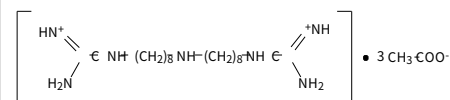


# Analysis of Iminoctadine Triacetate in Drinking Water by Post-column HPLC

This note describes a determination method for iminoctadine triacetate using an HPLC equipped with a post-column derivatization system.

Iminoctadine is a type of guanidine fungicide and contained in agricultural chemicals. However, it is indicated that iminoctadine causes severe hypotension in acute oral poisoning. In Japan, a target value for iminoctadine triacetate residues in tap water was set at 0.006 mg/L by the Ministry of Health, Labour and Welfare. In this note, analysis of iminoctadine triacetate was carried out in conformity with the regulated method.

## STRUCTURE

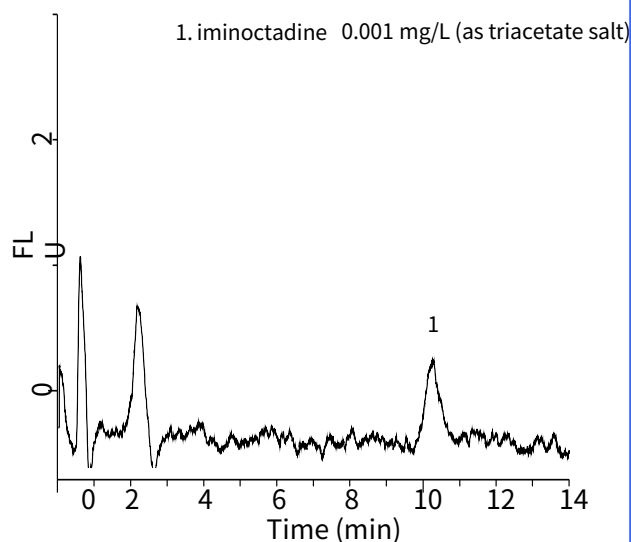
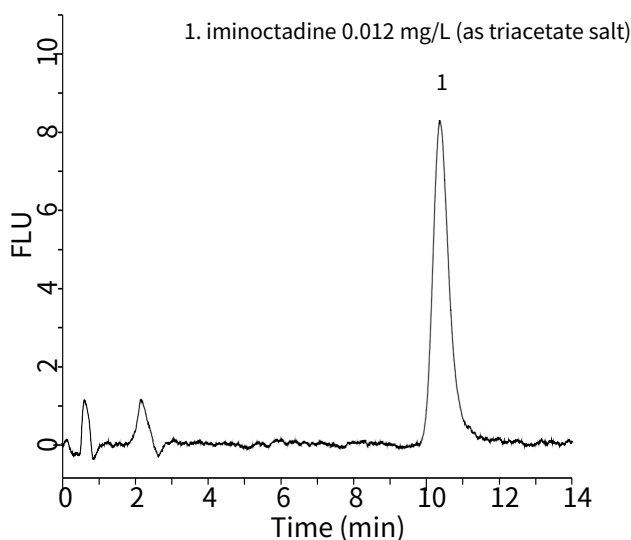


Iminoctadine triacetate

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

## Chromatograms obtained from standard solution

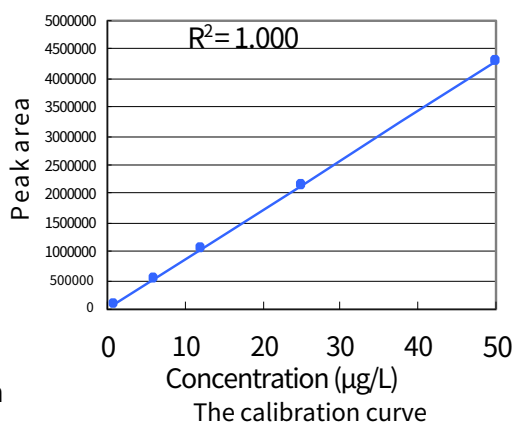
In the quality control of Japanese pesticide analysis, it is required that the coefficient of variation (CV) at one-hundredth concentration of the target value is less than 20%. Since iminoctadine in sample solution is 200-times concentrated by solid-phase extraction in the sample pretreatment, C.V. value lower than 20% should be offered when 0.012 mg/L iminoctadine solution is injected into an HPLC system. **At the concentration (0.012 mg/L), 2.8 % was obtained as CV value ( $r=5$ ).** Furthermore, C.V. at 0.001 mg/L was calculated to be 10%. Inertsil ODS-3 column enables to determine iminoctadine with high sensitivity and precision.



