Introducing the iSort Automated Cell Sorter

Optimized for effortless GFP cell sorting

The Invitrogen™ iSort™ Automated Cell Sorter makes routine cell sorting astonishingly simple. Meticulously designed for intuitive operation, easy maintenance, and with a compact footprint, the new iSort Automated Cell Sorter can help you save time, effort, and cost.

Simplified technology for single-color sorting

The iSort Automated Cell Sorter enables researchers to create a more efficient and consistent workflow when working with green fluorescent protein (GFP) cell samples. Configured with a single 488 nm laser, the iSort sorter is optimized for detecting cells expressing the GFP signal. With the simple touch of a button, the iSort Automated Cell Sorter collects individual populations of GFP-positive or -negative cells. The compact design enables the added convenience and flexibility of allowing it to fit into a standard biosafety cabinet or on a benchtop.

The iSort Automated Cell Sorter features user-friendly data collection and analysis. It provides real-time data acquisition with a simple-to-follow experience on a large touch screen. The software provides exportable data files for use on multiple data analysis platforms, making the iSort Automated Cell Sorter an asset to any laboratory looking for easy integration.

Features:
- Simple-to-use, touch-screen interface
- Minimal training required
- Effortless operation with walk-away automation
- Easy setup and analysis with automated sort parameters
- Affordable for individual lab ownership
- High-speed performance

Convenient operation and maintenance

Intuitive, quick, and reliable
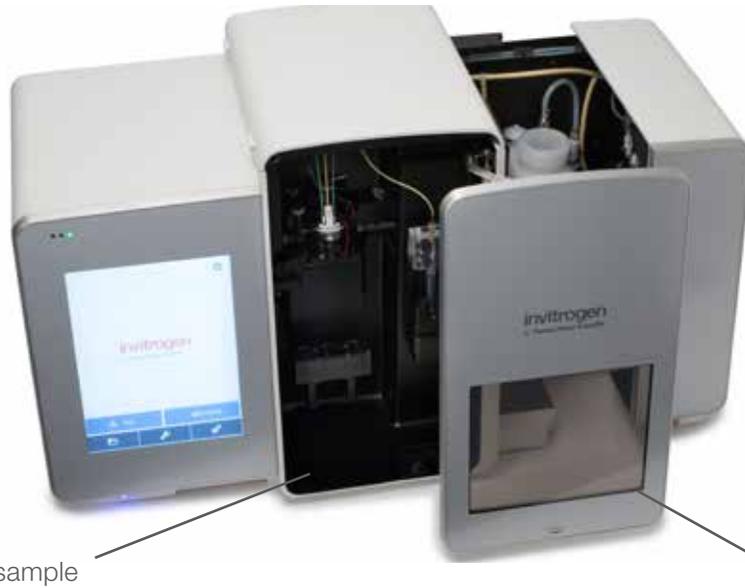
Easy collection with a single sample holder and double collection tubes

Minimal fluidics and waste generation

A single laser equipped with a photomultiplier provides rapid excitation and high-speed detection of signal. The analysis of GFP-expressing cells is measured by the side scatter and fluorescence, making it possible to sort up to 12,000 events/sec, and to collect rare, GFP-positive cells without losing purity or speed (Figure 1).

Simple and rapid sorting

Ideal for new users, the iSort Automated Cell Sorter features proprietary technology with an intuitive interface that requires minimal training to operate. Automated sort parameters eliminate many technically difficult, time-consuming steps typically involved when operating conventional cell sorters (Figure 2).

Nozzle tip

Laser

Point of analysis
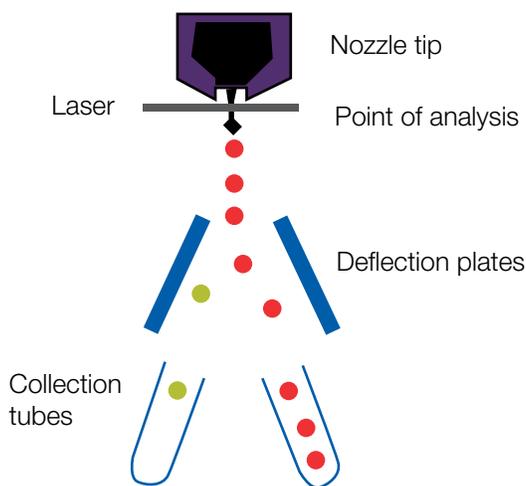
Deflection plates

Collection tubes

Figure 1. The iSort Automated Cell Sorter is engineered to detect GFP signals and to select for pure populations of cells.

