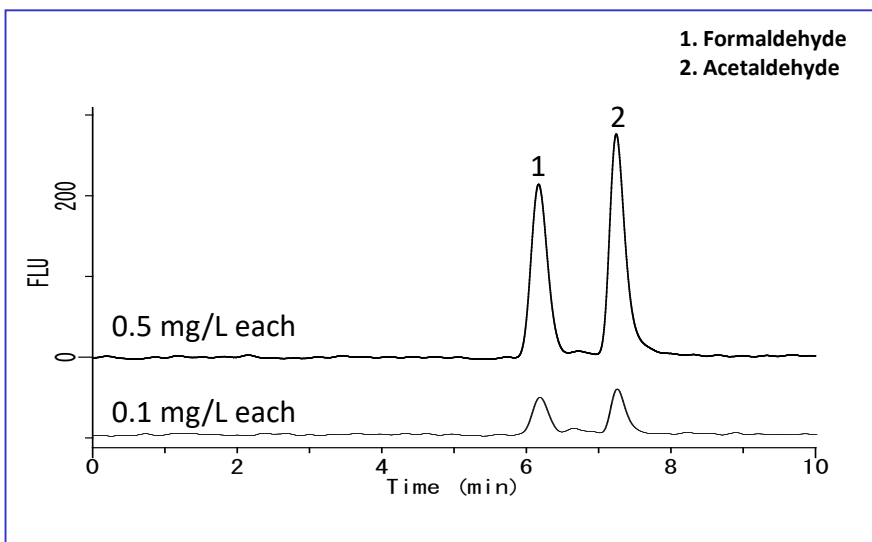


Detailed in this application is an example of the analysis of two aldehydes, formaldehyde and acetaldehyde. In Technical Notes No. 16 and No. 17, we introduced a post-column HPLC method using acetylacetone as a reaction solution. In this application note, two aldehydes were measured using 1,3-cyclohexanedione as a reaction solution.

(K.Suzuki)

Example: Measurement of standard**HPLC conditions**

Column : Inertsil CX
(5 μ m, 250 x 4.6 mm I.D.)

Eluent : A) 0.2 % H_3PO_4
B) CH_3CN
A / B = 98 / 2, v/v
(gradient mixer)

Flow rate : 0.7 mL/min

Column temperature : 40 °C

Reaction solution : 1,3-cyclohexanedione
aqueous solution

Flow rate of the reagent : 0.3 mL/min

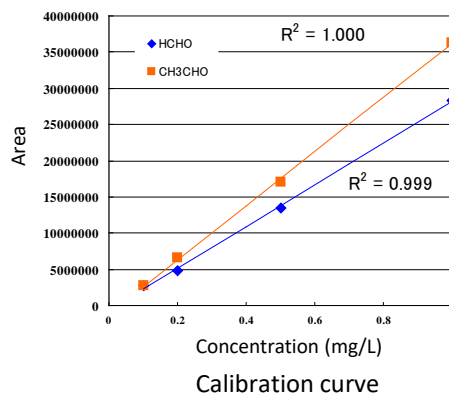
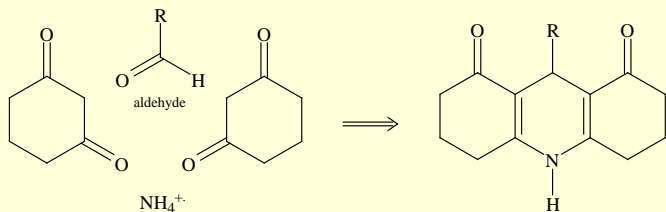
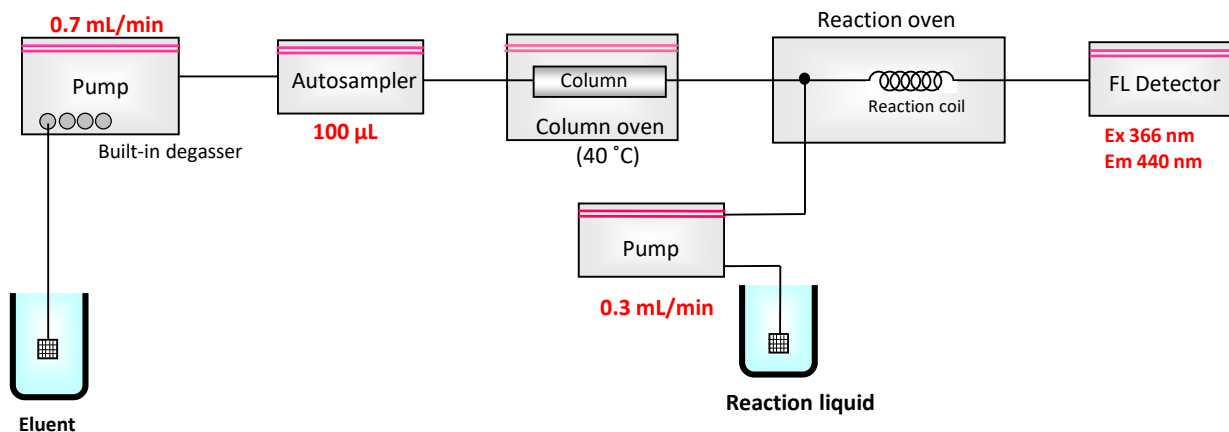
Detected : FL Ex 366 nm Em 440 nm

