An Automated Solution for Superior, Repeatable, and Traceable Pipetting

The Andrew+ pipetting robot and OneLab software enable laboratories to transition from laborious manual protocols to efficient and accurate robotic workflows

The pace of biological research continues to accelerate, placing increased pressure on laboratories to achieve high productivity without sacrificing reproducibility and traceability. This becomes especially challenging far applications and processes requiring significant manual pipetting, which is laborious, time-consuming, and requires a high degree of operator skill to ensure accuracy. Further, the frequent, repetitive movements required far pipetting can lead to repetitive strain injuries. Automating pipetting workflows improves productivity, minimizes error and improves reproducibility, reduces the risk of repetitive strain injuries, and allows personnel to spend time on higher level tasks. The Andrew Alliance Andrew+ Pipetting Robot coupled with Onelab software enables laboratories to effortlessly migrate from manual procedures to fully automated, error-free, robotic workflows.

A flexible and compact pipetting solution

Busy labs require flexible solutions that enable multiple different liquid handling applications. The Andrew+ liquid handling robot executes custom protocols, and is supported by a range of modular Dominas that enable integration of a range of tools and consumables. Andrew+ can also perfarm numerous complex experimental steps such as column and microtitre plate gripping and maneuvering.

Andrew+ integrates with Andrew Alliance smart single, and multi-channel electronic pipettes via Bluetooth, enabling a wide range of liquid handling experiments. Best-in-Class Andrew Alliance pipettes, manufactured by Sartorius based on the Picus range, offer superior reproducibility, and a dynamic range of dispensing volumes from 0.2 µL up to 10 ml.

Andrew+ is supported by modular Dominas that enable integration of a wide range of tools and consumables.

Integrating other compatible mixing, heating and cooling, bead separation, and elution instruments enables more complex workflows. The addition of Vacuum+ far example, supports sample preparation applications far liquid chromatography-mass spectrometry (LCMS) such as GlycoWorks. Similarly, the addition of Magnet+ enables genomic, plasmid, and mitochondrial DNA purification using magnetic beads, and supports Midiprep workflows.

With benchtop and biosafety cabinet space in high demand, adding large, cumbersome instruments and robots to the laboratory can take up valuable workspace and impede workflows. Andrew+ is a compact solution designed with a small footprint. It fits the majority of benchtops, biosafety cabinets, and refrigerators operating at 4ºC. Even when arranged with 11 modular Domino consumable holders, supporting 7 microplates, 56 falcan tubes, or 168 microtubes, Andrew+ requires only 24 inches of depth on these surfaces. With the constant addition of new labware from various suppliers, Andrew+ can easily be configured to accommodate your preferred labware.

Intuitive software for fully traceable protocol design and execution

Browser-based Onelab software integrates with Andrew+, and enables users to design, share and execute protocols, and monitor experiments remotely.

Designing a protocol with Onelab is simple, and requires no programming or automation engineering knowledge. The intuitive soltware features a drag-and-drop design interface, so users simply add the necessary consumables and samples to the virtual bench, and drag the pipette from the source to the destination. Alternatively, users can select from a growing methods library. Protocols can be easily shared with other users, to facilitate collaboration and training.

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Miscalculations in pipetting workflows create erroneous results, and waste valuable samples that may be in very limited quantity. Onelab features dilution factor calculation and serial dilution design capabilities, to eliminate potential errors and ensure accurate experimental outcomes. Onelab securely communicates protocols to Andrew+ and other compatible devices, far efficient execution and a high degree of repeatability.

In addition to reducing human error, integrating Andrew+ with Onelab so ware improves traceability. AII steps from protocol design to experiment execution are recorded by Onelab, and reports are automatically generated to support auditing requirements Onelab also features secure user identification and access control, anda customized connection with existing laboratory information management systems (LIMS).

Compact design allows Andrew+ to fit in most biosafety cabinets.

Andrew+ automates laborious, time-consuming liquid handling tasks, improving productivity, reproducibility, and traceability. As part of the Onelab ecosystem, Andrew+ provides users the flexibility required to support continuously evolving workflows.

To learn more about the Andrew+ Pipetting Robot and Onelab soltware, visit: www.andrewalliance.com

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