

robot whisperer

PerkinElmer Australia's Liquid Handling Newsletter



Greetings !

Hello again—

Thanks for taking the time to read *robot whisperer* 3. People seem to be enjoying the newsletter—I certainly enjoy hearing your comments and finding out what you're up to and what you're using your robots for.

JANUS is certainly holding her own at the moment—there has been quite a lot of interest from people all over Australia, for a variety of applications—old and new!

This issue, take a look at what happened at the first PKI Liquid Handling User Group Meeting, held in Perth on July 22nd.

We have a new section for Frequently Asked Questions—these are real questions from you, the users.

This issue we also have some new accessories and options for JANUS—I hope you find these interesting.

And finally, there are a couple of tips from our users.

Remember, if you have any hints, tips or suggestions that you'd like to share, please send them in to me.

Enjoy your reading and see you soon!

Cheers ☺

Desley

Would you like a copy of our new "Quick Guide to Liquid Handling" ??

Contact me or your local Sales Manager for a copy (see back page for contact details).

WA PKI Liquid Handling User Group

We held the first PKI Liquid Handling User Group (LHUG) meeting in Perth on July 22nd. There were 22 attendees, representing a total of 18 robots. We were lucky enough to have 4 users speak , from Royal Perth Hospital Clinical Immunology, PathWest Forensic Biology, WA DNA Bank and WAIMR Monoclonal Antibody Facility. A range of real-life applications were covered, including PCR setup, PCR purification, sequencing cleanup, cell culture and ELISA assays.

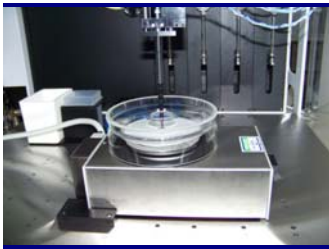
Inside this issue:

WA PKI Liquid Handling User Group	1
Precision and Accuracy	2
FAQs	2
What's New?	3
User Tips & Tricks	4
Contact Details	4
Next Issue	4



Precision and Accuracy

JANUS and MultiPROBE II are liquid-based pipetting systems using individually controlled syringes. It is possible to calibrate the syringes, using a sophisticated automated Gravimetric Performance Verification Option. This option includes a Mettler-Toledo® balance that sits on the deck (left). The software asks the user to input information such as:

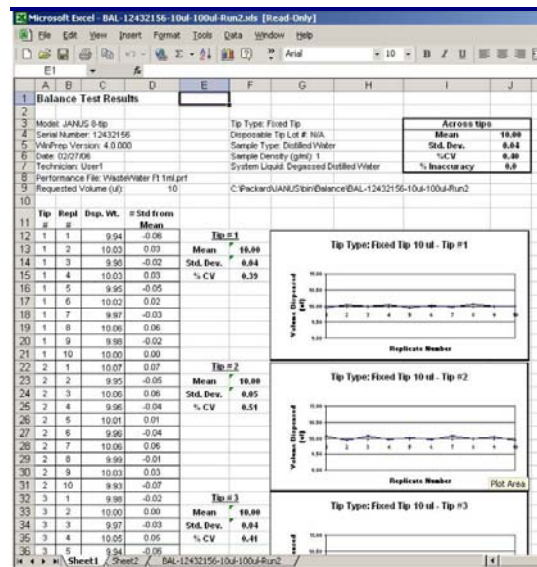


- ✓ Volume to be tested
- ✓ Number of replicates per tip
- ✓ Which probes to use
- ✓ Type of disposable tip
- ✓ Lot # of disposable tips
- ✓ Sample density
- ✓ Technician name
- ✓ Date
- ✓ Performance file used
- ✓ Comments

Once this data is entered, the system proceeds to pipette each volume for the required number of replicates. Live updating of the precision (% CV) and accuracy (%inaccuracy) is displayed on-screen at all times. At the end of the test, a detailed

report (below) is provided, which shows the overall average results, as well as individual results per tip.

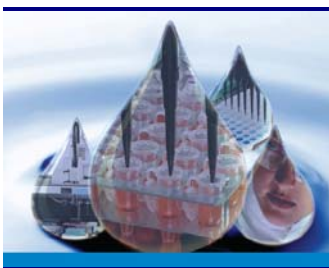
The results are then used to create optimized performance files for each tip type, ensuring very accurate and precise pipetting.



FAQs

How do I log a service call?

1. Record the serial number of the instrument requiring service.
2. Phone the Service Hotline on 1800 066 776.
3. Give the service customer care representative your details, including the nature of the problem and the serial number of the instrument.
4. If you have a preferred engineer, you should mention it to the representative.
5. Record the Job Number given to you by the service customer care representative.
6. The engineer will call you shortly after to make a time to visit.



Why does the robot pick up 1 tip at a time, instead of all 4 or 8?

This is usually a result of the VariSpan spacing for the piece of labware that the probes are accessing—and it can happen for all types of labware, especially tips and plates.

To fix the problem, you need to edit the labware. Double-click on the labware in question and click the EDIT button, then click O. In the window that opens, go to the details page.

Under Well Array Details, click on the numerical value on the “Well spacing y” line and change it to -9.0.

On a 4-tip arm, the VariSpan spacing is from 9 to 20mm. On an 8-tip arm, the spacing is from 9 to 40mm.

Alternatively, you might be using a Single Liquid Transfer instead of a Reagent Transfer!

What settings should I use for viscous solutions?

When using viscous fluids, it is recommended that you decrease aspirate and dispense rates.

For example, to aspirate 45 µl of polyethyleneglycol (PEG), you might want to set the aspirate rate at 30µl/s and set the dispense rate at 100µl/s. In both instances, the rates are slower than if the solution were of a normal viscosity.

