Significantly Improving Workflows

Enabling Researchers
to push their science in new directions

Echo Liquid Handlers overcome traditional barriers in genomics research by dramatically reducing sample and reagent volume requirements, enabling laboratories to maximize their working budgets, while improving processes and data quality.

GENOMICS RESEARCH

Increase Efficiency and Speed while Reducing Costs

Echo Liquid Handlers integrated into an Access System provide a high-throughput, fully automated system for pooling oligonucleotides, assembling constructs and spotting colonies. When using the Gibson Assembly or Golden Gate cloning method, tipless acoustic liquid handling reduces costs, waste and time.

Synthetic Biology

Cost Effective, High-Throughput qPCR

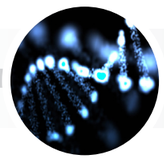
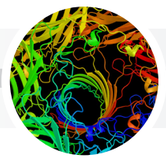
Echo Liquid Handlers reduce assay costs and automate laborious assay preparation steps. Non-contact transfers improve assay reproducibility and eliminate false positives. When combined with the Access System, the Echo Liquid Handler makes cost-effective high-throughput qPCR a reality.

qPCR

Flexibility Accelerates Optimization for More Efficiency

Echo Liquid Handlers enable ultimate flexibility to generate CRISPR-based gene editing complexes. Miniaturization of transfection reactions, including CRISPR complex, transfection reagent and cell number, increases throughput, while reducing cost per edit. This enables more thorough screens, higher efficiency edits, and fewer off-target events.

Gene Editing



TXTL

Faster Optimization of Protein Production with Lower Costs

Echo Liquid Handlers enable high-throughput cell free evaluation of bespoke gene constructs and gene circuits. The provided flexibility enables the optimization of protein production conditions and circuit stoichiometry. Nanoliter transfer of inputs for test construct(s) maintains miniaturized reaction volumes and cost savings for simple or complex gene or circuit tests.

Sequencing

Low Cost, Highly Efficient Library Preparation

Echo Liquid Handlers enable library preparation in low microliter or nanoliter volumes for a range of sequencing methods. Drastically cut reagent costs, save samples, and eliminate steps — all while improving library quality and throughput.

Microbiome

Miniaturize Your Sample and Workflow 20x

As researchers continue to explore and study the interaction of the body and the microbiome, Echo acoustic liquid handling leads the way by dramatically simplifying the library preparation workflow and reducing the amount of sample required. This ultimately reduces the time and cost of library preparation to enable a more cost effective use of shotgun sequencing as an alternative to less precise methods like 16S sequencing.

Enabling Miniaturization
with unparalleled throughput and accuracy

Reagents, compounds, and samples used throughout the drug discovery process are transferred efficiently and accurately with Echo Liquid Handlers. With various throughput options and fluid transfer capabilities, you can use the Echo system at all steps of the drug discovery process.

DRUG DISCOVERY

Cost-effective Plate Preparation and Superior Data Quality

Sample management is the linchpin of any discovery process. For screens to be run effectively, the sample library must be uncompromised. Our sample management solutions dramatically reduce sample volume requirements without sacrificing precision.

Sample Management

Biologically Relevant Assays with Unmatched Data Quality

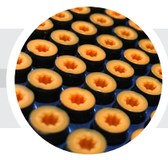
Cell-based assays offer a biologically relevant model to predict the response in an organism. The increasing demand for this in-depth analysis is pushing scientists to dramatically improve assay throughput while reducing operating costs. We address these needs with integrated solutions for liquid handling and automation designed for cell-based assay screening.

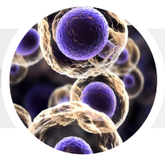
Cell-based Assays

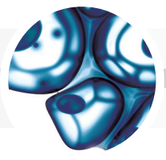
Maintain 21 CFR Part 11 Compliance while Using Echo Liquid Handlers

With unparalleled precision and accuracy, Echo Liquid Handlers transform the scientific landscape to give researchers the best possible solutions for potency assays, binding assays, and pre-clinical research in GMP/FDA-regulated laboratories.

Bioassays







Biochemical Assays

Simplify Assay Workflows with Precise Reagent Transfers

Buffer formulations are often complex in order to maintain protein stability in long-term storage. This complexity presents challenges for traditional liquid handling methods to transfer reagents without loss of material. Echo Liquid Handlers incorporate Dynamic Fluid Analysis technology into the liquid transfer process, which ensures reagents are transferred without loss of material and regardless of the storage buffer complexity.

ADME-Tox

Enable Cost-Effective, Earlier Safety Screening

ADME-Tox assays are critical to the drug discovery process to help determine the viability of a drug candidate. The non-contact transfer and ability of the Echo Liquid Handler to perform direct dilutions eliminate the potential for sample loss on tips, error propagation during serial dilutions, and compound precipitation — removing drug elimination due to false negatives.

GENOMICS RESEARCH

DRUG DISCOVERY

For a complete list of Echo liquid handling applications, please visit our web at www.beckman.com/liquid-handlers/echo-525

Access Systems and Workflows

Ready-to-Go Robotic Systems for Echo Liquid Handlers

Whether you are looking to automate simple or complex workflows involving an Echo Liquid Handler, Beckman Coulter Life Sciences offers an automation solution that can be configured to meet your needs. Powered with Tempo Automation Control Software, Access Systems employ a modular design principle for flexible solutions that can be easily scaled or re-configured when needed.

Access Dual Robot System

- Ideal for more than 12 devices
- Options available to manage the system environment

Access Single Robot System

- Ideal for 6–12 devices
- Options available to manage the system environment

Access Laboratory Workstation

- Ideal for 8 devices plus an Echo Liquid Handler

Training and Support

Maximize Your Instrument Performance

Timely service and preventive maintenance are essential for optimal instrument performance and data quality. Beckman Coulter Life Sciences offers a range of service plans to fit every lab's needs and budget. We provide global field service support with local personnel in the United States, Europe and Asia. In addition to field support, we have support and instrument maintenance facilities in the United States, Europe and Asia.

Global Applications Support Team

We offer superior application support dedicated to helping you achieve optimal results from your Echo Liquid Handlers and Access Automation Platforms. As a global organization that serves customers in the United States, Europe and Asia, we're a collaborative partner that is committed to your success.

Echo Software Applications

Quickly and Easily Develop Protocols for Echo Liquid Handlers

We offer a full suite of Echo Software Applications to enable researchers to quickly and easily create liquid handling protocols for specific applications with minimal training. Each Echo application is designed around a specific liquid handling workflow and uses a combination of wizards and graphical interfaces to simplify the creation of plate formats, liquid transfer routines, and output files. Researchers can quickly create a variety of protocols off-line for Echo Liquid Handlers and use built-in simulators to validate every transfer before running live. The suite of Echo software applications enables Echo Liquid Handlers to quickly and efficiently accomplish any liquid handling task.

- Echo Array Maker
- Echo Cherry Pick
- Echo Combination Screen
- Echo Dose-Response
- Echo Plate Audit
- Echo Plate Reformat
- Echo Compliance Manager

Echo Qualified Consumables

Precision Manufacturing and Exceptional Performance

Echo Qualified Consumables must meet the highest specifications to achieve the exceptional performance expected from Echo Liquid Handlers. Only plates that are made of an acoustically compatible material and are exceptionally flat with extremely low inter- and intra-plate CVs are considered qualified for use on Echo systems. Factory fluid calibrations developed specifically for Echo Qualified Consumables support transfers of a broad range of fluid types, providing maximum flexibility at the highest level of accuracy and precision.