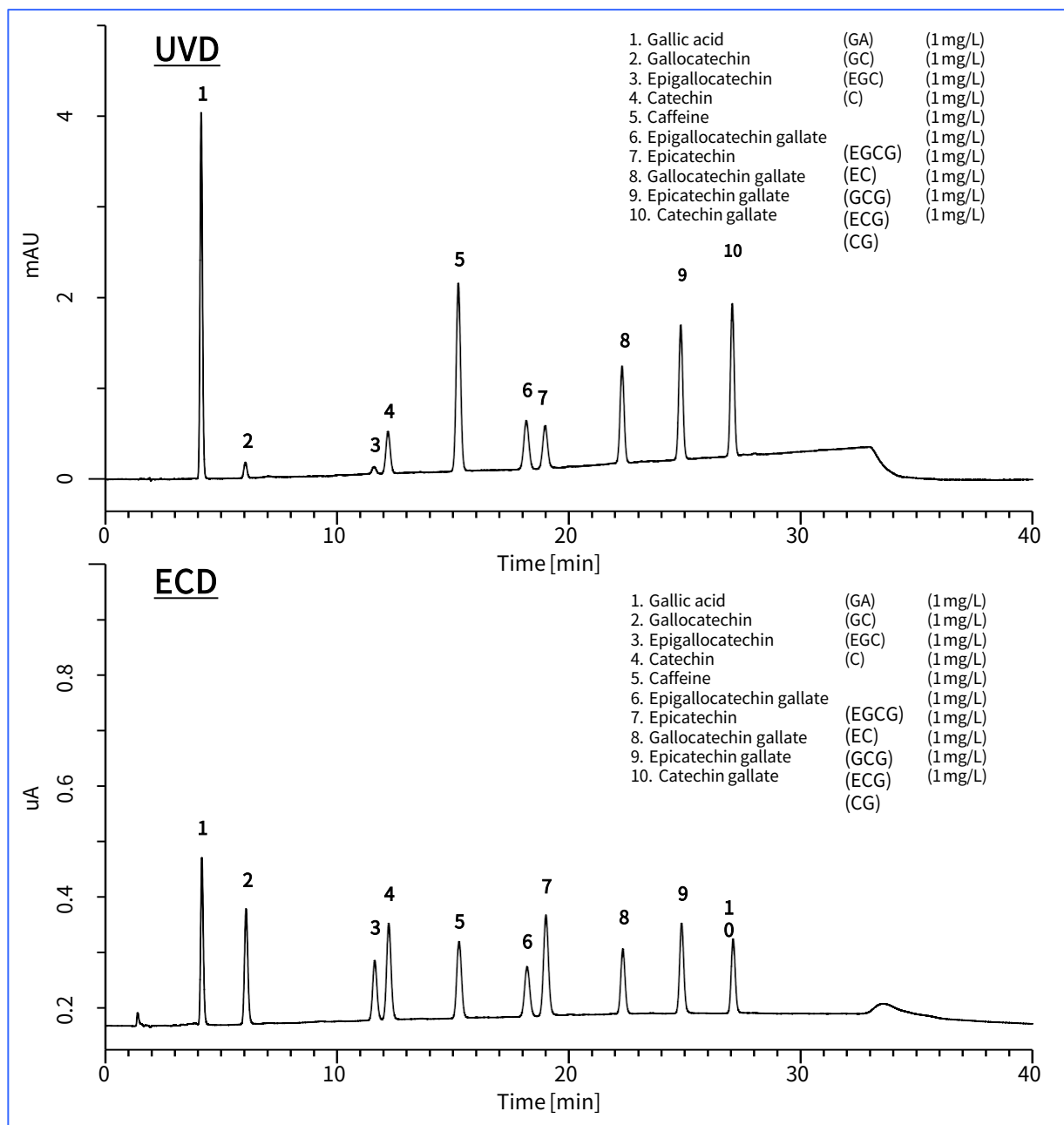


A determination method for 8 catechins, caffeine, and gallic acid (total 10 compounds) is described in this LC Technical Note. By connecting a UVD (ultraviolet detector) and an ECD (electrochemical detector) in series, Gallocatechin and Epigallocatechin were detected with sufficient sensitivity compared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

(H. Hirano)

