The Ion OneTouch 2 System

Fast, automated template prep for Ion semiconductor sequencing

The Ion OneTouch™ 2 System simplifies the workflows for the Ion S5™, Ion S5™ XL, Ion Proton™ and Ion PGM™ Systems by providing an automated solution for scalable and reproducible template preparation.

The Ion OneTouch 2 System:

- Automates template preparation workflows in a single system
- Enables parallel processing of multiple samples per day through modular design
- Provides scalable template preparation for all Ion semiconductor sequencing chips
- Supports up to 400 bases on the Ion S5™, Ion S5™ XL and Ion PGM Systems and up to 200 bases on the Ion Proton System
- Supports multiplexed samples
- Fits easily on any benchtop with its small instrument footprint

System components

The Ion OneTouch 2 System comprises two modules: the Ion OneTouch 2™ Instrument and the Ion OneTouch™ ES (enrichment system).

At the heart of the Ion OneTouch 2 Instrument are three breakthrough technologies that enable automated delivery of templated Ion Sphere™ particles. The first is the reaction filter that creates millions of microreactors in which clonal amplification occurs. The second is the fully integrated thermal cycler and disposable path amplification plate system that enable robust thermal cycling of the microreactors. The third is the integrated centrifuge, which recovers the templated Ion Sphere particles. Combined, these technologies deliver massively parallel clonal amplification and recovery with walk-away operation—all in a small benchtop footprint.

The Ion OneTouch ES employs proven magnetic bead technology to isolate template-positive Ion Sphere particles that can be loaded directly onto the Ion semiconductor chip—delivering automated, highly reproducible enrichment with every run.

Automated workflow

The Ion OneTouch 2 System automates multiple manual steps to provide template preparation, including enrichment, with only minutes of hands-on time, allowing preparation of multiple samples per day and significant time savings.

ThermoFisher SCIENTIFIC

ion torrent

For both the Ion OneTouch 2 Instrument and the Ion OneTouch ES, instrument setup, sample preparation, and run initiation steps are simplified for maximum efficiency and throughput (Figure 1).

Modular design

The modular design of the Ion OneTouch 2 System enables parallel template processing with sample sequencing on the Ion S5™, Ion S5™ XL, Ion Proton™ or Ion PGM™ Sequencer. This attribute reduces the time from sample to sequence to a single day and enables processing of two samples per day. The combination of Ion semiconductor sequencing and the Ion OneTouch 2 System maximizes the speed of each experiment and minimizes the overall time to completion for each project. The modular design also allows quality control of Ion Sphere particles to maximize experimental control and the success rate of your experiment.

System components

The Ion OneTouch 2 Instrument is scalable and supports all Ion semiconductor sequencing chips. This flexibility enables automated preparation and fast sequencing for maximum flexibility in project type and size.

The Ion OneTouch 2 Instrument also supports processing of multiplexed libraries, reducing the time and cost of template preparation for both DNA- and RNA-based applications.

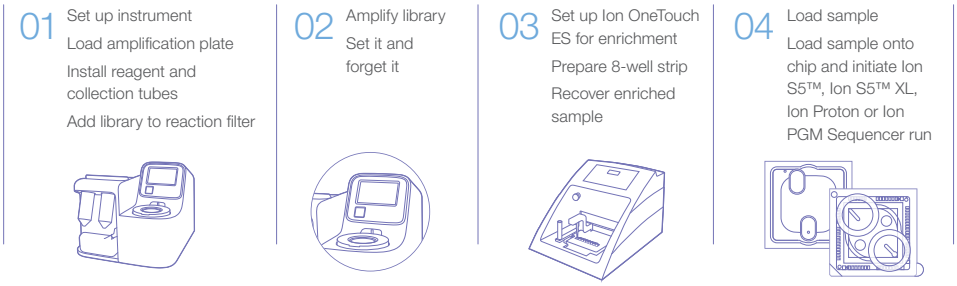

Figure 1. Ion OneTouch 2 System workflow.

Ion OneTouch 2 System specifications	
System	Ion OneTouch 2 System (Cat. No. 4474779) includes: • Ion OneTouch 2 Instrument • Ion OneTouch ES
Dimensions and weight	• Ion OneTouch 2 Instrument: (12 x 16 x 14 in., 23 lb.; 30 x 41 x 36 cm, 10.4 kg) • Ion OneTouch ES: (9.5 x 12.5 x 11 in., 12 lb.; 24 x 32 x 28 cm, 5.4 kg)
System run time	• 5 hours total time for Ion PGM Sequencer template preparation—minutes of hands-on time • 8 hours total time for Ion Proton Sequencer template preparation—minutes of hands-on time
Throughput	Supports template preparation for all Ion semiconductor sequencing chips
Library types	Supports template preparation with a broad range of libraries used for various applications: • Genomic DNA (fragment and mate-paired) • Amplicon • RNA (cDNA)
Operating environment	Temperature: 15–25°C; humidity: 20–80%, noncondensing
Consumables	Please visit **thermofisher.com/ionproducts** for ordering information
Power requirements	110/220 V (US/international)
Multiplexing	Up to 384 barcoded libraries for DNA- or RNA-based applications

Find out more at **thermofisher.com/onetouch2**

ThermoFisher SCIENTIFIC