

Waters column

A Reprint from

*Volume VI
Issue 4, 1997*

*If you would like a subscription,
or more information,
please contact your nearest
Waters Office.*

*Check the Waters website
for up-to-date information:
<http://www.waters.com>*

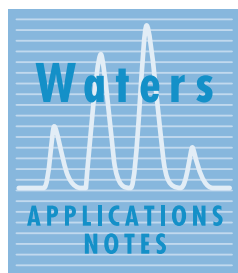
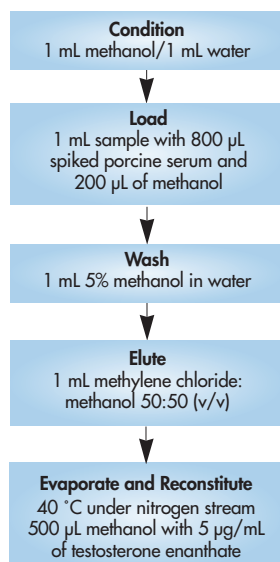
Published by Waters Corporation
34 Maple Street
Milford, MA 01757 USA
Tel: 508-478-2000
Toll-free: 1-800-252-4752
Fax: 508-872-1990

Editor: Uwe D. Neue, Ph.D.
ISSN #1084-0540

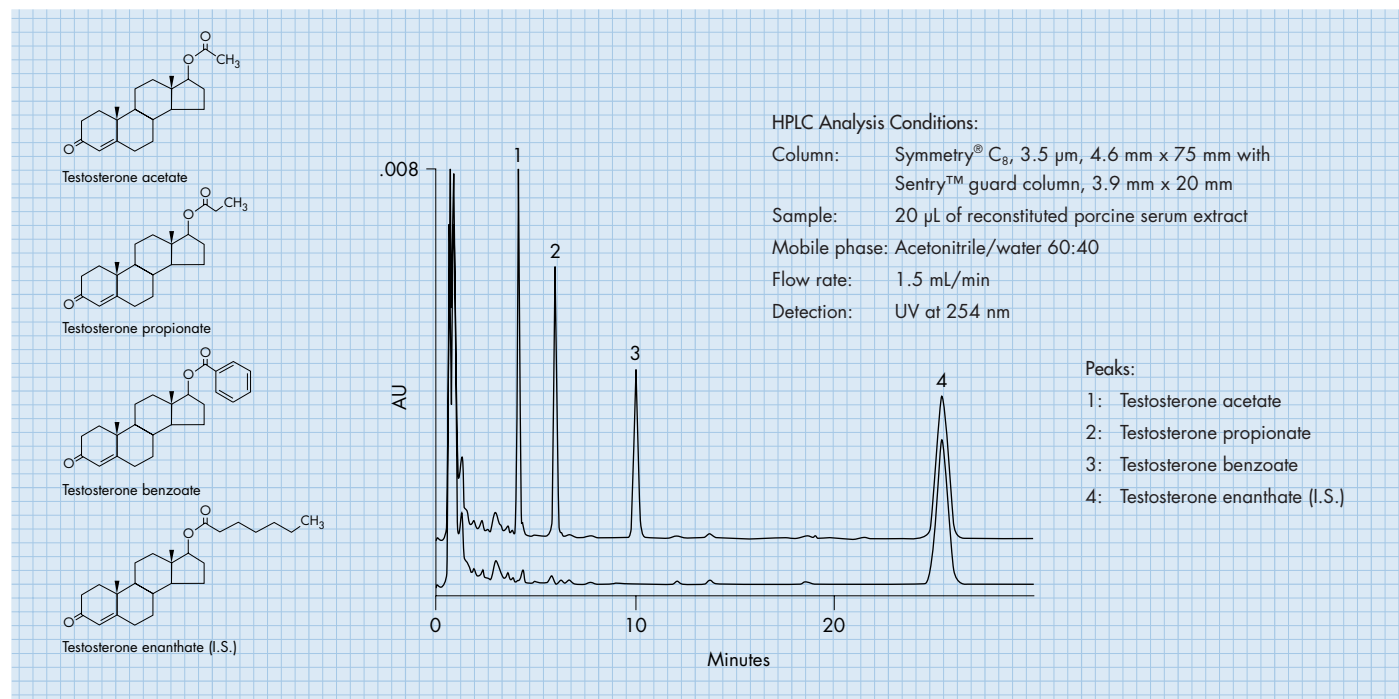
Androgens: Testosterone Esters

Solid-Phase Extraction Procedure

Oasis™ HLB 1 cc Extraction Cartridge



Chromatogram of Serum Extracts: A) Blank B) Spiked Sample



System:

A Waters 717plus Autosampler and a Waters 625 LC System. Detection was by UV using a Waters 486 Tunable UV/VIS Absorbance Detector. Data acquisition was performed using a Waters Millennium® 2010 Chromatography Manager. A 20-position vacuum manifold with a vacuum pump was used to process solid-phase extraction.

SPE Spiked Serum Results

Drug	Concentration µg/mL	% Recovery	% RSD (n=6)
Testosterone Acetate	1.00 0.200	98% 94%	1.2% 3.7%
Testosterone Propionate	1.00 0.200	100% 94%	1.9% 4.3%
Testosterone Benzoate	1.00 0.200	94% 87%	1.6% 3.2%

Waters 717plus Autosampler

The Waters 717plus Autosampler combines reliability, versatility and low cost of ownership into a fully automated, all-electric, easy-to-use instrument that will meet and exceed your requirements. The 717plus Autosampler incorporates a highly reliable and extremely precise fluid path design that is versatile enough to use for all your methods and applications. Advanced automation capabilities make it easy to develop methods using automated derivatisation techniques or to automatically add reference standards or diluents. The optional Heating/Cooling module allows you to work with a wide range of samples, from heat labile biological samples to viscous polymer samples, with exceptional precision and reliability.

Waters 625 LC System

The Waters 625 LC System combines advanced polymeric technology and low dispersion system volume into a single liquid chromatograph providing the highest performance available in a non-metallic system. This instrument is designed to handle a wide variety of life science applications such as high-resolution protein purification, microbore peptide mapping, nucleic acid isolations, and purification and analysis of oligosaccharides. These applications require an array of different column chemistries. The Waters 625 LC System is optimised for ion-exchange, gel filtration, affinity, hydrophobic interaction and reversed-phase column chemistries used in microbore, analytical or micropreparative methods relevant to the biochemist. The Waters 625 LC System is designed to be easy to operate, and to maintain, for reliable daily operation.

Millennium® 2010 Chromatography Manager

Advanced computer technology simplifies accessing, interpreting, and reporting your results.

The productivity of today's chromatography is centered around the ability to find, generate, summarise, and report results in a way that meets your needs and complies with any regulatory requirements. The Millennium® relational database lets you create your own view filters to customise the way you sort your information, such as "lotCode".

- Using the database, you can track a method history giving you audit trail capability that ensures total security of your raw data and results. In addition, you can specify "Access Type" which allows you to "lock" your methods for even greater security.
- The database keeps track of your instruments, triggering an alarm when scheduled maintenance is required. The Millennium® relational database lets you view the injection information on any calibration point at any particular point in time on a processing sequence. This gives you a detailed account of the processing method for that injection, ensuring an accurate audit trail for regulatory compliance.
- The Millennium® Chromatography Manager can provide acquisition and control for as many as four chromatographic systems, including three HP5890 GC systems.
- The Millennium® Report Publisher has the capability to give you exactly what you want.

The Waters 486 Tunable UV/VIS Absorbance Detector

The performance you expect with the flexibility you need.

The Waters 486 Tunable UV/VIS Absorbance Detector is the highest performing UV/VIS detector with the flexibility to accommodate virtually all your HPLC applications. Our exclusive Taper-Cell® flow cell design eliminates refractive index effects, providing exceptional baseline stability.

- The 486 detector is tunable from 190 to 600 nm wavelength range with reproducibility and precision.
- The unique modular cell assemblies for microbore, analytical, preparative, high-pressure mass spectrometry, and nonmetallic flow paths give your application flexibility.



The quality management system of Waters manufacturing facility, Milford, Massachusetts, complies with the International Standard ISO 9001 Quality Management and Quality Assurance Standards. Waters quality management system is periodically audited by the registering body to ensure compliance.