Injection volume : 100 μ L

Note) 1,3-cyclohexanedione aqueous solution:
40 g ammonium acetate, 20 mL acetate,
1,3-cyclohexanedione 5 g, in ultrapure water
made up to a volume of 1 L

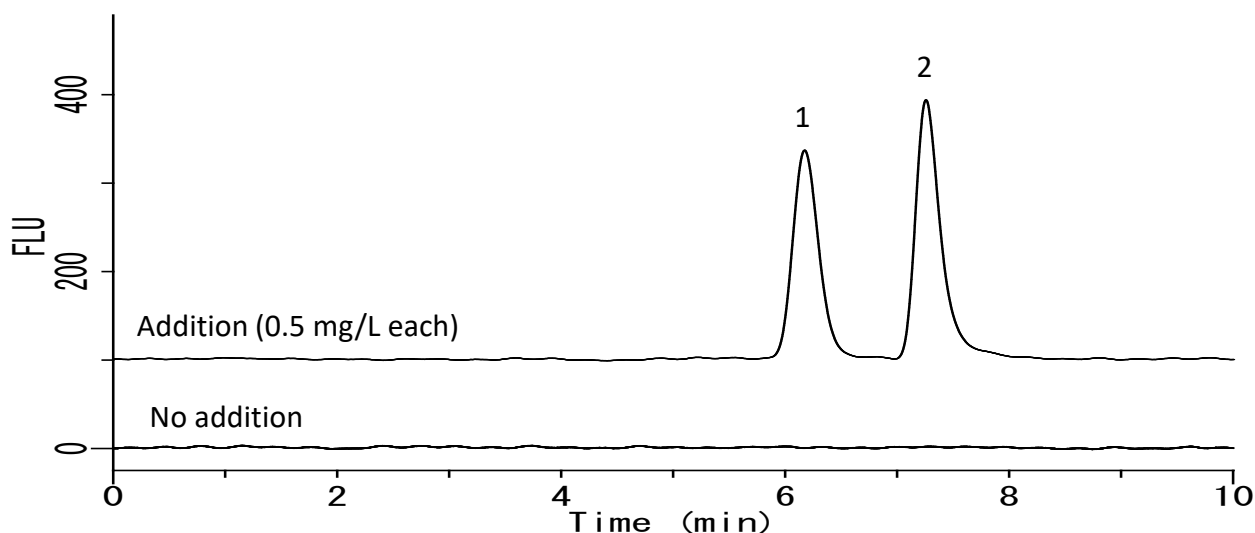
Postcolumn reaction

Aldehydes react with two molecules of 1,3-cyclohexanedione and one molecule of ammonium ion to form a fluorescent compound.

**Flow diagram**

Example: Measurement of tap water

1. Formaldehyde
2. Acetaldehyde



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
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

International Distributors

Visit our Website at www.glsciences.com/distributors