Standard Solutions



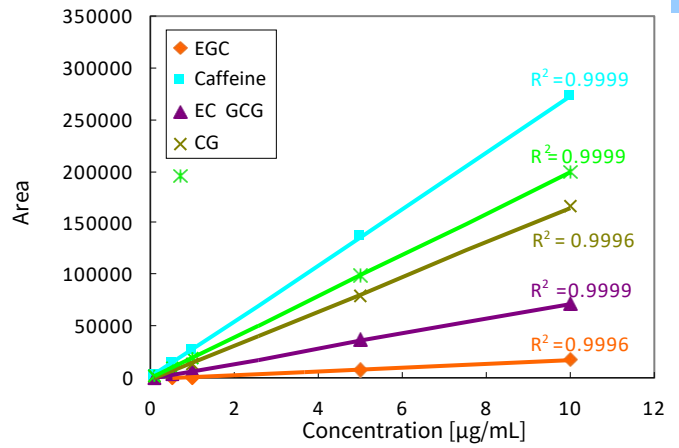
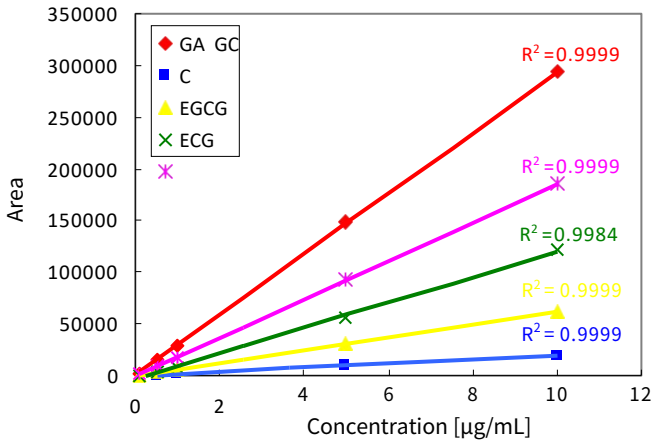
HPLC Conditions

Column: InertSustain C18 5 m, 150 × 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)
Inj. Vol.: 10 µL

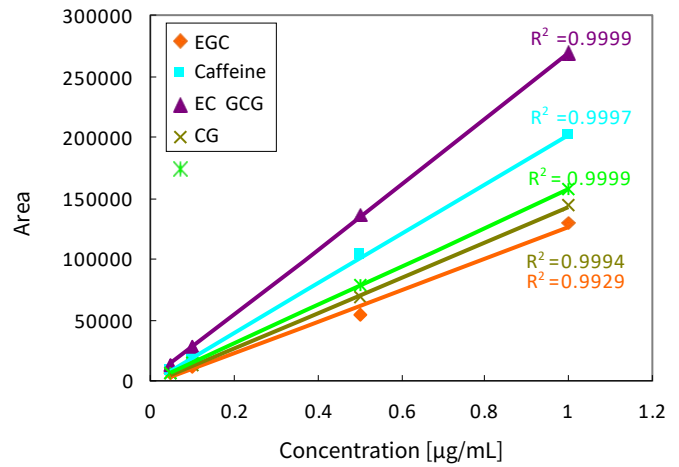
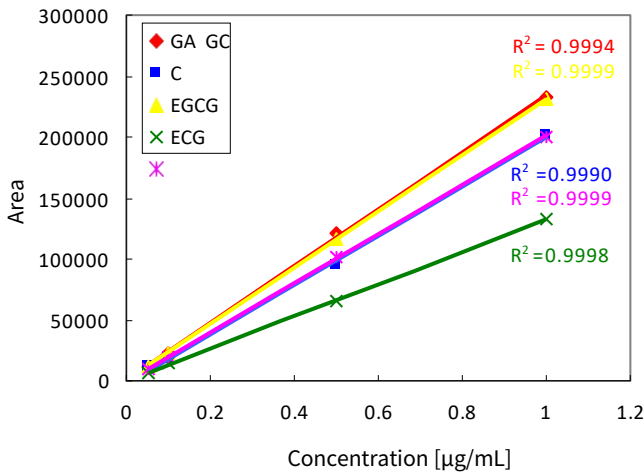
Eluent: A) 0.1% H₃PO₄ in H₂O (pH 2.1)*
 B) CH₃OH/CH₃CN = 9/1, v/v

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)

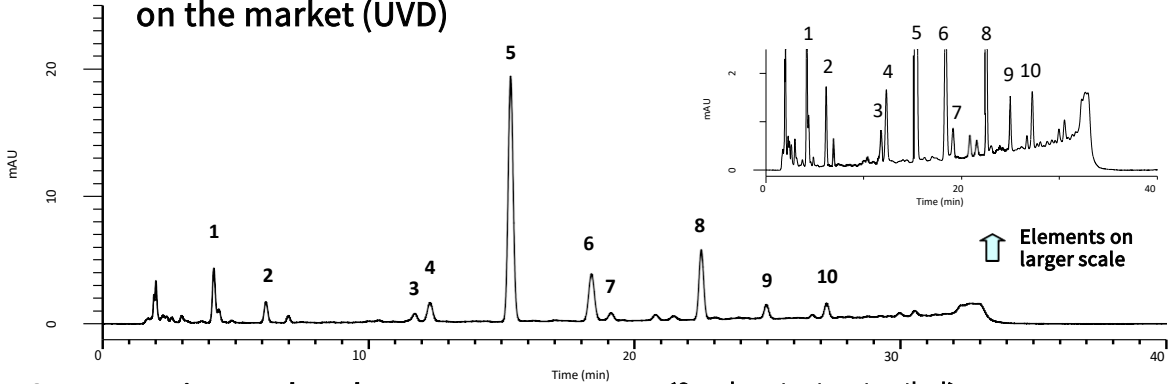


Analyses of Soft Drink Sample (1)

