

SPEAR S.W.I.F.T.™

Scalable Workflow Integration for Flexibility and Trackability

From sample to qPCR-ready. Fully automated.

A fully automated benchtop system that streamlines SPEAR ultra-sensitive biomarker workflows from sample to qPCR-ready. With exceptional precision, reproducibility, and throughput, researchers can generate high-quality data with less hands-on time and greater confidence.



From setup to analysis in 4 hours



Up to three 384-well plates per 8-hour workday

Approximately 500 samples in duplicate

Automation, performance, and flexibility in one system

- **Fully automated SPEAR assay workflow** from sample to qPCR-ready with less than 45 minutes of hands-on time.
- **High-throughput benchtop operation** designed to scale 384-well biomarker studies without sacrificing valuable laboratory space.
- **Attomolar sensitivity from low sample volumes** using only 1 μ L of diluted sample per well.
- **Flexible assay workflows** supporting singleplex and Parallel Plex protocols, and compatible with leading qPCR platforms.

Walk-away operation for efficient workflows

Integrated hardware and software standardize critical assay steps across the entire automated workflow

Technical Specifications

Dimensions	740 W × 695 D × 680 H mm (29 × 27 × 27 in)
Weight	83 kg
Power requirements	100–240 VAC, 50–60 Hz; two grounded outlets required
Plate setup time	30–45 minutes
Instrument run time	2.5 hours from run start to qPCR-ready
Plate format	96-well or 384-well
Throughput	Up to three plates, or 1,152 wells, per 8-hour workday
Sample input volume	10–25 µL per workflow
Sample volume per well	1 µL diluted sample
Compatible assays	All SPEAR assays
Software	SPEAR S.W.I.F.T.™ Connect for guided run setup, monitoring, user management, and reporting

Capabilities that support consistent results

- **Fully automated SPEAR assay workflow** improves efficiency and reduces hands-on involvement from sample to qPCR-ready.
- **Controlled reaction conditions** combine a custom plate lid, evaporation control, temperature and humidity monitoring, and local qPCR plate temperature control to strengthen assay robustness.
- **Guided setup and run trackability** use SWIFTConnect and the integrated camera to streamline setup, monitoring, and documentation.
- **Precision low-volume liquid handling** supports consistent small-volume reactions and improved run-to-run precision.
- **Simultaneous well processing** helps minimize timing-related variability and plate drift by processing all wells at the same time.
- **Built-in mixing protocols** standardizes small-volume reaction mixing and helps reduce operator-related variability.

Learn more about SPEAR S.W.I.F.T.™

Scan the QR code to explore the platform and request more information.



spear.bio

100 Tradecenter Drive, Suite 510, Woburn, MA 01801