 B) CH₃OH/CH₃CN = 9/1, v/v

Time (min)	A (vol%)	B (vol%)
0.0	90	10
15.0	80	20
30.0	60	40
30.1	90	10
40.0	90	10

• 1 mL of special grade phosphoric acid (85% conc.) was added to 1 L of hyperpure water.

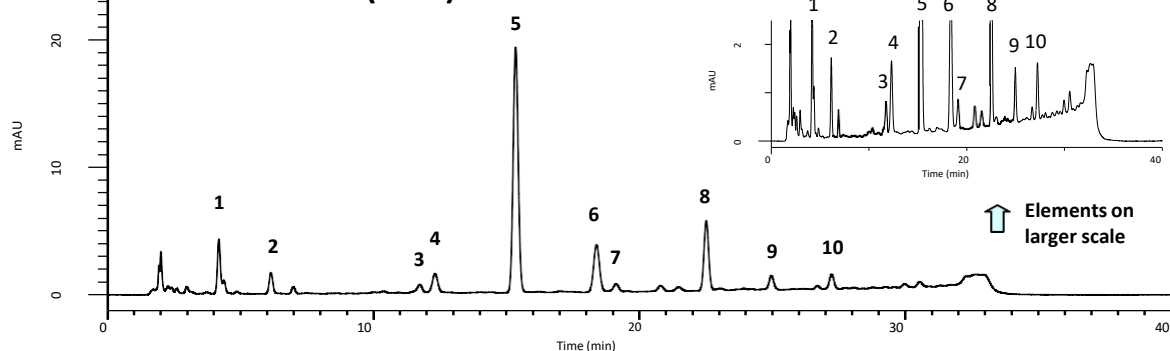


Calibration curve—ECD (0.05 ~ 1 µg/mL)

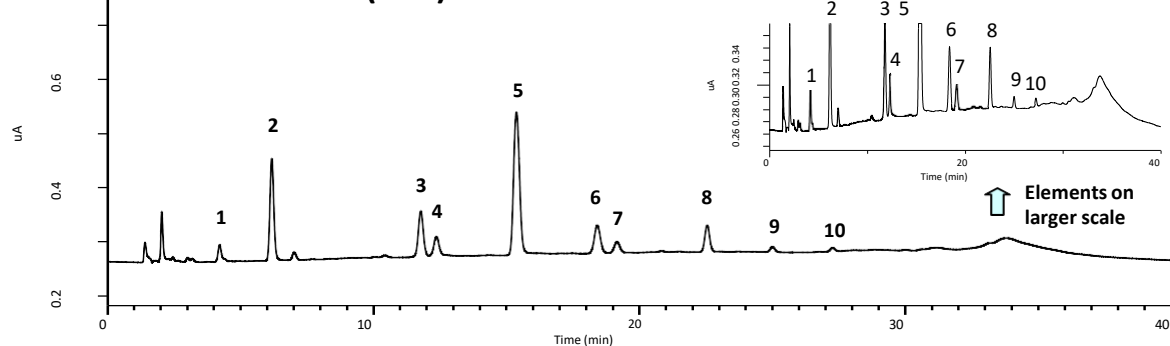


Analyses of Soft Drink Sample ①

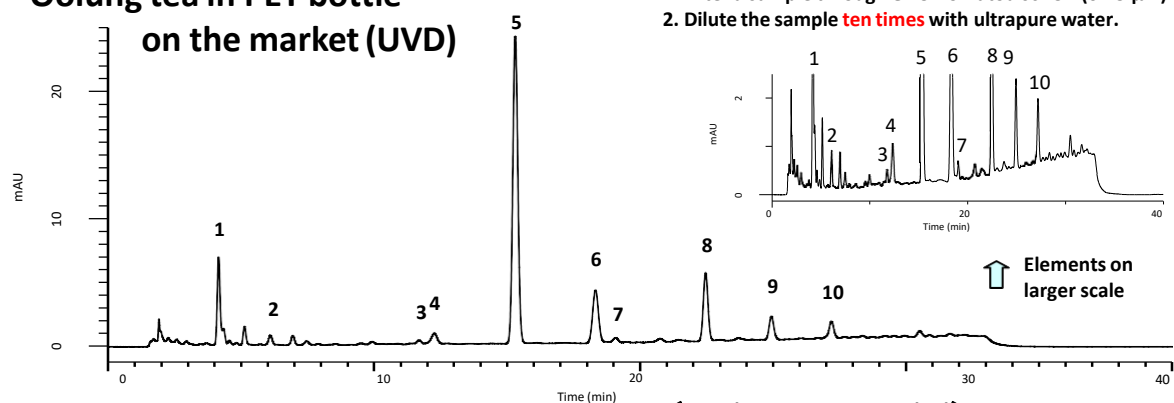
Green tea in PET bottle on the market (UVD)



Green tea in PET bottle on the market (ECD)



