



Better Pipetting:
Better Data, Better Science



Andrew Alliance



Andrew is a novel pipetting robot that enhances the reproducibility and efficiency of a laboratory by automating the use of standard manual pipettes. By providing scientists with a fully automated and unattended pipetting solution, scientific resources can now focus their efforts on important tasks without being slowed down by the pipetting process. Andrew helps remove both inter and intra user variation in protocol execution while greatly reducing errors infused by improper pipetting techniques. Our software was developed for scientists that have no automation experience which allows for even novice users to write protocols with little to no training. It is now simple and affordable to transition from error prone and time-consuming manual pipetting to liquid handling automation.

ONE SOLUTION, MANY BENEFITS.

Andrew weighs only 10kg and occupies a bench space as small as a sheet of paper when not in use. The compact size allows Andrew to be integrated into a laboratory within minutes including inside a hood, a glove box, a cabinet, and even cold rooms at 4°C. Scientists can now bring automation to areas where it was historically challenging to implement. However, Andrew's working deck can expand out to accommodate very complex experimentation and host a large suite of different consumables. You can use up to 10 microplates, hundreds of tubes, or any mixture of different consumables you use in the lab (including your own pipette tips).



REPRODUCIBILITY

Better pipetting means better data. And better data means better Science. Automated pipetting eliminates human error, fatigue and people training, resulting in more reliable data while minimizing the need of replicates and redundant work.



TIME IS MONEY

Biologists spend two hours per day pipetting. Andrew can run in parallel for hours on end, accurately executing pipetting when humans simply cannot. Just the work time saved by Andrew enables the system to pay for itself in less than a year.



HEALTH

Pipetting requires repetitive movements (up to 500 times per day for the average user) that can lead to musculo-skeletal disorders. Andrew can pipette hazardous materials without the risk of possible exposure.

CHOOSE THE RIGHT LIQUID HANDLING ROBOT FOR YOUR APPLICATION



1000G

The most compact liquid handling robot.
This model uses Gilson pipettes from 0.2 μL
to 1000 μL and universal tips.

1000G-XL

The liquid handler using Gilson pipettes
from 0.2 μL to 1000 μL , with extra-height
for tips longer than 70 mm.



1000R-XL

The automated pipettor using Rainin Pipettes
with LTS Tips from 0.1 μ L to 1000 μ L.



10KR

The large volume liquid handling robot
from 10 μ L to 10mL.

This model uses Rainin pipettes and tips.

