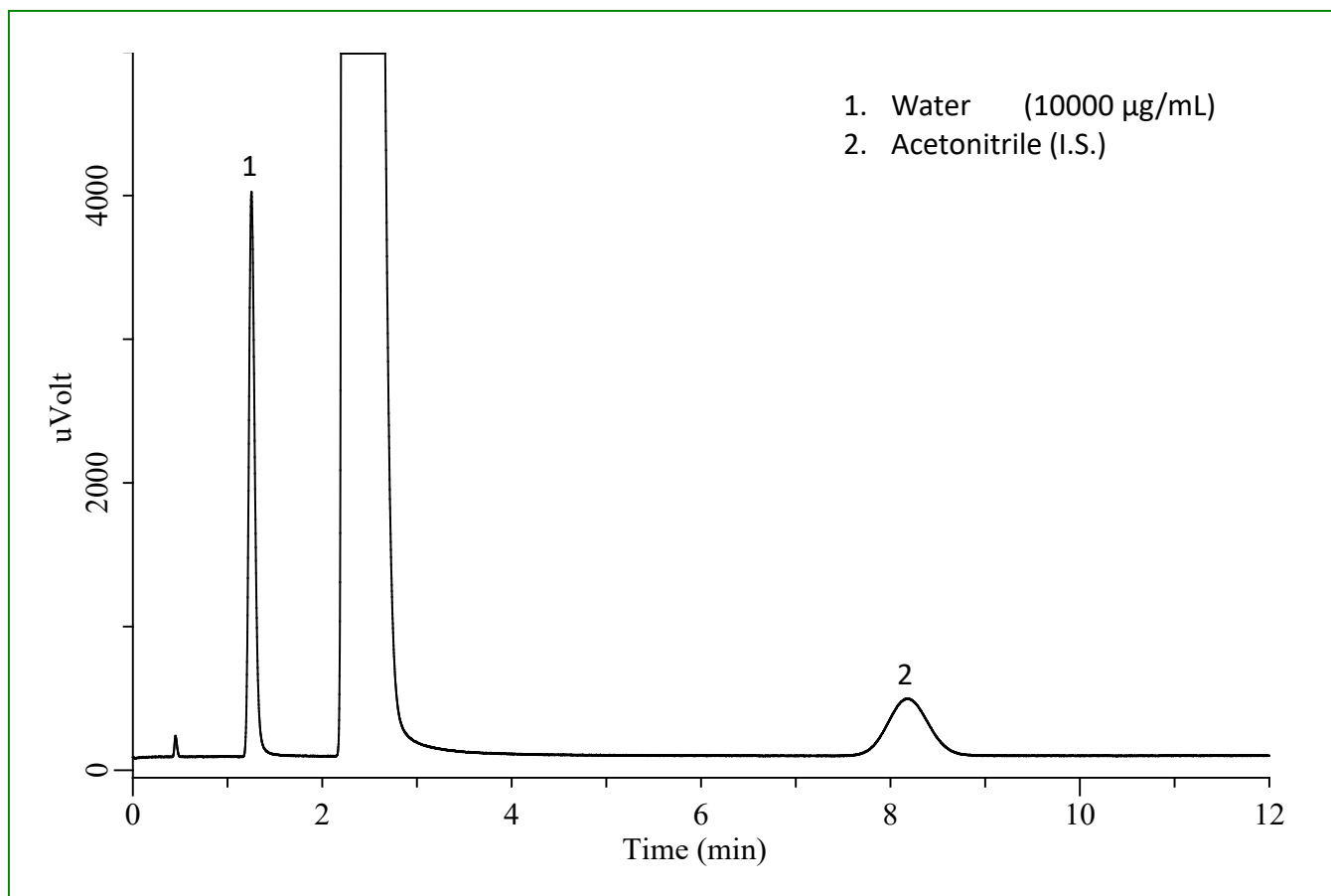


Water Testing of Panipenem- with Reference to the Japanese Pharmacopoeia 16th Edition

Panipenem is an antibiotic that is active against a variety of bacteria, including *Streptococcus pneumoniae*, *Escherichia coli*, and *Pseudomonas aeruginosa*. Indications include sepsis, pneumonia, osteomyelitis, and sinusitis.

In this application, a water test as described in the 16th edition of the Japanese Pharmacopoeia was performed using a packed column. Excellent results were achieved in terms of both separation and reproducibility for water and acetonitrile in methanol.

Example: measurement of standard



Measurement conditions

System : GC - TCD
Column : Porapak™ Q 80/100
 Glass 2 m x 3 mm I.D.
Col. Temp. : 125 °C
Carrier Gas : He 200 kPa

Injection : Direct
 200 °C
Injection Vol. : 1 µL
Detection : TCD 100 mA
 100 °C
Sample : Standard
 Analytes in Methanol

Porapak™ is a trademark of Waters Corporation.

Requirements for System Suitability

1. Water, methanol and an internal standard (acetonitrile) were eluted in this order with the resolution between water and the internal standard being not less than 10.
2. With 6 repeat injections, the relative standard deviation of the ratio of the peak area of water to internal standard is not more than 5.0 %.



Our results

Resolution :15.29

Relative standard deviation: 0.98 % (see Table 1)

Relative standard deviation

Table 1. System repeatability test results

Frequency	①Water	②Internal standard	①/②
1	17520	11313	1.549
2	17166	11008	1.559
3	17968	11515	1.560
4	17447	11137	1.567
5	16755	10986	1.525
6	17449	11168	1.562
Mean	17384	11188	1.554
Standard deviation	403	199	0.015
Relative standard deviation (%)	2.32	1.78	0.98

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 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