



# Thermo Scientific Multidrop Pico 8 sf Digital Dispenser

Effortless precision with every drop

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The Thermo Scientific™ Multidrop™ Pico 8 sf Digital Dispenser offers enhanced dispensing precision with volumes from 11 pL to 10 µL in any well, eliminating the need for manual dilution while providing significant cost and waste reductions. Designed to enable assay miniaturization, boost productivity, and improve the accuracy of results, the dispenser is ideal for a broad array of low-volume applications, such as qPCR, dose-response curves, and drug screening assays.

## Features and benefits

### Assay miniaturization

- Increase compound efficiency—reduce reagent and sample use by up to 10 times with minimal dead volume
- Digital dispensing—precisely dispense consistent amounts of fluids into assay plates as low as 11 pL
- Reduce labware waste—direct dilution in the assay plate results in up to 90% labware waste reduction compared to traditional analog serial dilution

### Improved efficiency and sample integrity

- Forty times greater speed—eliminate several workflow steps and achieve a typical dose experiment in 15 seconds instead of 10 minutes by analog serial dilution
- Decreased hand-pipetting steps—minimize repetitive motion injury commonly caused by manual pipetting errors
- Non-contact dispensing—disposable cartridges avoid carryover and contamination
- Application-focused wizards—simple, yet sophisticated Thermo Scientific™ Multidrop™ PicoIT software helps enhance throughput and limits repetitive work due to manual pipetting errors
- Speed up qPCR workflows—preprogrammed protocol templates for a selection of Applied Biosystems™ qPCR master mixes automatically customize fluids for each qPCR component
- Complete traceability—Multidrop PicoIT software tracks reagent amount and dispensing time for each well after

each run, enabling complete sample and compound traceability

### Powerful, flexible, and easy-to-use

- Dispense any volume in any well at any time—ultimate flexibility allows automation of even the most complex protocols
- Simplify assay set up with Multidrop PicoIT software—flexible and intuitive experiment design is made possible even for complex plate layouts, such as drug combination/synergy or titration of one or multiple components
- Dispenses DMSO, aqueous fluids, and PCR master mixes—flexible for applications with large or small molecules into any well of any microplate
- Supports a variety of throughputs and reagent number variations—the Multidrop Pico 8 sf dispenser's eight-channel format enables automation of complex multi-reagent/sample assays, even in 1,536-well plates



## Applications

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

## Efficiency and dependability for dose-response applications

Multidrop Pico 8 sf dispensers automate the setup of dose-response assays to enhance throughput and reliability—while reducing errors associated with manual processes.

## Count on Multidrop Pico 8 sf automated dispensers to:

- Support various titration modes and randomization to help deliver high-precision data
- Simplify drug-drug interaction studies for efficient multidrug synergy experiments
- Dispense picoliter to microliter volumes directly to conserve compounds and help reduce costs
- Ease operation with user-friendly Multidrop PicoIT software that facilitates rapid protocol creation and supports comprehensive workflow integration

## Intuitive qPCR setup

An easy-to-use Multidrop PicoIT software platform with application-focused wizards and a highlighted loading guide allows effortless and quick plate setup and operation.

## The preprogrammed protocols provide:

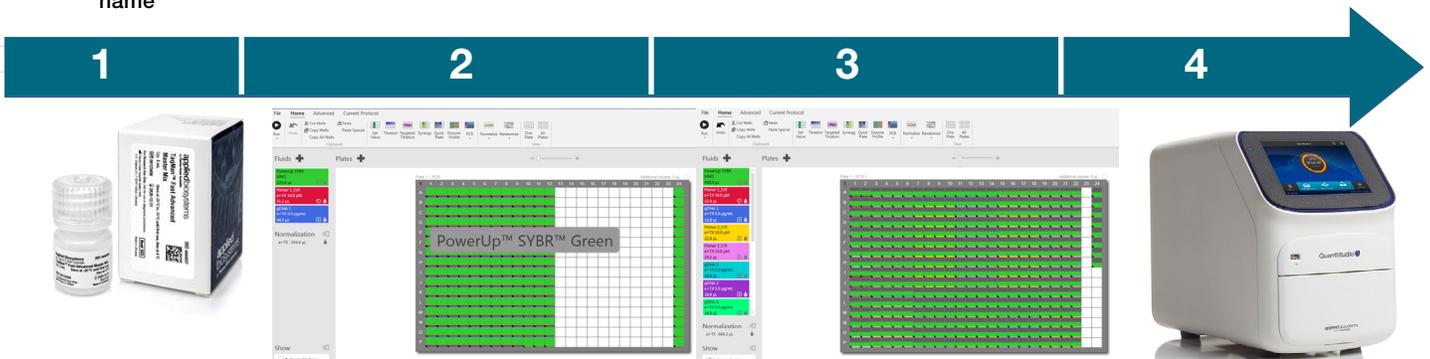
- Preselected fluid information
- Simplified layout, including Non-Template Controls (NTCs)
- Preset reaction volume and plate type
- Preset number of replicates

Select a preprogrammed protocol template by Applied Biosystems master mix product name

Customize and save as a protocol (adjust primer concentration, template input, number of samples, replicates, etc.), including standard curve

Run the protocol directly into an assay plate using cartridges

Run the plate for qPCR





## Product specifications

Multidrop Pico 8 sf dispenser	
Plate types	12, 24, 48, 96, 384, and 1,536 well plates Plate height: 6–47 mm
Compatible cartridges	8-channel, 20 $\mu$ L and 4-channel, 200 $\mu$ L standard cartridges and surfactant-free cartridges
Dispensing volume range	11 $\mu$ L to 10 $\mu$ L
Dispensing volume increments	As low as 11 $\mu$ L
Precision CV	$\leq$ 8%
Overall dimensions (L x W x H)	47 x 38 x 23 cm (18.5 x 15.0 x 9.1 in.)
Weight	14.1 kg (31.1 lb.)
Software	Used with Multidrop PicoIT software
Automation capability	Yes, Multidrop Pico 8 sf 4- and 8-channel cartridges can be robot gripped and zero force inserted
Fluid compatibility	Master mixes, 70% to 100% DMSO or aqueous solutions with or without: <ul style="list-style-type: none"> <li>• Biomolecules up to 300 kDa or 10,000 basepairs and up to 3 mg/mL</li> <li>• Small molecules &lt;1,000 Da, 10 mM</li> <li>• Nanoparticles &lt;1 <math>\mu</math>m diameter, <math>\leq</math>0.5% suspension</li> </ul>

## Ordering information

Description	Quantity	Cat. No.
Multidrop Pico 8 sf Digital Dispenser	1 Each	5840700
4 Channel 200 $\mu$ L Standard Cartridges	20 Packs/Case	LTR0003
8 Channel 20 $\mu$ L Standard Cartridges	20 Packs/Case	LTR0004
4 Channel 200 $\mu$ L Surfactant Free Cartridges	20 Packs/Case	LTR0005
8 Channel 20 $\mu$ L Surfactant Free Cartridges	20 Packs/Case	LTR0006

Learn more at [thermofisher.com/digitaldispenser](https://thermofisher.com/digitaldispenser)

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