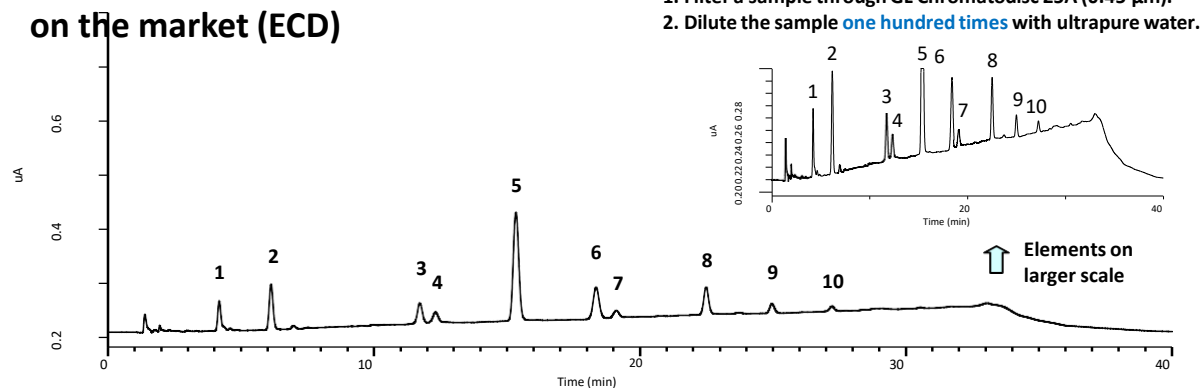
Oolong tea in PET bottle on the market (UVD)



<Sample pretreatment method>

1. Filter a sample through GL Chromatodisc 25A (0.45 μ m).
2. Dilute the sample **ten times** with ultrapure water.

Oolong tea in PET bottle on the market (ECD)

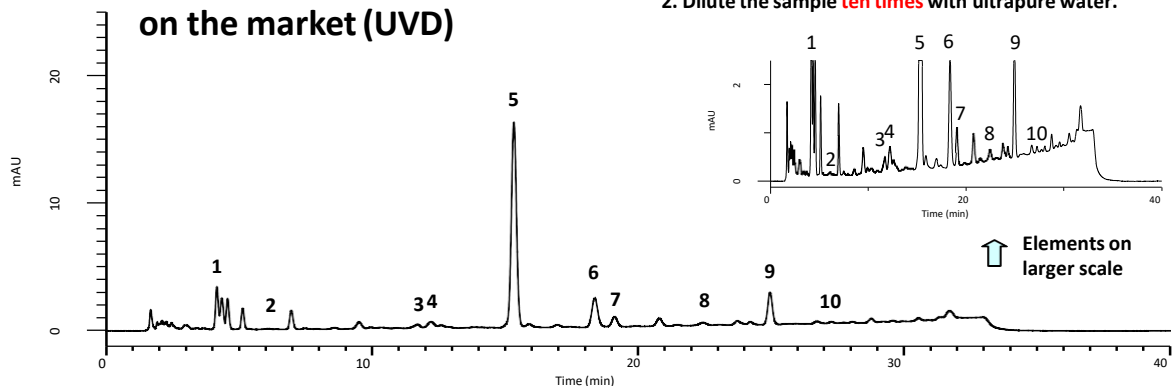


<Sample pretreatment method>

1. Filter a sample through GL Chromatodisc 25A (0.45 μ m).
2. Dilute the sample **one hundred times** with ultrapure water.

Analyses of Soft Drink Sample ③

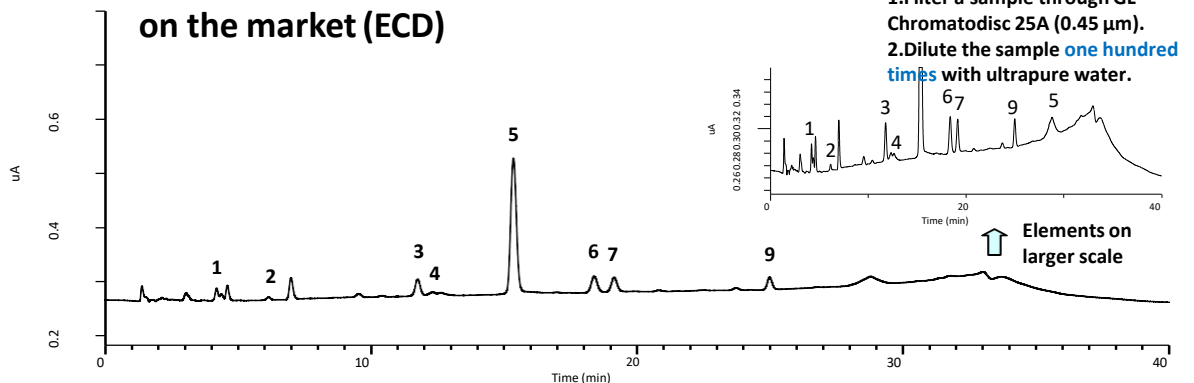
Black tea in PET bottle on the market (UVD)



<Sample pretreatment method>

1. Filter a sample through GL Chromatodisc 25A (0.45 μ m).
2. Dilute the sample **ten times** with ultrapure water.

Black tea in PET bottle on the market (ECD)



<Sample pretreatment method>

1. Filter a sample through GL Chromatodisc 25A (0.45 μ m).
2. Dilute the sample **one hundred times** with ultrapure water.

HPLC Column

InertSustain C18 5 μ m, 150 $\times$ 4.6 mm I.D.
Cat. No. 5020-04645



Syringe Filter

GL Chromatodisc Type A Hydrophilic,
25A, 0.45 μ m Cat. No. 5040-28512
(25A means I.D. is 25 mm and Type A. 4,
13, and 25 mm I.D. are available.
0.2 and 0.45 μ m are available.)



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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
Web: 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
Web: 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
Web: 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
Web: www.glsciencesinc.com

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