

HP D300e Digital Dispenser

Accelerate pharma and life sciences research



The HP D300e Digital Dispenser enables you to eliminate serial dilution from your dose response workflow, miniaturize qPCR reaction volumes, and easily dispense any volume in any well for a broad array of low-volume dispensing applications.

Accurately dispense volumes from picoliters to microliters for faster, more reliable dispensing of small molecules and biomolecules to enable drug discovery, genomics, and proteomics research.



BETTER

Experience excellent results while miniaturizing your assays and saving precious fluids

- Precisely dispense directly into assay plates in as low as 11 pL increments
- Eliminate carryover using non-contact dispensing
- Reduce edge effects with the HP digital randomization software feature
- Miniaturize assays and use up to 10 times less sample and reagent

FASTER

Eliminate tedious workflow steps and obtain great results the first time

- Run assays in a fraction of the time by eliminating serial dilution steps
- Eliminate normalization steps for qPCR sample concentrations
- Minimize delay and rework from manual pipetting
- Avoid waiting in line for liquid handling robots
- Quickly auto calculate all concentrations during experiment design

EASIER

Enjoy easy, safe, and powerful operation for everyone on the bench

- Minimize repetitive motion injury by eliminating hand-pipetting steps
- Significantly reduce training times
- Eliminate the need for super-users; walk up and obtain results quickly
- Use simple software wizards to easily set up even the most complex assays



The perfect solution for dose response studies, calibration standards, miniaturized qPCR assays, and other low-volume reagent dispensing applications.

Improve pharma and life science research with a complete HP solution

HP D300e Digital Dispenser



Flexible, easy operation

- 12–1536 well and deep well compatible
- Fits easily in laminar flow and sterile hoods
- Flexible benchtop design with automation capability

HP Dispensing Software



Intuitive for all to use

- Wizards**
- Titration
 - Drug synergy
 - Enzyme profile
 - qPCR set up
- Special features**
- Auto volume and concentration calculation
 - Digital randomization

HP T8+ and D4+ Dispensing Cassettes



Dispense any volume in any well

HP T8+ Dispensing Cassette

- Dispense**
- Small molecules and biomolecules¹ in DMSO or aqueous solutions²
- Dispense volume**
11 pL–20 uL

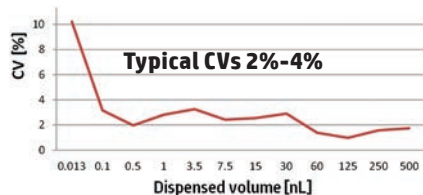


HP D4+ Dispensing Cassette

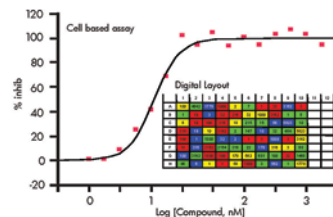
- Dispense**
- Small molecules and biomolecules¹ in DMSO or aqueous solutions²
- Dispense volume per well**
1 nL–200 uL

Experience excellent results while miniaturizing your assay and saving precious fluids

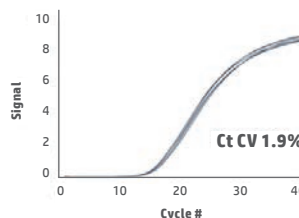
Improve data quality—CV of < 8 percent³



Reduce edge effects with digital randomization



Miniaturize qPCR assay volumes

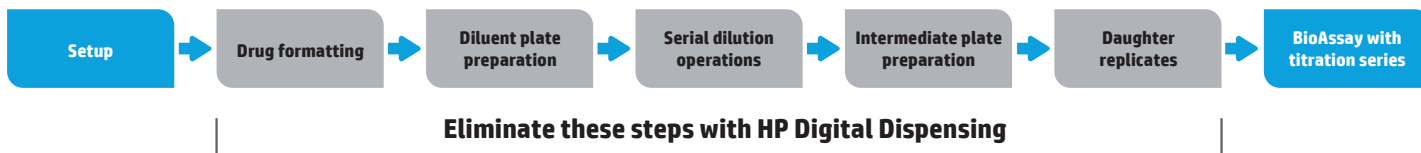


Use case: Use up to 10 times less sample with low dead volume and no dilution steps

Series	Traditional serial dilution sample usage	HP Direct Dispensing sample usage	Sample usage reduced with HP Direct Dispensing
11 point X3	30 uL	3 uL	90%
8 point X2	15.4 uL	2 uL	87%
9 point X2	20 uL	2 uL	90%
11 point X3	60 uL	7.5 uL	88%

