

# Nanoliter

Very Limited Offer

## nanoLiter Cool Wave MS Dispenser, Starting at \$4.99k\*

ESI

Same Device

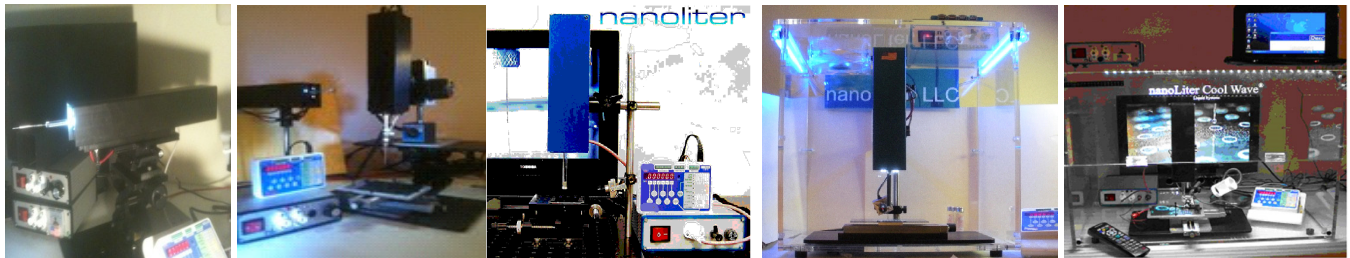
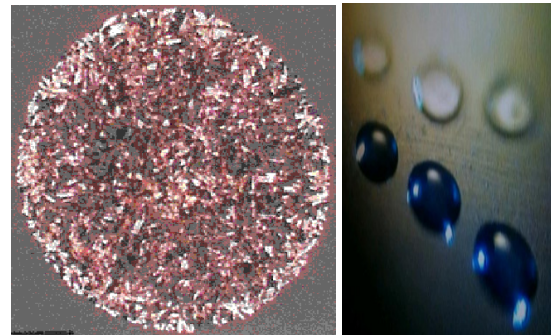
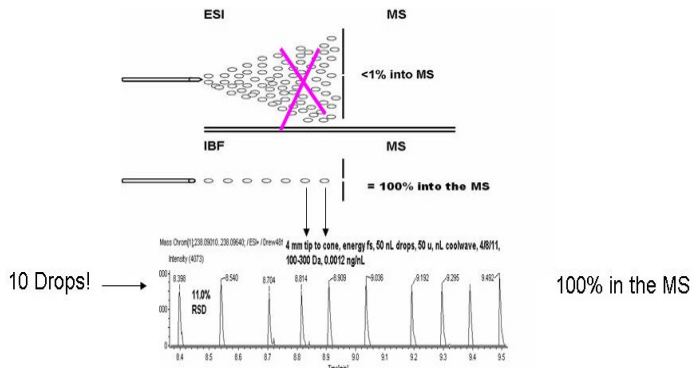
MALDI

100% ESI efficient, "all in" IBF technology

As published in Analytical Chemistry, presented at ASMS 2007-2014.

Excellent MALDI crystals, LO 3D Print !

Harmon et al USF, JASMS 5/09, Polymer 5/09



Various configurations of an IBF dispenser. One nanoLiter Cool Wave device can be used to make excellent MALDI crystals or shoot 100% of your sample into your ESI source!

\*ESI or MALDI: \$4.99k, ESI & MALDI: \$9.99k, ESI, MALDI, LC: \$14.9k: ESI, MALDI, LC, + : \$19.9k. (+ tshj)

**One Device:** Major sensitivity, reproducibility increases for ESI and MALDI.

Spraying chemicals, neurotoxins, poisons & radiochemicals is dangerous & not electrostatically bright! Shoot drops like this.....

Directly analyze blood, cells, serum, bio-fluids, agents, radiochemicals, products and viscous or any liquid. Observe ESI mass spectra.

