

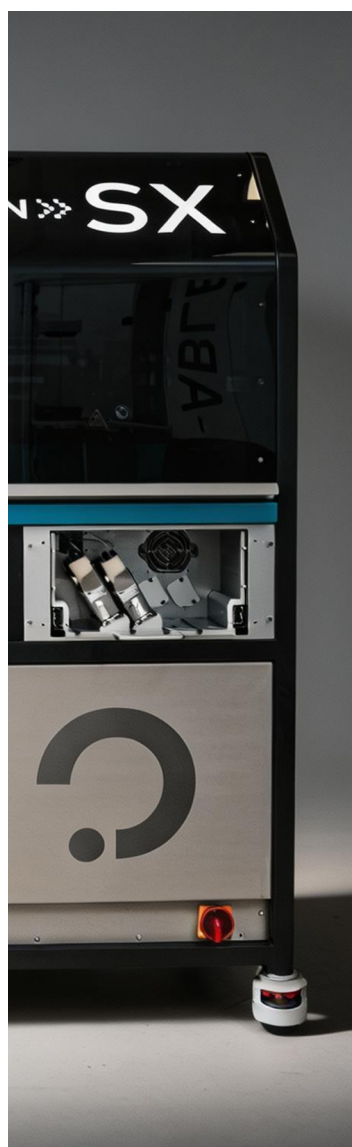
FROM CONCEPT VALIDATION TO HIGH-THROUGHPUT MANUFACTURING

Precision Microdispensing, engineered to scale

SCIFLEXARRAYER® DISPENSING PLATFORM

S3 | S12 | SX | S100

One platform. Four scalable systems.





1

Precision matters. At every stage.

In diagnostic manufacturing, multiplex assay development and drug delivery device production, precision microdispensing defines performance. Whether exploring new biological formats or scaling toward production, precision, reproducibility and process control become critical.

FOR RESEARCH & EARLY-STAGE TEAMS

- Fast concept validation
- Reproducible, precise dispensing
- Easy target handling / management
- Rapid and flexible assay iteration
- Reliable, low-risk operation
- Upgrade pathway as project scales

FOR SCALE-UP & MANUFACTURING

- High-volume batch capacity
- 24/7 automated operation
- Batch-to-batch reproducibility
- Precision at production speed
- Minimal downtime and preventive maintenance
- ISO-compliant and quality-managed production

THE SCIFLEXARRAYER® PLATFORM

Built on over 25 years of dispensing expertise, the sciFLEXARRAYER® platform combines picoliter to nanoliter precision with scalable system architecture, enabling teams to validate, optimize and scale diagnostic and drug delivery applications without changing technological foundation.



10 pL to 5,000 nL
droplets, with high
speed and precision



Trusted by leading
IVD and life science
manufacturers



Demonstrated
positional accuracy
and reproducibility



Scalable architecture
and workflows, from
S3 to S100

More than an instrument: a complete ecosystem.

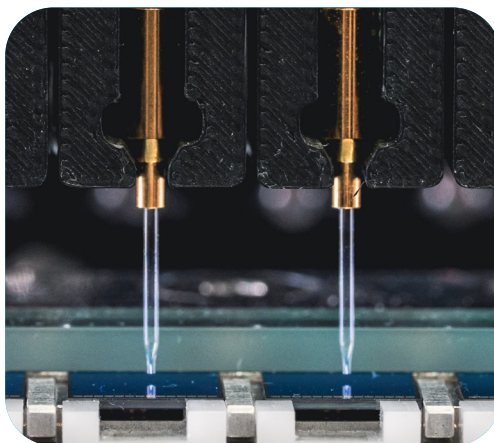
The sciFLEXARRAYER® platform is embedded within an industry proven broader precision microdispensing ecosystem, enabling long-term performance and investment protection.

PROVEN TECHNOLOGY

- Non-contact precision microdispensing based on piezo-driven acoustic waves (sciDROP® PICO) and electromagnetic valve systems (sciDROP® NANO).
- Controlled drop-on-demand dispensing of biomolecules, solvents and viscous liquids across multiple substrates, through inert glass capillaries.
- Engineered and manufactured in Germany.

SUPPORT & LIFECYCLE

- Installation and onboarding.
- Preventive maintenance.
- Uptime-focused technical support.
- Global service network.