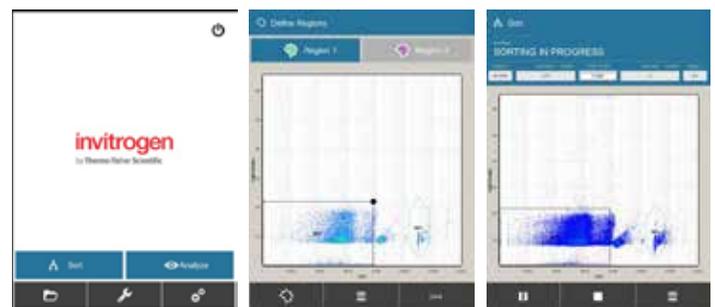Start up → Adjust settings → Sort or analyze

Figure 2. Users simply start the instrument, load their sample, and follow the straightforward touch-screen menus to run their application. Performance is automatically monitored, helping to ensure stable and consistent sort outcomes.

Simple, intuitive touch screen

iSort
Automated Cell Sorter

Invitrogen
by Thermo Fisher Scientific

Invitrogen
by Thermo Fisher Scientific

Compact footprint

Save data on USB
flash drives

Easy, convenient instrument care

The iSort Automated Cell Sorter is designed with easy-to-access parts and maintenance software for issues to be solved within the laboratory. Problems such as clogging can be quickly solved by accessing and cleaning out parts, helping to minimize downtime. Warm-up and start-up protocols are available as one-click touch solutions.

Gain control, improve efficiency

Enjoy the flexibility that comes with owning and operating a system that is available at a moment's notice. The easy-to-use start-up menu and touch-screen controls make it simple to control your workflow, scheduling, and resources (Figure 3).

A

Easy operation with touch-screen start-up options

B

Control the brightness of your samples with a slide bar

Easy-to-define negative and positive populations

Gating tools are easily manipulated

Figure 3. Intuitive touch-screen controls help you save time. Image **(A)** shows simple touch controls for common instrument functions. Image **(B)** shows the easy-to-read start-up menu for fast navigation.

Specifications

Physical characteristics

- **Dimensions (H × D × W):** 49 × 42 × 67 cm (19 × 16.5 × 26.5 in.)

- **Weight:** 45 kg (100 lb)

- **Footprint:** Approximately 92 × 92 cm* (36 × 36 in.)*

- **Operating power:** 100–240 VAC, 4.0 A

Optics

- **Laser:** 488 nm (blue), 165 mW

- **Optical detection:** SSC (488/10) and GFP (525/50BP), photomultiplier tube (PMT)

Hardware

- **Biohazard containment:** Fits in any standard >4 ft biosafety cabinet**

- **Output ports:** 3 ports, USB 2.0

- **Power supply:** AC adapter with country-specific power cords

Fluidics

- **Flow cell type:** Ceramic tip, 85 µm orifice

- **Automation:** Auto alignment, auto drop delay calibration, auto droplet monitoring, auto stream-to-laser alignment

- **Cell types:** Mammalian

- **Sample flow rate:** 23 µL/min (fixed)

- **Sample sort rate:** Up to 12,000 events/sec

- **Sample sort directions:** One- or two-way

- **Sample input vessel:** 5 mL (12 × 75 mm tube)

- **Sort collection vessels:** 1.5 mL, 5 mL, 50 mL tubes

- **Sort technology:** Jet-in air

- **Sort purity:** >99% (sample-dependent)†

- **Sensitivity:** <250 molecules of equivalent fluorescein

- **Signal dynamic range:** 1–10,000 (4 orders of magnitude)

* With the fluidics compartment door completely open, the entire system requires a total bench width of 135 cm (53.2 in.).

** Additional modifications and/or filters may be required to meet individual institutional safety requirements.

† Sort purity is dependent on sample preparation and experimental protocol. More than 99% purity was achieved with Invitrogen™ GripTite™ HEK293 cells stably expressing GFP, using the Invitrogen™ Attune™ NxT Flow Cytometer to assess purity.

Ordering information

Product	Quantity	Cat. No.
iSort Automated Cell Sorter	1	A32726

Find out more at **thermofisher.com**

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