DISPENDIX
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I.DOT

Fast. Accurate. Unmatched.

Newest technology in noncontact dispensing for fast and accurate results every time

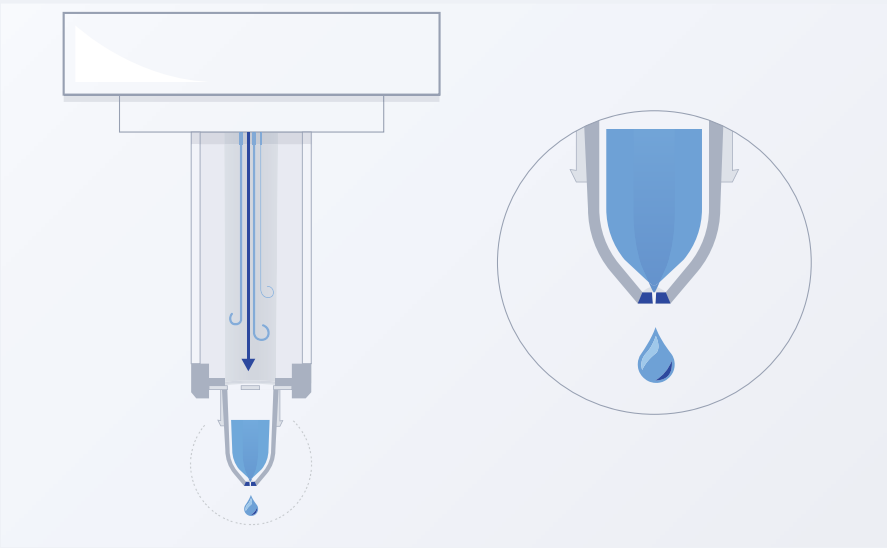
WHEN EVERY DROP COUNTS

The I.DOT is the only instrument in the world to incorporate drop detection and the capability to detect when users run out of source liquid and verifies dispensing volume.

I.DOT's DropDetection is a patented feature that detects and counts every droplet released during a single dispensing run. It's a simple and powerful tool enabling droplet verification. DropDetection uses a circuit board mounted under the I.DOT source tray that leverages 96 miniaturized light barriers to detect every droplet generated from each source plate position, identifying changes in light intensity to detect droplets as they pass the light barrier. After dispensing, DropDetection produces color-coded and text-file-based results.

How does the I.DOT work?

I.DOT's approach is precise and accurate noncontact liquid handling tasks. The system uses eight individually controlled positive pressure channels to generate droplets from 8 to 50 nanoliters from a small nozzle at the bottom of each well. Each channel can generate up to 100 droplets per second giving control and speed to the users all while minimizing cross contamination.



Watch our video to learn more about how the I.DOT works

Key Benefits

Accuracy: Built-in droplet verification

I.DOT 's droplet detection has the capability to detect when users run out of source liquid and can verify total dispense value.

Eliminate carryover and cross contamination

The technology enables droplets to be dispensed into the target plate below the source plate. I.DOT eliminates carryover and cross-contamination.

Save time

I.DOT's speed also saves you time per task from manual pipetting and reduces repetitive work.

Flexible

Dispense into any SBS target plate, including 96-, 384- and 1536-well plates, as well as customized labware.

Supports multiple liquid classes

Dispenses multiple liquid classes on-demand including aqueous solutions, various buffers, DMSO (up to 100%) and glycerol (up to 50%) and defines liquid class at the well level.

Save tips

I.DOT uses less consumables per task and does not depend on pipette tips which enable laboratories to maximize budgets. With I.DOT's low dead volume, save 10 times on reagents used.

Low dead volume

Well reservoir design ensures dead volume < 1 µl for H20.

Speed

Dispense 10 nl across a 96-well plate in 10 seconds and across a 384-well plate in 20 seconds.

I.DOT automates life science workflows and executes them more efficiently

Assay development

- Miniaturize your cellular assays into a 1536- well plate.
- Dispense up to 96 source liquids using a different volume in each well with I.DOT's DoE-friendliness.

Synthetic biology

- Dispense any volume from any source well to any target well like complex DNA structures to sub-cellular components.

