NANOlab

BIODOT
AN **///ATS** COMPANY

Comprehensive
FAQs

**High Precision.
Nanoliter-Scale.
Freedom at Every Step.**

To learn more about NANOlab, go to: www.biodot.com/products/nanolab

What is NANOlab™?

NANOlab is a high-precision nanoliter-liquid-handling platform engineered for advanced genomics, proteomics, PCR/qPCR, NGS, and low-input workflows. It delivers nanoliter accuracy, disposable-tip purity, walk-away automation, and consistent CVs at ultra-low volumes.

What makes NANOlab different from traditional liquid handlers?

Most liquid handlers are optimized for microliters. NANOlab is purpose-built for true nanoliter dispensing, offering:

- Microliter-to-Nanoliter dispensing range.
- Disposable or fixed hybrid tip systems.
- High-speed on-the-fly non-contact dispensing.
- Open-deck, flexible workflow architecture.
- Minimal reagent and sample waste (Low dead volume).
- Easy-to-use software.

What workflows does NANOlab support?

NANOlab supports genomics (NGS, library prep, DNA/RNA extraction), PCR/qPCR, proteomics, mass spectrometry, single-cell workflows, microfluidics, assay miniaturization, and custom µL to nL dispense workflows.

What dispense volumes can NANOlab achieve?

Disposable Tip:

- 50 nL-200 nL.
- 190 µm orifice.
- Supports viscosities less than 10 cP.

Fixed Ceramic Tip:

- 3 nL−2 µL.
- 100 µm & 190 µm orifice options.
- Supports viscosities less than 1cP.

How does NANOlab prevent cross-contamination?

Nanoliter disposable tips eliminate carryover, protect fragile samples, and ensure clean dispensing. Fixed-tip workflows integrate precision wash/vacuum stations.

What automation features are included?

- Automated tip mount & ejection.
- Advanced vision system with automated dispense position control.
- On-the-fly dispensing.
- Walk-away automation.
- PC Control Workstation.
- Integrated humidity chamber & ILD5000 degasser.
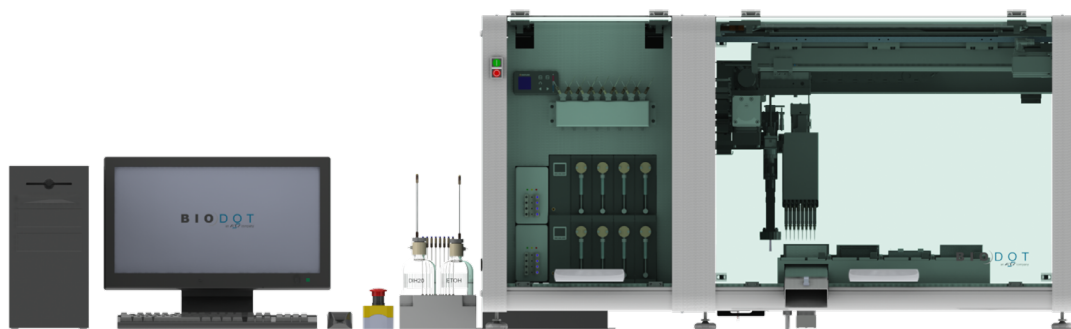
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What are the system dimensions?
- System: 52 x 26.25 x 27.8 inches.
- Nest Size: 18.6 x 19.25 inches.
- Dispense Area: 19.7 x 15.75 inches.
- Weight: ~300 lbs.
- Power: 110/220 VAC.

What head/tip configurations are available?
- Disposable: 8, 4, or 1 channel.
- Fixed ceramic: 8, 4, or 1 channel.
- Hybrid: 1 fixed + 4 disposables.
- Deck options: MTP, slides, mixed, datum-only, custom.

How does NANOlab improve efficiency?
NANOlab reduces hands-on time, compresses long workflows with on-the-fly dispensing, eliminates variability, reduces reagent waste, and increases throughput.

What sample types are compatible?
DNA/RNA, cDNA, PCR master mixes, proteomic reagents, microfluidic reagents, low-viscosity biochemical solutions (<10 cP), and cell suspensions.

Is NANOlab compatible with slides and microplates?
Yes — supports 96/384/1536/3456+ well plates, glass slides, microfluidic chips, and custom substrates.

What are the applications covered by NANOlab?
NANOlab covers a wide range of discovery and genomics applications, including NGS library preparation, PCR and qPCR setup, cell-based assays, CRISPR and gene-editing workflows, microfluidics and lab-on-chip loading, proteomics and enzymatic reactions, point-of-care and diagnostic development, and high-density compound screening. It is designed to support any workflow that requires accurate, repeatable nanoliter dispensing with minimal reagent use.

How much reagent does NANOlab save?
NANOlab drastically reduces reagent consumption and preserves rare samples by dispensing in the nanoliter range with excellent reproducibility. Contact your sales representative to learn more.

Who do I contact for support or demonstrations?
- Contact Sales: www.biodot.com/contact-us
- Contact Support: www.biodot.com/support
- Contact your local BioDot representative to learn more about NANOlab and pricing.