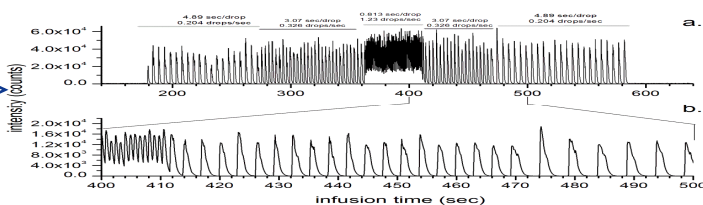
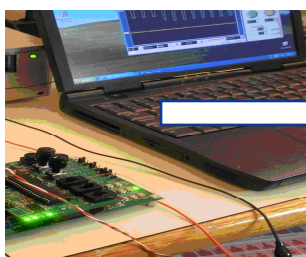
Study non-covalent interactions, HDX, kinetics, ionization, Lanthanides, Actinides, nano-titrations, polymers, more.

Manipulate liquids for PCR, TLC, SIMS, DART, DESI, std. prep., microscopy, spectroscopy, and parallel dispensing. Miser expensive labeled standards, evidence, etc.

**NEW!** VERY RAPID FIRE DROPLET GENERATOR for FIA, LC/ESI/MS, LC/MALDI Analysis & R&D.

Fastest (msec), most introduction efficient (100%) LC/ESI, LC/MALDI programmable energy supply in world.

Request a quote.



See G. Groenewold, A. Sauter & A. Sauter, June, Analytical Chemistry 2013, Radiochemical analysis of Lanthanide series elements of interest in USDOE work. Fastest, most efficient in the world.

Contact: Drew Sauter, nanoLiter LLC, 217 Garfield Dr., Henderson, NV 89074, USA, nanoliter.com, [adsauterjr@gmail.com](mailto:adsauterjr@gmail.com), 702-896-5413

# Why nanoLiters?

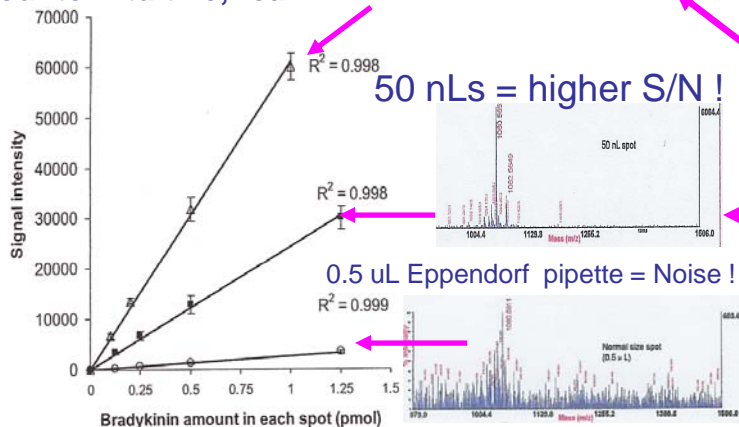
Improve sensitivity of MALDI, DART, DESI, SIMS, LDI 10 to 100x...LITERALLY!