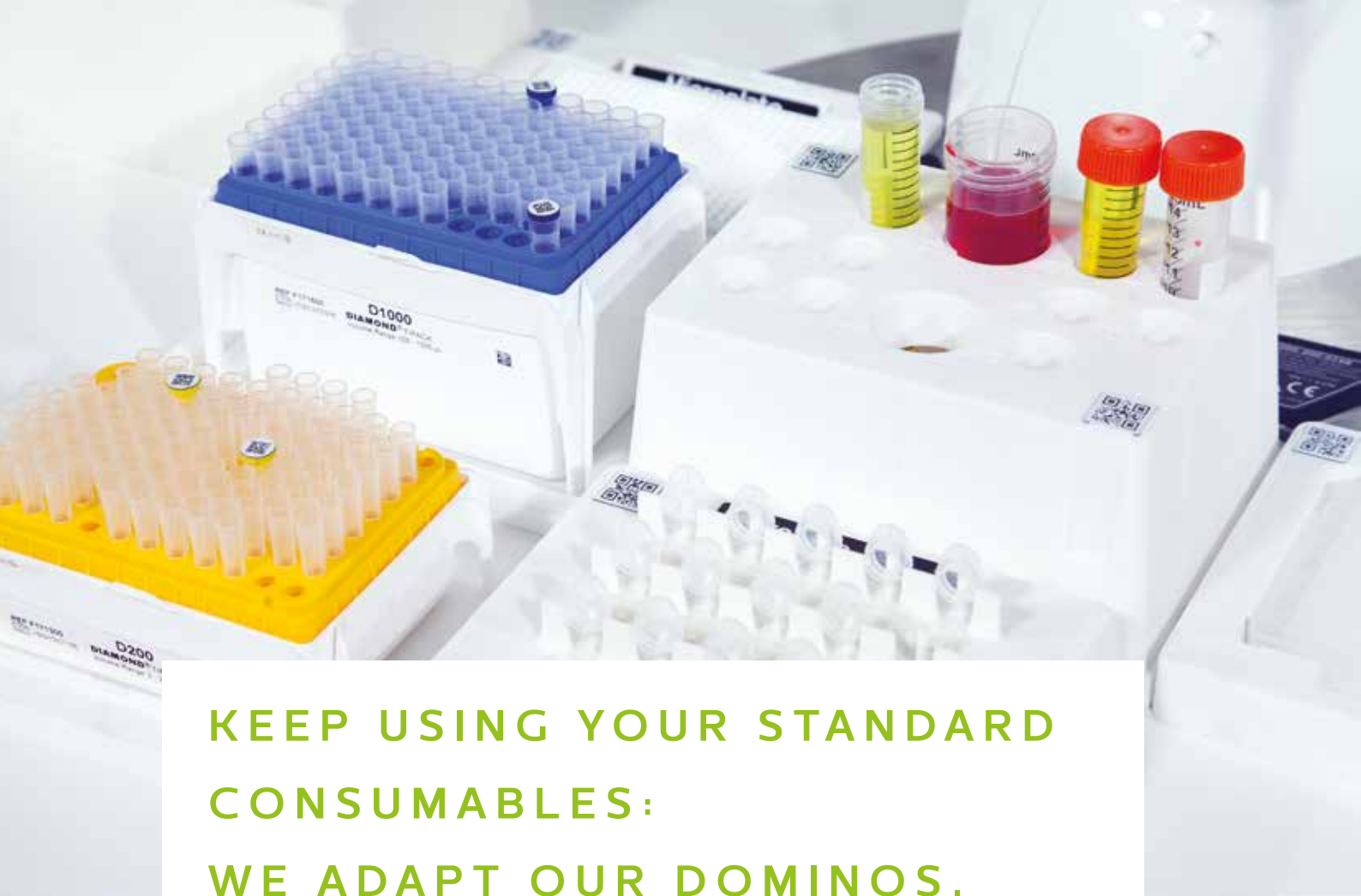


1000P

Automated pipetting of viscous and volatile liquids
with Gilson positive displacement pipettes.

From 1 μ L to 1000 μ L.





KEEP USING YOUR STANDARD CONSUMABLES: WE ADAPT OUR DOMINOS.

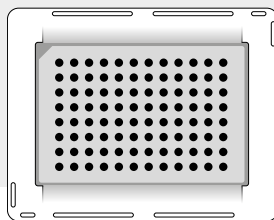


SCAN THIS CODE
TO ACCESS
THE DOWNLOADABLE
PDF DOMINO CATALOG

The working deck of the Andrew liquid handling robot consists of magnetic tiles called DOMINO™ blocks that you can freely organize in seconds. DOMINOs are designed to host your consumables: from bottle to tubes, from microplates to microchips, from vials to racks of tubes. DOMINOS can also agitate, stir, heat, cool, and can even host a ready-to-go full kit. And if we don't have a domino already available – we will make it.

