NT8 Key Features

http://www.formulatrix.com/demosite/liquid-handling/products/nt8/index.html#tabbed-nav=tab2

**Ultra-Low Volume Dispense Head**

At the core of the NT8 is an 8-channel nanopipettor that reliably dispenses drops from 50 nL to 1.8 μL with CVs averaging 5%. The NT8’s pipette tips have a very small geometry and a hydrophobic coating, both of which ensure precise dispensing across the full range of reagents encountered in protein crystallization.

The low volume head uses liquid displacement pipetting, which means the tips can be quickly washed from the inside out and reused or discarded for zero cross-contamination.

Small tips result in small dead volumes. Dead volumes for the NT8 range from 1-3 μL when dispensing 96 drops.

**Flexible Finger Technology**

In order to ensure that drops wick to the crystallization plate, all eight tips must touch the plate. To achieve this objective, each tip is attached to a flexible finger that can travel up and down by 0.5 mM, allowing the dispensing head to contour to each dispense surface.

Additionally, each tip has a sensor that indicates when a tip contacts a surface. These sensors allow the NT8 to drive down precisely to the point where all tips touch the plate.

**Plate Copy Dispense Option**

The NT8’s optional plate copy head automatically loads tips and can aspirate and dispense up to 200 µL.

Equipped with **eight individual pressure sensors**, the plate copy head accurately detects when each tip contacts liquid, allowing the NT8 to aspirate from just below the liquid surface. This feature prevents viscous liquids from coating the outside of the tips and dripping while in transit to the dispense location.

**Lipid Cubic Phase (LCP) Dispense Option**

The NT8’s optional LCP head can accurately and quickly dispense drops of 25-200 nL. For precise drop setting, its fully-automatic calibration system ensures that the syringe tip is centered to within 50 µm of the target drop location, and it can dispense lipid and well solution drops to a 96-drop LCP plate in fewer than 5 minutes.

**Collision Avoidance**

The NT8 is designed to protect itself and your samples from plate crashes caused by incorrectly positioned plates and improper plate types. **Optical encoders** monitor the positioning of each motion axis and tell the NT8 to alert you as soon as a motion error is detected while **Tip Touch Sensing** surveils tip-to-plate contact and proper tip attachment.

**Active Humidification**

The NT8 prevents sample evaporation with three powerful, fully-enclosed humidifiers that actively control humidity from ambient to 95%. You can use the software to manually adjust humidity as necessary, or “set it and forget it” and let the NT8 do the work automatically.

The NT8 can increase humidity from 60% to 85% in fewer than 20 seconds. By thoughtfully positioning humidifiers away from active samples, the humidification system is designed to respond quickly without adding condensation nor buildup to your drops.

**User-Friendly Software**

The NT8 software is designed to be user friendly and features easy setup. Learning basic dispense design is easy and writing scripts is simple.

For a seamless overall design and dispense experience, the NT8 also easily integrates with Rock Maker (currently under beta).