Green tea in PET bottle on the market (UVD)

<Sample pretreatment method>

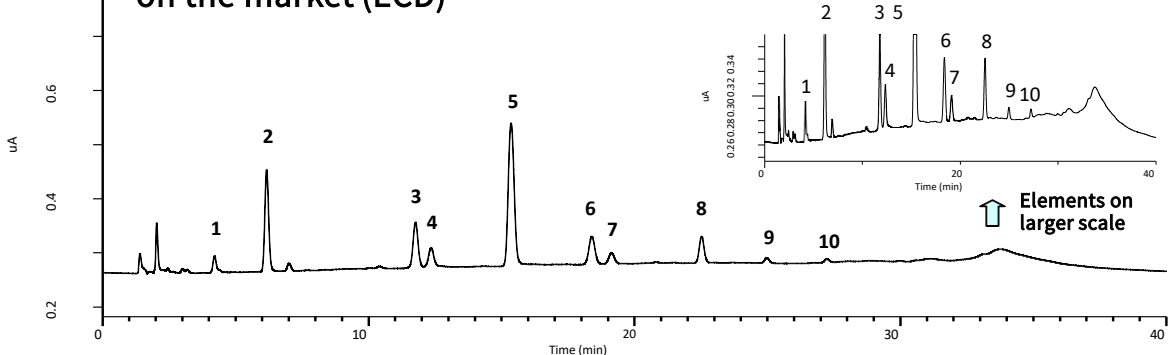
1. Filter a sample through GL Chromatodisc 25A (0.45 µm).
2. Dilute the sample **ten times** with ultrapure water.



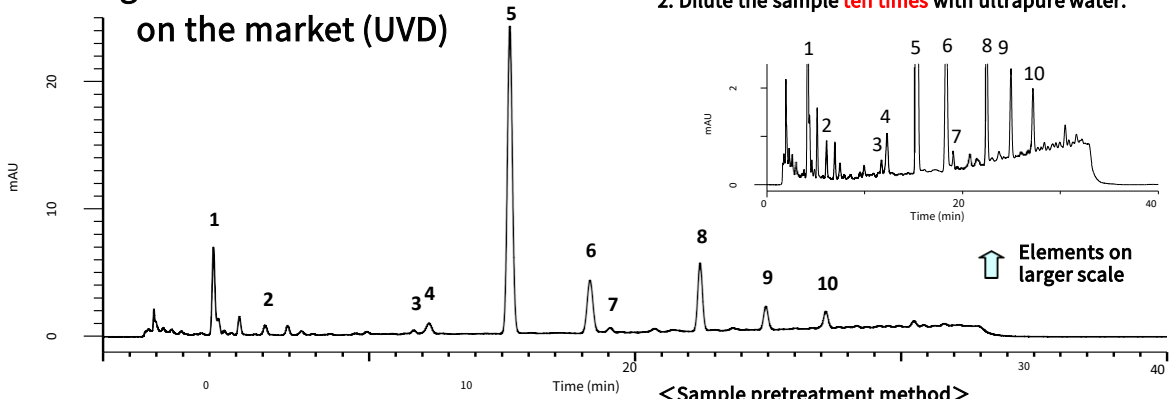
Green tea in PET bottle on the market (ECD)

<Sample pretreatment method>

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



Oolong tea in PET bottle on the market (UVD)

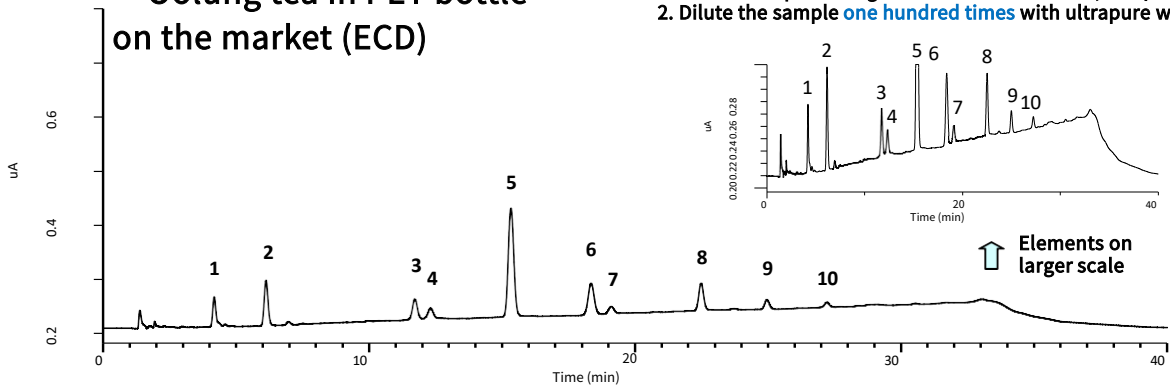


<Sample pretreatment method>

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

↑ Elements on larger scale

Oolong tea in PET bottle on the market (ECD)