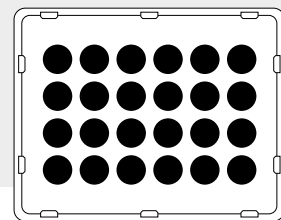
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STANDARD



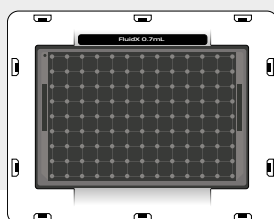
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MAGNETIC
STIRRER



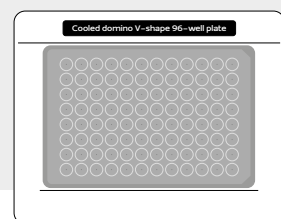
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RACK



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COOLED



ANDREW LAB, THE UNIVERSAL SOFTWARE FOR PROTOCOL DESIGN, IS COMPLIMENTARY.

Andrew Lab is a software tool that allows the creation and documentation of generic pipetting protocols, even without any liquid handling robot. Try it to believe it, and join the thousands of users that are already exploiting our protocol design software (for free). Simply visit our website to download your own copy.



DRAG AND DROP

Specify all pipetting actions, including specific operations such as incubations and special user interventions, by drag and drop – without training.



NO ANDREW?

Define your protocol, and print a PDF to document and complete by hand.



SERIAL DILUTIONS

Indicate your desired concentration, volume, and number of points: no more mistakes in calculations (and Andrew will do it right – without forgetting to mix).



PROTOCOL TRANSLATIONS

One protocol, one file. You can send an email and open it in any language, from Chinese to Russian, from English to Korean.



CONCENTRATION NORMALIZATION

Copy and paste from excel the concentration of your solutions, and indicate your target value: All calculations and pipettings are done for you.



EASY IMPORT/EXPORT

It's easy for a biologist to import/export data from/to a LIMS or EXCEL, or for an automation specialist to use our XML/API tools to integrate Andrew in more complex workflows.

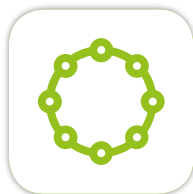


ACCESSORIES AND INTEGRATED SOLUTIONS



Calibro

Calibro allows for the unattended verification of pipette performances using photometric dyes and a fully integrated microplate reader. In just a few clicks, Andrew will pick up the pipettes you choose and provide a full report that includes random error, systematic error and CV values. You can launch the system before you go home or before an important experiment and rest assured on the results.



BeadTender

In-tip processing of magnetic beads: reproducible, contamination-free, consumable and volume independent. With unprecedented efficiency and purity.



Liquid Level Wand

If you have many samples on deck all of varying volumes, the Liquid Level Wand enables Andrew to use sound to determine where the physical liquid levels are on deck. Andrew picks up the Wand just like a pipette and, in 2-3 seconds over each tube, determine liquid levels.



SCAN THIS CODE
TO DOWNLOAD
THE LLW BROCHURE

APPLICATIONS

Andrew is used across dozens of unique applications and the list grows every week. From proteomics to molecular biology to analytical chemistry to aliquoting to cherry picking to normalizing sample concentrations...the options are limitless. Download or request a copy of our application summary brochure at your convenience. Or give us a call to see if we have experience automating what you are looking to achieve.



SCAN THIS CODE TO ACCESS THE DOWNLOADABLE PDF APPLICATION NOTES






The system is remarkable in terms of precision: the demonstration data is absolutely compelling.

HEAD OF BIOANALYTICAL UNIT

PHARMACEUTICAL COMPANY / FRANCE

We aliquot expensive custom primers with a precise volumetric map for our NGS libraries, and Andrew does the same job of our liquid handling robot, but it costs 10 times less!

LABORATORY DIRECTOR • GENOMICS

MOLECULAR DIAGNOSTICS COMPANY
/ SWITZERLAND

WHAT CUSTOMERS SAY ABOUT ANDREW:

The most flexible liquid handling robot ever. We could customize Andrew within minutes and it works flawlessly and without mistakes.

SCIENTIST • PHARMACEUTICAL COMPANY BOSTON USA

AWARDS



2017



2014



2013



2013



2013

TECHNICAL SPECIFICATIONS:

ANDREW

Vision-assisted companion robot capable of manipulating, unattended, standard single-channel adjustable volume pipettes.

