

HIGH END MULTICOLOR FLOW CYTOMETER

SPECIFICATION SHEET

Rapid, accurate detection of rare events

The High end multicolor flow cytometer benchtop analyzer that uses acoustic focusing, a revolutionary technology that aligns cells prior to interrogation with a laser for multicolor flow cytometry analyses. This allows for significantly greater collection rates and the improved ability to detect rare events without excess sample manipulation.

The system offers:

- Time savings—10X faster speeds with no loss in data quality
- Reduced clogging—even with large or sticky cell types
- Easy protocols—no wash, no lyse options
- Simple software—learn to run in less than a day

With up to 4 lasers and 14 colors, the flow cytometer offers big performance in a small package—at an affordable price. That's WOW! Cytometry.



Instrument Specification

Physical characteristics	<ul style="list-style-type: none"> • Footprint (H x W x D): Approximately 40 x 58 x 43 cm (16 x 23 x 17 in.) • Weight: Approximately 29 kg (64 lb) • Operating temperature: 15–30°C • Operating humidity: 10–90%, noncondensing • Electrical requirements: 100–240 VAC, 50/60 Hz, <150 W • Audible noise: <65 dBA at 1.0 m
Optics	<ul style="list-style-type: none"> • The optical layout is dependent upon the instrument configuration chosen from the 1–4 laser system.
Excitation	<ul style="list-style-type: none"> • Laser power: <ul style="list-style-type: none"> - Blue laser: 488 nm, 50 mW - Violet laser: 405 nm, 50 mW - Red laser: 637 nm, 100 mW - Yellow laser: 561 nm, 50 mW • Laser profile: Flat top laser requiring minimal alignment • Flow cell: Quartz cuvette gel coupled to 1.2 NA collection lens • Alignment: Fixed alignment, no customer maintenance required

Instrument specifications, continued

Emission	<ul style="list-style-type: none"> • Forward scatter: Photodiode detector with 488/10 nm bandpass filter • Side scatter: PMT with 488/10 nm bandpass filter • Emission filters: User-changeable, keyed filters • Up to 14 color channels with PMTs
Fluidics	<ul style="list-style-type: none"> • Sample rates: 12.5–1,000 $\mu\text{L}/\text{min}$ • Sample delivery: Sample delivered by positive displacement syringe pump for volumetric analysis • Sample analysis volume: 20 μL to 4 mL • Fluid storage: All fluids stored within instrument with active fluid level sensing • Standard fluidic tanks: 1.8 L focusing fluid tank, 1.8 L waste tank, 175 mL shutdown solution tank, and 175 mL wash solution tank • External tanks option: Optional configuration for 10 L fluid • Nominal fluid consumption: 1.8 L/day • Sample tubes: Accommodates tubes from 17 x 100 mm to 8.5 x 45 mm
Work station	<ul style="list-style-type: none"> • Operating system: Windows[™] 7 SP1 • Processor: Intel Core[™] i7 • RAM: 16 GB • Computer: Minitower desktop • Hard drive: 80 GB or larger and 250 GB RAID-compatible hard drives • Monitor: 23-inch flat panel (1,920 x 1,200 resolution), dual monitor capability
Software	<ul style="list-style-type: none"> • Attune[™] NxT Software • Romlock license required
Software features	<ul style="list-style-type: none"> • Compensation: Fully automated and manual compensation modes • Instrument tracking: Automated baseline and performance test with Levey-Jennings plots • Automated maintenance: ≤ 15 min startup and shutdown • Maximum event file: 20 million • Heat map: Tubes and plate visualization • SmartGate[™] label: For Quad • Stats: Create customized statistics (i.e., Concentration) • File formats: FCS 3.1 (saved) • Graphics resolution: Publication-quality images • User account maintenance: Administrative and individual accounts with user log • Gates: Standard and customizable gates
Performance	<ul style="list-style-type: none"> • Data acquisition rate: Up to 35,000 events/sec • Particle size range: 0.5–50 μm • Fluorescence sensitivity: <ul style="list-style-type: none"> ≤ 80 MESF for FITC ≤ 30 MESF for PE ≤ 70 MESF for APC
Fluorescence resolution	<ul style="list-style-type: none"> • CV <3% for the singlet peak of propidium iodide–stained CEN
Forward and side scatter	<ul style="list-style-type: none"> • Able to discriminate platelets from noise • Optimized to resolve lymphocytes, monocytes, and granulocytes in lysed whole blood

Attune NxT Autosampler product information

Physical characteristics	<ul style="list-style-type: none"> • Footprint (H x W x D): approximately 40 x 29 x 29 cm (16 x 11 x 11 in.) • Weight: approximately 16 kg (35 lb) • Operating temperature: 15–30°C (50–95°F) • Operating humidity: <80% noncondensing • Electrical requirements: 100–240 VAC, 50/60 Hz, <300 W
Space requirements	<ul style="list-style-type: none"> • Minimum width: 40 cm (15.8 in.); when attached to the Attune NxT Acoustic Focusing Cytometer, the total width is 167 cm (65.8 in.) • Minimum depth: 58.5 cm (23.1 in.) provides 43.2 cm (17.1 in.) for the cytometer unit, a 10.2 cm (4 in.) ledge in front of the unit to place fluidics bottles, and 6.5 cm (2.5 in.) behind the unit for ventilation • Minimum clear height: 74 cm (29 in.) above the mounting
Surface	<ul style="list-style-type: none"> • Software/computer requirements <ul style="list-style-type: none"> - Attune NxT Cytometric Software Version 2.1 or higher Windows 7 Operating System • Compatible plate types <ul style="list-style-type: none"> - 96 deep-well (flat, round, and V-bottom) - 96-well standard depth (flat, round, and V-bottom) - 384-well standard depth (flat, round, and V-bottom) - 384 deep-well (flat, round, and V-bottom)
Processing time	<ul style="list-style-type: none"> • <45 minutes for 96-well plate • <60 minutes for 96-well plate with 2 wash cycles • <180 minutes for 384-well plate using High Throughput mode • <240 minutes for 384-well plate using Standard mode, 2 wash cycles, Carryover <0.5%
Mixing cycles	<ul style="list-style-type: none"> • Each well mixed via full aspiration (not shaking)
Wash cycles	<ul style="list-style-type: none"> • User-defined number of wash cycles, dependent on plate-processing protocol and time to acquire plates
Minimum sample volume required	<ul style="list-style-type: none"> • 50 µL for 96-well plates
Minimum dead volume	<ul style="list-style-type: none"> • 30 µL (for 12.5 µL/min - 200 µL/min)
Fluidics requirements	<ul style="list-style-type: none"> • Onboard fluidics tanks: 800 mL total • Capable of running four 96-well plates

▶▶▶ Regulatory compliances



▶▶▶ Corporate Social Responsibility

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