

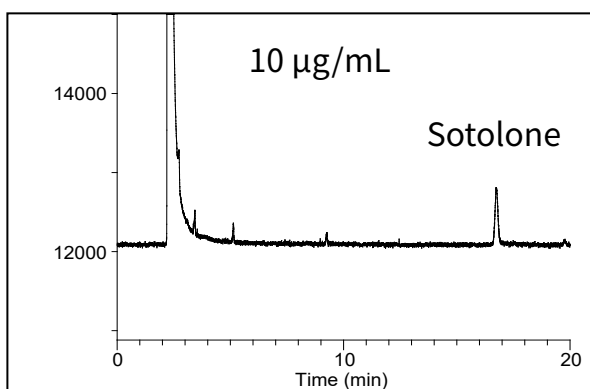
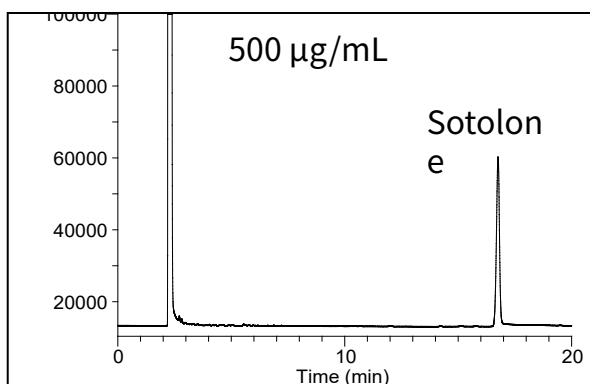
# Analysis of the Flavor Component Sotolone - Using InertCap Pure-WAX

It has been demonstrated that the odor and taste of foods are very closely related, with strong sweetening of odors and other interactions.

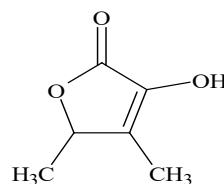
Sotolone, a compound responsible for flavor, is described as having an odor of caramel and curry, and is also known to be one of the odor components characteristic of old sake.

In this application, GC analysis was made for Sotolone reference samples using InertCap Pure WAX a new WAX-based inert column,. Here we present the successful results.

## Example: Measurement of standard



### Structural Formula



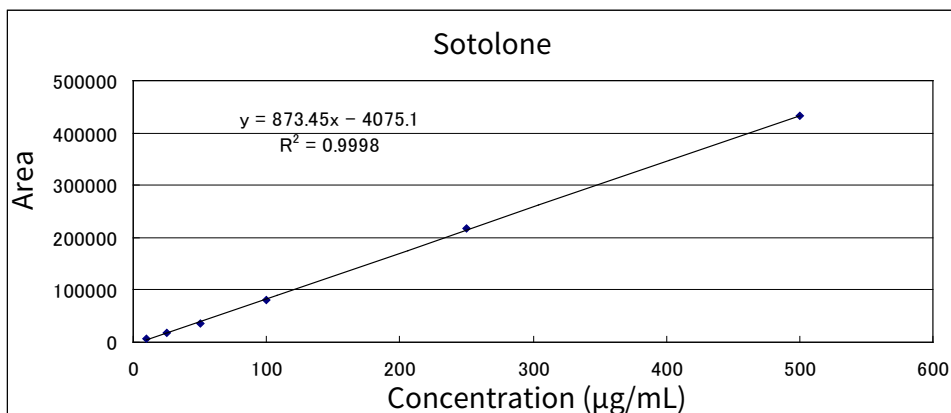
Sotolone  
3-hydroxy-4,5-dimethyl-2(5H)-  
furanone

Structures created using Chemistry 4-D Draw which is  
provided  
By ChemInnovation Software, Inc.

### GC Condition

<b>System</b>	: GC - FID
<b>Column</b>	: InertCap Pure-WAX 0.25 mm I.D. x 30 m df = 0.25 µm
<b>Column Temp.</b>	: 160 °C
<b>Carrier Gas</b>	: He 100 kPa
<b>Injection</b>	: Split Flow 50 mL/min 1 µL 240 °C
<b>Detection</b>	: FID Range 10 <sup>0</sup> 240 °C

### Calibration curve



Repeatability of 10 µg/mL injections of Sotlone

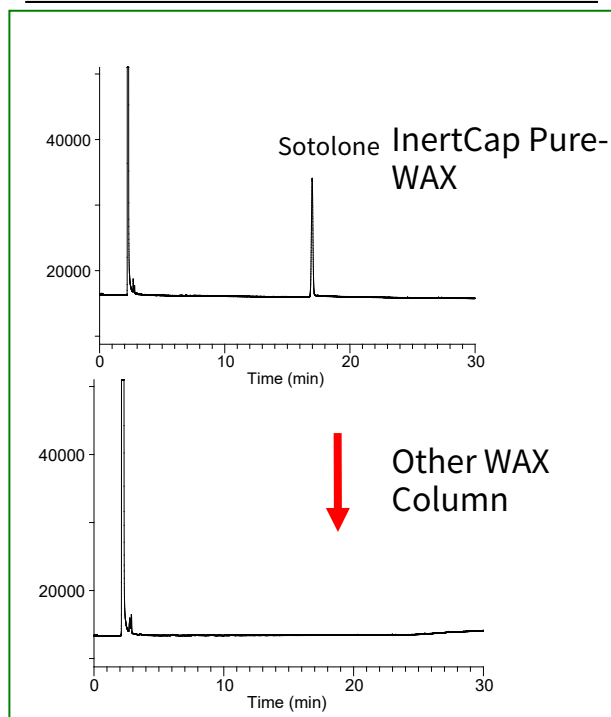
	Sotlone
1 st	6936
2 nd	7043
3 rd	7101
4 th	6840
5 th	6545
Ave.	6893
SD	219
CV (%)	3.17

Peaks that could not be detected using WAX-based columns from other companies were successfully separated, in terms of peak shape, repeatability and linearity using InertCap Pure WAX.

Many flavor components are present at very low concentrations, despite the sensitivity of GC they can be difficult to measure.

A more accurate sniffing system can be built by using it in combination with a sniffing GC (OP275).

Comparison with a column from another manufacturer



\*Sotolon is very unstable. Please inquire if you intend to analyze under different conditions.

InertCap Pure-WAX

I.D. (mm)	Length (m)	df (µm)	Max. Operating Temp.(°C)	Cat.No.
0.25	30	0.25	iso-260-Prog.260	1010-68142
0.25	60	0.25	iso-260-Prog.260	1010-68162
0.32	30	0.25	iso-260-Prog.260	1010-68242
0.32	60	0.25	iso-260-Prog.260	1010-68262
0.53	15	1.0	iso-240-Prog.240	1010-68425
0.53	30	1.0	iso-240-Prog.240	1010-68445

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)



**International Distributors**

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