PIPETTE TYPE

• 1000G and 1000G-XL

Gilson PIPETMAN® Classic P2, P20, P100, P200, P1000

• 1000P

M10E, M25E, M100E, M250E, M1000E

• 1000R-XL

Rainin Pipet-Lite XLS+ L2, L20, L100, L200, L1000

• 10kR

Rainin Pipet-Lite XLS+ L100, L1000, L10M

TIP TYPES

Most brands of tips compatible with the above mentioned pipettes - list available upon request.

TIP RACKS

Any type, even when partially filled, provided that tips are formatted in an 8x12 array (list available).

DIMENSIONS & WEIGHT

- **1000G** : 53.5 cm (H) x 29 cm (W) x 25 cm (L) – 10 kg
- **10KR, 100G-XL, 1000R-XL** : 61 cm (H) x 29 cm (W) x 25 cm (L) - 11.2 kg

BENCH SPACE REQUIRED DURING OPERATIONS

Minimum: 45 cm x 70 cm (3 Dominos™)

Maximum: 67 cm x 85 cm (13 Dominos™)

OPERATING TEMPERATURE

4°C–40°C with maximum relative humidity of 80% below T=31°C, decreasing linearly to 50% relative humidity at 40°C

COMPUTER CONNECTION

USB 2.0, via USB Type A female connector (USB/USB male cable supplied)

MINIMUM PERSONAL COMPUTER REQUIREMENTS

Windows 7 or above, INTEL CORE i3 processor, 1X USB 2.0 port, 4Gb RAM, screen resolution of 1280x768.

DOMINOS™ (BASIC SET, INCLUDED)

1X Microplate Domino™ (one microplate)

1X Microtube Domino™ (15x microtubes)

1X Tube Domino™ (10x 15 mL + 2x 50 mL tubes)

2X Tip Domino™ (one tip rack)

1X Waste Domino™

OTHER DOMINOS™ (NOT INCLUDED)

List available at www.andrewalliance.com

EXPERIMENT REPEATABILITY (SAME ANDREW, SAME PIPETTES)

	Experiment repeatability (%)	Experiment repeatability (µL)
P2-0.5	6.80%	0.03
P2-1	2.08%	0.02
P2-2	2.07%	0.04
P20-2	0.72%	0.02
P20-5	0.70%	0.04
P20-10	0.53%	0.05
P20-20	0.38%	0.08
P100-20	0.45%	0.09
P100-50	0.41%	0.20
P100-100	0.77%	0.77
P200-100	0.62%	0.63
P200-150	0.60%	0.90
P200-200	0.22%	0.44
P1000-200	0.83%	1.66
P1000-300	0.42%	1.24

EXAMPLE OF PIPETTING PERFORMANCES BY ANDREW

	Expected Volume(µL)	Relative Inaccuracy (%)	CV (%)	Systematic Error (µL)	Random Error (µL)
P2-0.5	0.50	-16.0%	8%	-0.08	0.04
P2-1	1.00	-4.0%	3%	-0.04	0.03
P2-2	2.00	-3.5%	3%	-0.07	0.07
P20-2	2.00	-1.0%	5%	-0.02	0.10
P20-10	10.00	-2.0%	1%	-0.20	0.09
P20-20	20.00	-0.9%	1%	-0.17	0.15
P100-20	20.00	1.2%	1%	0.24	0.17
P100-50	50.00	0.2%	0%	0.08	0.06
P100-100	100.00	0.1%	0%	0.09	0.12
P200-100	100.00	0.2%	0%	0.19	0.10
P200-150	200.00	0.2%	0%	0.41	0.12
P200-200	200.00	-0.2%	0%	-0.43	0.24
P1000-500	500.00	0.2%	0%	1.05	0.57
P1000-1000	1000.00	0.1%	0%	0.63	0.38



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