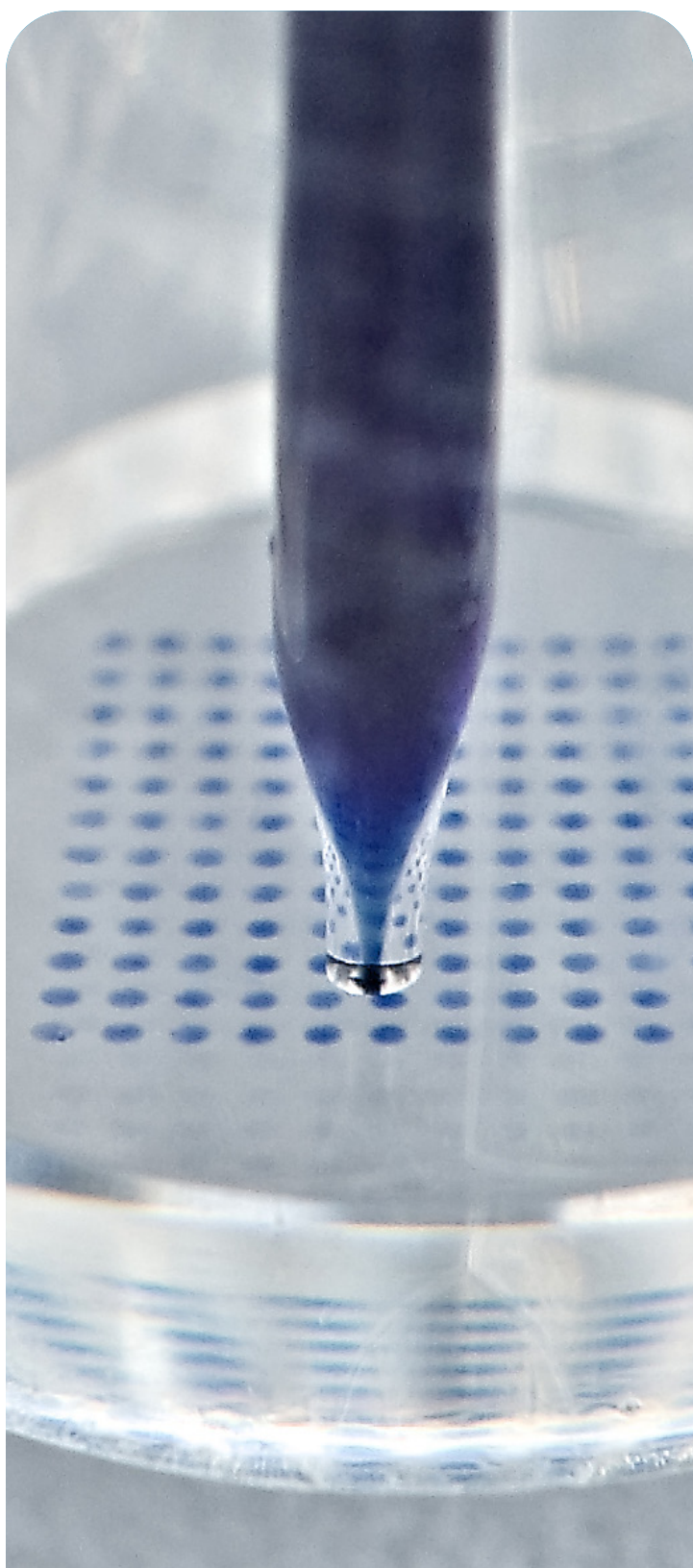
CONTRACT SERVICES

- Assay optimization and validation.
- Feasibility and process development.
- Pilot and pre-production runs.
- Manufacturing and production services.

CUSTOM SOLUTIONS & SCALE-UP EXPERTISE

- System customization and configuration.
- Material and substrate qualification.
- Quality-managed workflow design.
- Scale-up and validation planning.

Focused expertise across critical life science applications.



Our primary focus is precision microdispensing for diagnostics, drug delivery and biosensor development and manufacturing. Supported by decades of expertise and a multidisciplinary R&D team, we extend this know-how to enable customized solutions across emerging and specialized applications.

MULTIPLEXING ASSAYS



Biochips



Drug Delivery



Point-of-Care Testing



Biosensors & Wearables

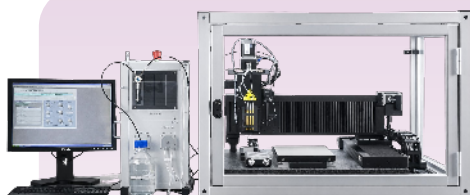


Lateral Flow



Microfluidics

Enabling scientific innovation at every scale.



READ
FULL
ARTICLE

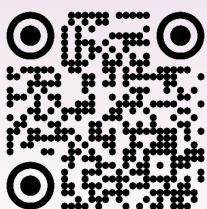
FUNDAMENTAL DISCOVERY

Published in Science: Microfluidic innovation enabled by picolitre precision

Using the S3, researchers achieved controlled picolitre dispensing on complex microfluidic devices, enabling high-resolution experimental design and reproducible biological interrogation. It enabled them to generate a landscape view of catalytic activity for 200 orthologs of a model enzyme.

>> <https://www.science.org/doi/abs/10.1126/science.adu1058>

READ
FULL
ARTICLE



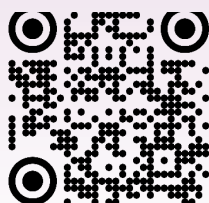
ADVANCED BIOSENSOR DEVELOPMENT

High-Density Multiplexing at Harvard Medical School

The sciFLEXARRAYER SX enabled high-density printing of custom glycan multiplexed microarrays displaying defined blood group antigens. This supported targeted antibody enrichment and high-throughput screening using intact red blood cells.



