

NDM - Nano Dispense Module

PC Driven

3Dispense
• Liquid Handling for Life



Flexible Nano Liter Volume and Live Cell Printing for:

- Stem Cell Research & Cancer Biology
- Customized cell arrays/cell-based assays
- Automated cell dispensing for High-content analysis
- Cell-Cell interaction studies
- Cell-Drug interaction studies (e.g. Drug screens)
- Cell culture in Hydrogels
- Biofabrication /Bioprinting research
- Tissue Engineering
- Regenerative Medicine

- Can print droplets of volumes ranging from 10 nL to 4 μ L.
- Multiple droplets of desired volume can be printed for larger-volume applications or the dispense valve can be commanded open to dispense directly using priming source.*
- Capable of gentle handling of cells, maintains high cell viability of delicate and robust cells alike.
- Able to dispense fluids with a wide viscosity range, ranging from viscosity comparable to water e.g. typical cell media, to highly viscous media / solutions such as 1-2% Alginate or 30% Polyethylene glycol.
- Development software provided offers flexibility and ability to customize.
- System dispenses a full range of cell types, from robust to delicate, both adherent and suspension cell types.
- Compact 170mm x 110mm x 60 mm size support integration into liquid handling robots.
- Can print live-cells / reagents / sample containing cells to all standard commercially available microtitre well plates (6 to 1586-well plates)/ as well as customized or pre-fabricated substrates or analysis platforms, e.g. Biochips.\
- Can be configured to provide pulsation free fluid flow for use in microfluidics.
- Multiple dispense channels available.

Gentle Handling of Cells:

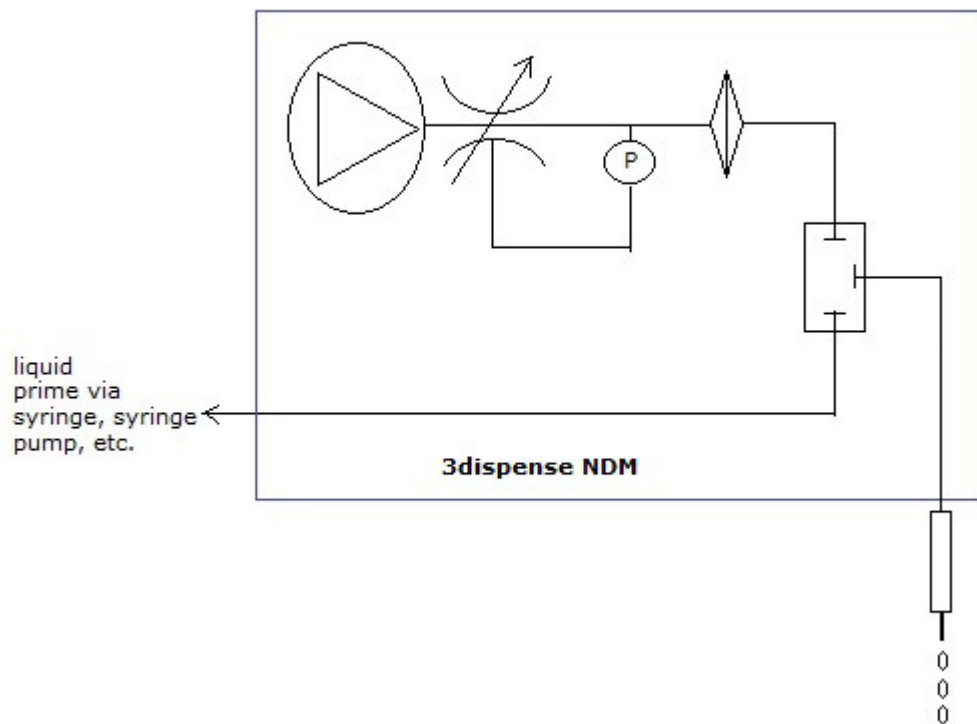
Cells are aspirated from their source through ceramic tips into coiled tubing and dispensed into microtiter plates or slides without making contact with any valve using compatible backing solution. Dispensing below approximately 30nL is best achieved with solutions being dispense directly from the valve and should be limited to non cell-based solutions.

The 3Dispense NDM gives the user full control over critical dispense parameters such as droplet volume, and dispense velocity. Allows printing of both ordinary cell media with watery consistency, and viscous solutions such as Hydrogels.

The NDM can be integrated onto standard and custom liquid handling platforms printing onto all commonly used cell culture equipment – standard microtitre plates, petri dishes and slides, as well as prefabricated scaffolds or customized biochips.

The NDM is easy to clean and has an effective design for a hassle-free maintenance. The fluid path (to which cells come in contact with) can be disinfected/sterilized using all commonly used agents e.g. 70 % Isopropanol, 2% Gluteraldehyde.

Contact 3Dispense with application specifics for proper configuration.



* External priming source, syringe pump, peristaltic pump, manual syringe etc required to prime and fill dispense module. Can be primed either forward flow (dispense) from bulk reagent reservoir or reverse flow (aspirated) from source reservoir, microtiter plate etc.

Power: 24 vdc.

Control. USB via PC

Development Software included:

170mm x 110mm x 60 mm

Weight: Approximately 750 grams