For very viscous fluids, it can be helpful to increase the delay. The standard delay time (aspiration and dispense) is 200ms. Increase the delay to over 200ms for viscous fluids; the thicker the fluid, the longer the delay required.

You should also decrease the “Post-Step Tip Retraction” speed and increase the “Post-Step Tip Retraction” height.

Want to accessorize your JANUS ?



PerkinElmer and BioTek® have partnered to offer you a variety of **ELx405™ Microplate Washer** models, each with its own innovative design features.

Easily integrate your JANUS® Automated Workstation with the ELx405™ Washer to fully automate your ELISA, in-plate binding or cell-based assays. The ELx405™ may also be integrated as part of larger JANUS integrated systems.

	Model	96-well only	96/384-well	Cell Washing	Valve module	Ultrasonic Advantage
ELx405™	ELx405R	•				
	ELx405U		•			
	ELx405UV		•		•	
ELx405™ Select	ELx405UVS		•		•	•
	ELx405UCW		•	•		
	ELx405UCWS		•	•		•
	ELx405UCWVS		•	•	•	•

The Automation and Liquid Handling team now offers a **1D Handheld Barcode Scanner** (Part Number: 7600084, for USB communication) as a standard product for use with the JANUS Automated Workstations. This option is ideal for manually scanning 1D barcode labeled microplates, samples tubes or other labware. This option consists of the Datalogic QuickScan® QS6000 PLUS scanner and a stand for optional hands-free operation. The scanner features a universal wedge for additional keyboard emulation, barcode symbologies, and data editing. It simply plugs into any available USB port, and emulates keyboard input.

Decoding capabilities: Code 128, Pharmacode 39, Interleaved 2 of 5, Code 39, Code 93, Standard 2 of 5.



PerkinElmer now offers the specially modified **IKA Shaker** (Part Number: 7005047) for use either directly on the JANUS deck or to the right of the deck, either on the bench or on the Angle Bracket. This four microplate position orbital shaker provides increased shaking capacity.

The automation friendly design returns the shaker to the “zero” position after shaking allowing for reliable gripper and pipetting access. The IKA Shaker is controlled through JANUS WinPREP® software—adjust the amplitude, turn the shaker on and off, set user-defined timed shaking. The heater tiles from PerkinElmer’s Quad Heater can be attached to the IKA Shaker, enabling simultaneous heating and shaking.

For more information on these and many other accessories available for your JANUS please use the contact details on the back page of this newsletter.

NEW JANUS Oil Prep Workstation

The **JANUS Oil Prep Workstation** automatically dilutes oil samples with kerosene, in preparation for wear metals analysis by inductively coupled plasma (ICP), such as with PerkinElmer’s Optima™ ICP-OES.

The Oil Prep Workstation dramatically improves productivity and efficiency, with a flexible, variable span 8-tip arm. The use of disposable tips minimizes cross-contamination and eliminates time consuming tipwash steps required with fixed-tip systems, accelerating throughput and significantly reducing the volume of waste solvent. And unlike alternate technologies, PerkinElmer’s patent-pending ultrasonic liquid level sensing is not impacted by individual sample viscosities, color, or external lighting.

PerkinElmer JANUS Oil Prep Workstation provides a turnkey solution for anyone needing to increase their wear metals testing throughput while decreasing labor and material costs.





Visit our **website:**
www.perkinelmer.com.au

PerkinElmer Regional Sales Managers

Peter Jenkins: Sales Manager—Qld/NT
 Phone/Fax: (07) 3367 2832
 Mobile: 0409 562 537
 Email: peter.jenkins@perkinelmer.com

Stephanie Moore: Sales Manager—WA
 Mobile: 0418 149 170
 Fax: 08 9456 0363
 Email: stephanie.moore@perkinelmer.com

Christine Mylo: Sales Manager—NSW/ACT
 Mobile: 0409 565 194
 Email: christine.mylo@perkinelmer.com

Nathan Tully: Sales Manager—SA/Tas
 Mobile: 0434 115 990
 Email: aecsa@senet.com.au

Antoniette Violo: Sales Manager—Vic
 Mobile: 0409 560 897
 Email: antoniette.violo@perkinelmer.com

Or call head office on 1800 033 391

Desley J. Pitcher

National Product Specialist—
 Automation, Liquid Handling & HTS

PerkinElmer®

PO Box 1956
 Sunnybank Hills Qld 4109

phone: 07 3299 7067
 fax: 07 3299 7047
 mobile: 04 0207 6911
 freecall: 1800 033 391
 e-mail: desley.pitcher@perkinelmer.com

In the next issue:

Do you have any ideas for what you'd
 like to see in the next issue of
robot whisperer?

Do you have any questions that you'd
 like answered?

If you have any **suggestions** or
questions, please send them
 to Desley Pitcher.

User Tips & Tricks

Do you have trouble sensing low volumes in PCR plates or do you find that your PCR plates are slightly warped or uneven?

PathWest Laboratory Medicine (Forensic Biology) suggests using the PCR Heat Transfer Block (Part Number 5080163) to hold the PCR plate. The metal of the heat transfer block facilitates better conductivity and increased sensitivity of the Accusense® liquid level sensing and also provide a solid support for the plate to account for uneven plates.

Do you sometimes find it difficult to remove bubbles from your syringes ?

The guys at Queensland Health (DNA Analysis, Forensic and Scientific Services) use a silicon spatula to tap the syringes during a flush/wash. This helps to dislodge the bubbles more easily (and less painfully) than tapping with your fingernail! Remember to tap only at the bottom of the syringe, never in the centre.

If you have tips or tricks that you would like to share, please send them in!