Compounds dispensing

- Use I.DOT to dispense small molecules with different dilution series possible.
- Remove variability in liquid handling by back calculating the exact concentration of dispensed drugs using droplet verification.

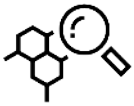
CRISPR reactions

- Leverage I.DOT's speed, accuracy and low dead volume to rapidly and cost-efficiently set up CRISPR reactions and other gene-editing protocols.

Indexing/Combinatorial dispensing

- Perform complicated dispensing patterns across 96, 384 and 1536-well plates.

High-throughput screening



- Create multiple permutations of drug concentrations across the well plate with different drug mixtures in each well.
- Add reagents between 8 nanoliters and 500 microliters per well using I.DOT's high dynamic range.
- Dispense from any source well into any destination well.

Dispensing beads

- Dispense resin-based or magnetic beads reproducibly across your target plates for extraction or cleanups.

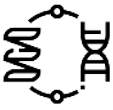
Pooling libraries

- CDNA concentrations and I.DOT software calculates the volume needed to achieve the correct concentration to be dispensed.
- Performs this function for up to 96 libraries in under one minute.

Cell dispensing

- Dispense anything from cells in suspension to organoids while maintaining cell viability.

Genomics and proteomics



- Enables you to do sample preparation for single cell proteomics for a deep resolution of the proteome.
- Enhance NGS Library Prep and leverage miniaturization, low-volume dispensing and low dead volume.
- Dispense high-viscosity solutions with ease and reduce time

Assay Studio streamlines your workflow

I.DOT's software Assay Studio optimizes protocol creation, and users can easily import CSV files to create more complex protocols. It is automation-friendly and integrates with any third-party scheduler.

- Touch screen, user-friendly software.
- Fast, intuitive, and CSV-friendly setup.
- Multiwell and custom formats.
- No programming or looping needed
- Improve processes and data quality

Plates to meet your low- and high-throughput needs

I.DOT Plates are comprised of an SBS-compatible polystyrol frame with 96 individual polypropylene wells.

Dispensing Nozzle	60 µm, 100 µm, 200 µm
Dispensing volume per well	8 nl to 80 µl
Well format	Single wells
Well material	Polypropylene
Material frame	Polystyrol
Source plate format	Up to 96
Dead volume	<1 µl for H2O
Dispensed volume CV (coefficient of variation)	<5.0% (for >100 nl) <8.0% (for <100 nl)
Droplet size resolution	0.1 nL

We are here for you

DISPENDIX's global team of applications specialists are ready to provide support when you need it, and multiple support packages are available to meet your needs. A member of our team can reach out within hours of receiving your request. We are happy to work by phone, over email, through video chat and on-site to perform installations, repairs and other services. Email us anytime at **support@dispendix.com**

» OUR VISION

Create the future of health by engineering science.

Customer Testimonials

"The I.DOT enabled us to carry out complex assay development. The low volume capability ensured that we weren't wasting our previous controls and maintained lower costs. We love having the I.DOT's flexibility in our laboratory."

Hugo Klaassen, Manager Biology
Cistim, Leuven, Belgium

"I.DOT has a small footprint, requires no special maintenance and offers a very intuitive user interface, which enables you to create custom workflows in a few clicks or simply by importing premade Excel templates. We were able to easily create new workflows for PCR and NGS applications. It is a great system for making serial dilutions and for parallelizing simple biochemical reactions like restriction digesting, ligation and *in vitro* transcription, all while keeping reagent volumes small – making the whole process highly cost-efficient.

I highly recommend this system for all labs running high-throughput assays that require complex liquid dispensing schemes, as well as those aiming to lower assay costs by reducing reagent volumes."

Nicola Crosetto, MD, PhD
Karolinska Institutet, Solna, Sweden

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DISPENDIX is a young, fast-growing deep-tech startup with products that enable scientists and researchers around the world to make new discoveries in areas such as drug discovery, diagnostics and personalized medicine. Our passion drives us to develop high-tech liquid handling technologies for laboratory automation and life sciences.

In 2018, DISPENDIX became part of BICO, a global leader in the development and delivery of life science solutions. BICO equips thousands of laboratories and scientists worldwide with cutting-edge technologies that enable breakthrough in scientific achievements.

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