Eliminate workflow steps and get great results the first time

Traditional serial dilution workflow:



Broad range of small molecule and biomolecule dispensing applications

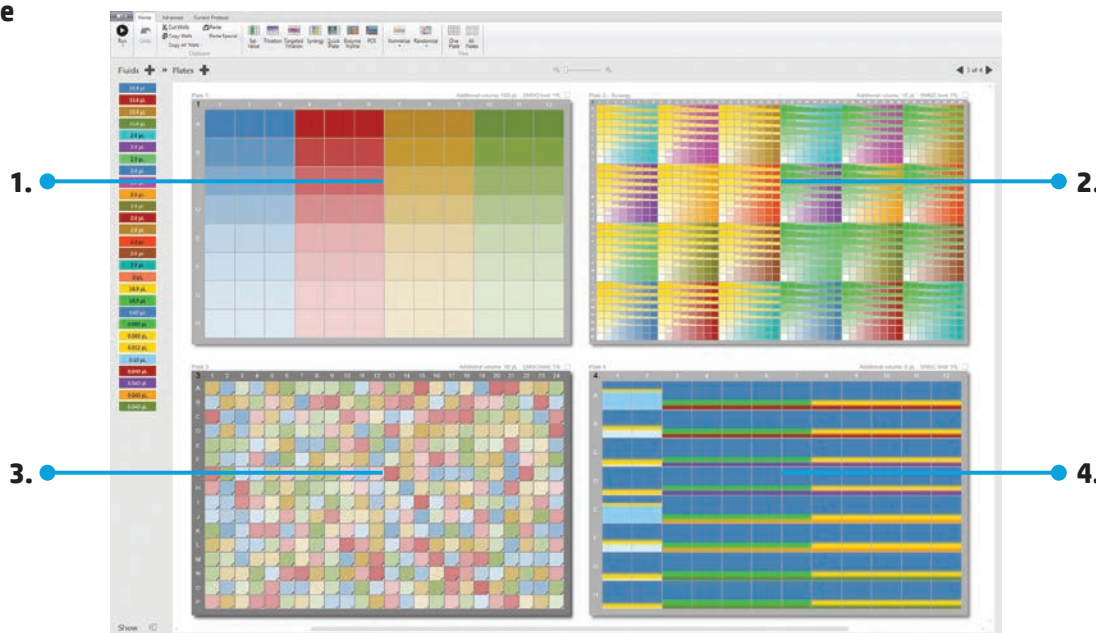
- Drug combination studies
- Biochemical assays
- Cell-based assays
- DMPK
- Secondary screening
- Synthetic chemistry
- Assay development
- qPCR
- Enzyme profiling
- Antibody therapies
- SAR
- Spotting

Enjoy easy, yet powerful software on the bench

Simple yet powerful software

Intuitive, easy-for-all-to-use software

1. Triplicate titrations
2. Complex drug synergy
3. Randomized design
4. Miniaturized qPCR assay



Technical specifications— HP D300e Digital Dispenser, T8+, and D4+ Dispensing Cassettes

Plate types	12, 24, 48, 96, 384, 1536 well plates Plate height: 6–47 mm
Fluid compatibility	DMSO or aqueous solutions ² with: <ul style="list-style-type: none"> • Biomolecules¹ up to 300 kDa and up to 3 mg/mL • Small molecules up to 10 mM • Nanoparticles in suspension at concentration < 0.5% • DNA up to 10k base pairs or RNA up to 10k bases, up to 3 mg/mL
Dispensing speed	11 pL–20 uL in seconds
Dispensing volume increments	as low as 11 pL
Precision CV	< 8% ³
Overall dimensions	47 cm x 38 cm x 23 cm
Weight	14.1 kg (31.1 lb)

Technical specifications— T8+ and D4+ Dispensing Cassettes

	T8+ Cassette (10 uL fill)	T8+ Cassette (20 uL fill)	D4+ Cassette
Dispensing volume range	11 pL–10 uL	1 nL–20 uL	1 nL–200 uL

Learn more at
hp.com/go/DigitalDispensing

¹ Biomolecules include, but are not limited to, proteins, antibodies, enzymes, nucleic acids, lipids, and oligonucleotides.

² Aqueous solution includes surfactant addition.

³ For volumes > 100 pL and test fluid of 100 percent DMSO without other additives or for volumes > 100 pL and aqueous test fluids of 0.1 percent Brij 35 without other additives.

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