Nanoliter Cool Wave® simple, inexpensive, sample handling platform & technology

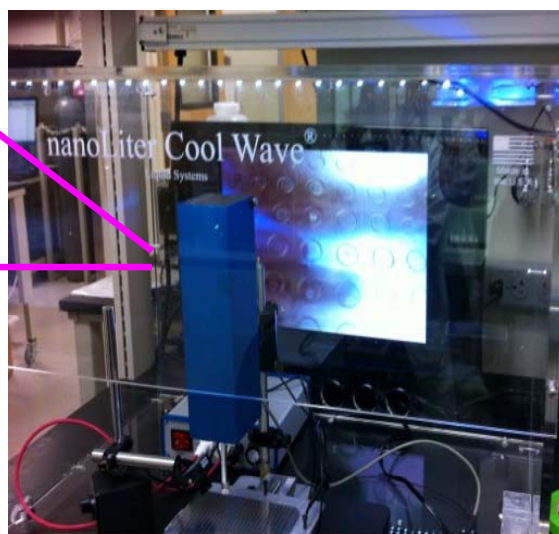
Also, manipulate and spatially, temporally concentrate samples for TLC, MS, IR, NMR, PCR; electrophoresis, fluorescence, crystallization & more.  
 Dispense viscous liquids non-touch (glycerol, blood, serum, ionic liqs., glues) for forensics, defense, medical, pharma, energy, proteomics, ionics, apps.  
 Save expensive labeled stds. Use for blood spot dispensing or DNA sample prep. Non-touch titrations with guanidine, urea for proteomics.  
 Make charged matter like nanoLiter-sicles, polymers. Fly liquids up, roll and pick up liquids with E fields as shown on youtube videos @ ch: adsauterjr.

Counterintuitive, real !

20 nLs best !!!

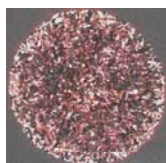


T. Tu, M. L. Gross, et al, JASMS, 8/08.

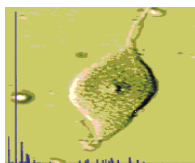


New liquid handling tools for MS & all labs.

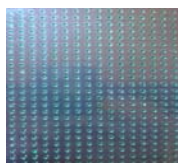
Great morphology    Single cell MALDI    nLs into tape, 1 msec



100 nL PMMA, Harmon, et al, JASMS 5/09 & Polymer 6/09



Jarecki, Stretton Vestling, et al, ACS Chem NeuroSci. 4/10.



Sauter & Sauter LabAuto 2010/11 Pats. Pending.

Unique R&D. Shoot liquids, 100% into TOF MS systems in a straight line or into/onto targets like plants, humans, microtiter plates, instruments. Pull liquids/solids off targets for new sampling applications. Tool for bacteria MALDI identification, cells, airport security, HSL and defense.

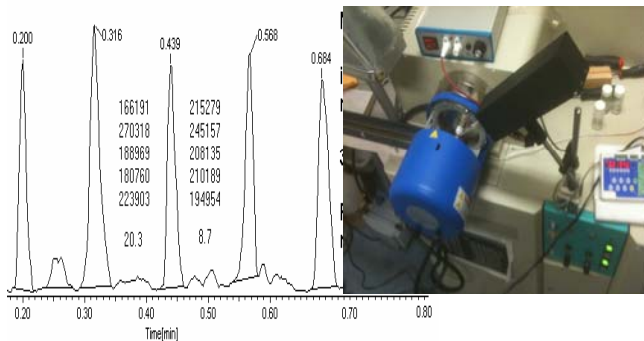
Save precious samples, and \$\$\$ on solvents. Reduce waste, chemical, biochemical & radiochemical exposure.

Go green as you improve sensitivity. PERFECT !

Best DART, DESI, SIMS, MALDI, LDI sample intro/prep tool.

Get major increases in sensitivity, precision using nanoLiters! Reproducible dn/dt into an MS is required for precise di/dt out! Shoot 100% of your nL sample into some TOF MS systems!

See R. Cody, et al, ASMS 2010. T. Brewer, et al, of NIST, RCM v. 24, 2010.



Worlds fastest 96/384/1536 channel dispense in 1.0 msec!



New !!! 2011 !utronics available for license, joint R&D. Fastest, most economical tech for parallel dispense, LC/MALDI, tissue MALDI, SPE, MS intro on the planet! RS 232 to your instrument.

Lowest/channel cost across the widest dynamic volumetric, viscosity ranges. IBF can shoot 100% of samples into an MS on a straight line and as the electrostatics are clear, we've wondered if IBF could replace ESI ???

Patented, pending IBF technology from nanoLiter LLC. Visit [nanoliter.com](http://nanoliter.com). Call Drew Sauter 702-896-5413.