>> <https://pubmed.ncbi.nlm.nih.gov/40796252/>



WATCH
THE
VIDEO

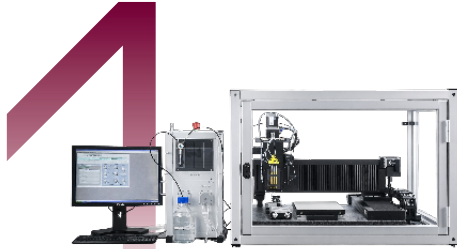
INDUSTRIAL DEPLOYMENT

Custom Precision System for Scalable Manufacturing

For a leading IVD manufacturer, SCIENTION engineered a fully integrated platform combining precision dispensing, automation and workflow control to enable validated, high-throughput production environments. A custom solution designed for operational stability, traceability and future expansion.

>> https://youtu.be/Z2_t43OLtdQ

One platform, four scalable systems.



S3 | Compact precision for early-stage innovation

- Fast concept validation, low cost of failure
- Reproducible picoliter or nanoliter dispensing
- Flexible configuration for experimental freedom
- Upgrade path within the sciFLEXARRAYER platform



S12 | Reliable batches for structured development

- Medium-scale capacity with stable performance
- Enhanced motion control for improved positional accuracy and consistency
- Designed for process optimization and validation
- Seamless transition toward higher throughput



SX | Operational batch manufacturing with control

- High-throughput capacity with validated batch-to-batch reproducibility
- Precision at production speed, reduced variability
- Integration- and regulation-ready architecture
- Built to prevent capacity bottlenecks



S100 | In-line dispensing for industrial output

- Ultra-high throughput with portal-based modular architecture
- 24/7 automation capability with uptime-focused system design
- Fully integration-ready for continuous production
- Engineered for long-term operational stability and low total cost of ownership

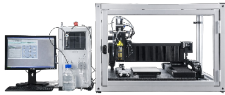
SOFTWARE OPTIONS

- Spot-on-the-Fly mode to speed up array printing
- Full online QC
- Fiducial recognition & target alignment

HARDWARE OPTIONS

- 3D drop, live-stream and head cameras
- sciPULSE shaper for dispensing of volumes under 50 pL & high viscosities
- Temperature, humidity and dew point control
- Custom holders for non-standard targets
- Cooling/heating unit for source plate and/or slide holder
- Anti-static bar

Technical Specifications

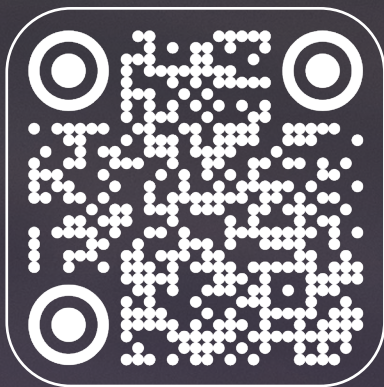
				
sciFLEXARRAYER®	S3	S12	SX	S100
APPLICATIONS	All microdispensing applications			
DEVELOPMENT STAGE	Early stages, prototyping	Medium-scale batch printing	High-throughput batch printing	Ultra high-throughput manufacturing, integration to continuous production lines
FULLY CUSTOMIZABLE	Yes	Yes	Yes	Yes
INTEGRATION-READY	-	-	Yes	Yes
No. OF DISPENSING CHANNELS	Up to 8	Up to 8	Up to 8	Up to 12 per portal
SCIDROP® PICO TECHNOLOGY AVAILABLE AS STANDARD (10 pL - 800 pL PER DROP)	Yes	Yes	Yes	Yes
SCIDROP® NANO TECHNOLOGY AVAILABLE AS STANDARD (25 nL - 1 nL PER DROP)	Yes	No, but available as custom solution	No, but available as custom solution	No, but available as custom solution
SPOTTABLE AREA DIMENSIONS (X, Y in mm)	227 x 276	380 x 370	803 x 870	Custom
FITS	4 MTPs*	12 MTPs*	27 MTPs*	Custom
OR	32 microscope slides*	70 microscope slides	140 microscope slides	Custom
AXES	X-Y-Z Spindle drive	X-Y High-speed linear magnetic drive, Z spindle drive	X-Y High-speed linear magnetic drive, Z spindle drive	X-Y High-speed linear magnetic drive, Z spindle drive
SIZE (L x W x H, in cm)	76 x 85 x 65 (benchtop)	130 x 80 x 120	167 x 85 x 176	130 x 80 x 120 per S100 portal
WEIGHT	130	420	450	420 per portal

* Up to 36 microscope slides with S3 XL

SCIFLEXARRAYER® DISPENSING PLATFORM

DISPENSE WITH CONFIDENCE.
ACCELERATE DEPLOYMENT.
GROW WITH THE RIGHT PARTNER.

SCHEDULE A
FEASIBILITY
DISCUSSION



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