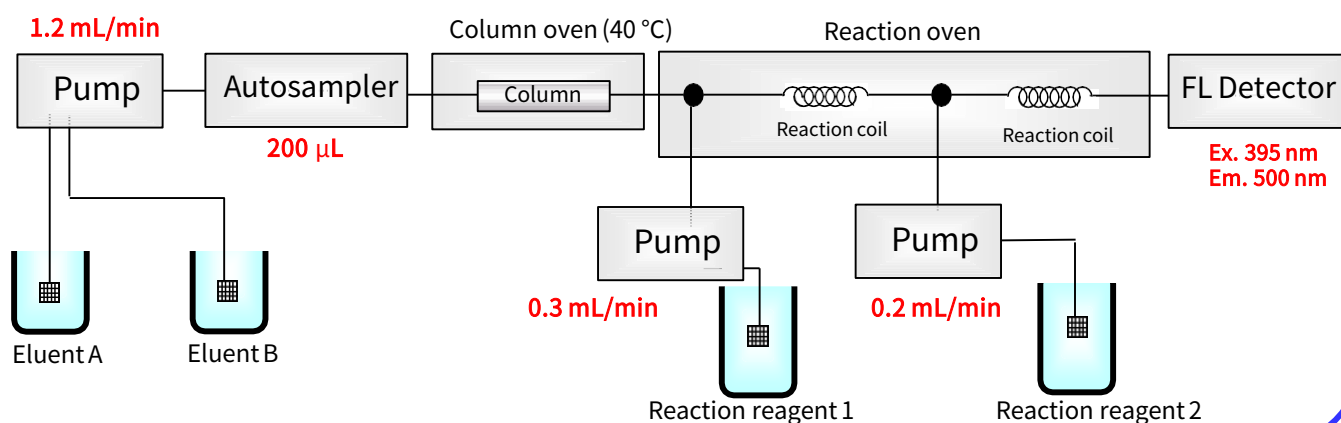
## Conditions

Column	: Inertsil ODS-3 (5 $\mu$ m, 150 x 4.6 mm I.D.) Cat.No. 5020-01731
Eluent	: A) CH <sub>3</sub> CN B) Perchlorate buffer * A/B = 5/17, v/v : 1.2 mL/min
Flow rate	: 40 °C
Column Temperature	: FL Ex. 395 nm, Em. 500 nm
Detection	: 200 $\mu$ L
Injection Volume	: 0.5 mol/L NaOH aqueous solution,
Reaction Reagent 1	: 0.3mL/min
Reaction Reagent 2	: 0.3 g/L Ninhydrin solution, 0.2 mL/min

\*Perchlorate buffer: To 14.1 g of sodium perchlorate, 400 mg of sodium hydroxide and 1.8 mL of lactic acid were added and made up to 1 L with water.



## A diagram for the HPLC system



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 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](mailto:info@glsciencesinc.com)  
Web: [www.glsciencesinc.com](http://www.glsciencesinc.com)

**GL Sciences B.V.**

Dillenburgstraat 7C  
5652AM, Eindhoven  
The Netherlands

Phone: +31-40-254-9531  
Email: [info@glsciences.eu](mailto:info@glsciences.eu)  
Web: [www.glsciences.eu](http://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](mailto:contact@glsciences.com.cn)  
Web: [www.glsciences.com.cn](http://www.glsciences.com.cn)

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