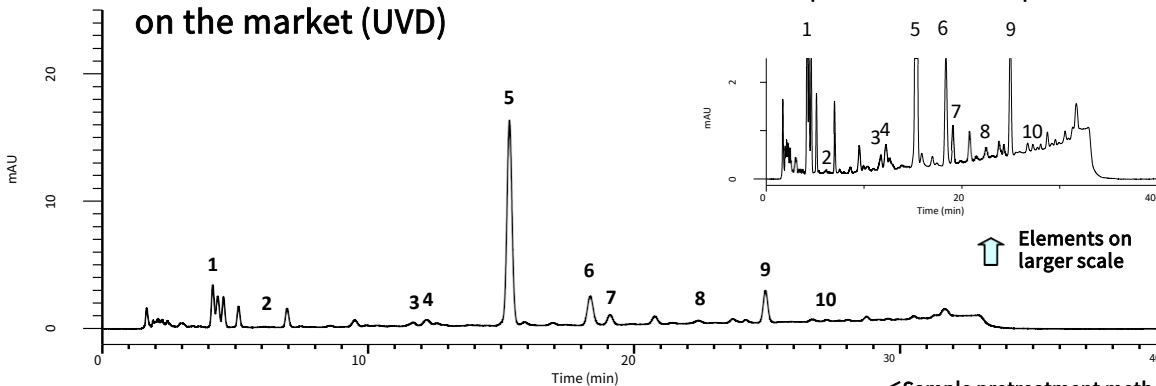
<Sample pretreatment method>

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

↑ Elements on larger scale

Analyses of Soft Drink Sample ③

Black tea in PET bottle on the market (UVD)

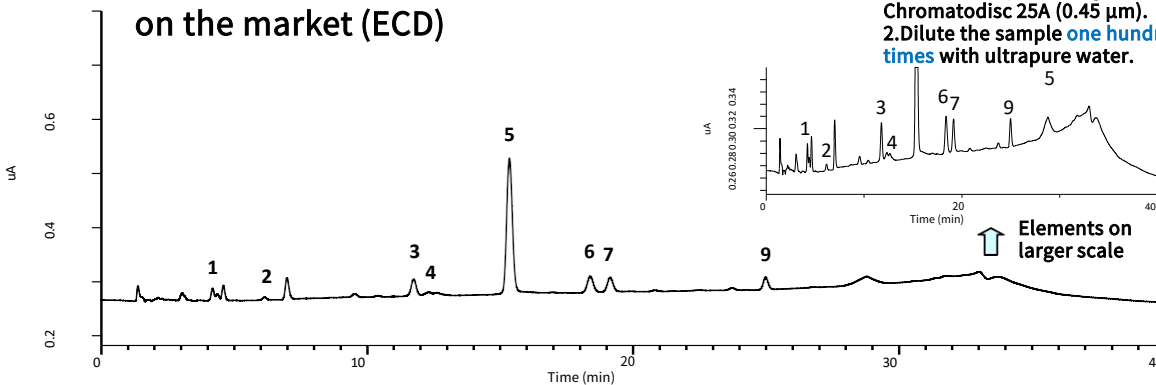


<Sample pretreatment method>

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

↑ Elements on larger scale

Black tea in PET bottle on the market (ECD)



<Sample pretreatment method>

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

↑ Elements on larger scale

HPLC Column

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



Syringe Filter

GL Chromatodisc Type A Hydrophilic,
25A, 0.45 μm 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 μm 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 Inc. USA

4733 Torrance Blvd. Suite 255
Torrance, CA 90503
USA

Phone: +1-310-265-4424
Fax: +1-310-265-4425
Email: info@glsciencesinc.com
Web: www.glsciencesinc.com

GL Sciences B.V.

Dillenburgstraat 7C
5652AM, Eindhoven
The Netherlands

Phone: +31-40-254-9531
Email: info@glsciences.eu
Web: www.glsciences.eu

GL Sciences (Shanghai) Limited

Tower B, Room 2003
Far East International Plaza
No.317 Xianxia Road, Changning District
Shanghai, China 200051

Phone: +86-21-62782272
Email: contact@glsciences.com.cn
Web: www.glsciences.com.cn



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