

CyFlow[®] Ploidy Analyser

DNA Analysis

Highlights

Comfort

- _ Ploidy and genome size analysis in less than 2 minutes
- _ Preparation and staining of meta-phase chromosomes is not necessary
- _ Replaces time-consuming microscopic evaluation
- _ Easy and quick sample preparation by ready-to-use Partec Protocols
- _ Propidium iodide or DAPI based DNA fluorescence
- _ Early stage tests on seeds and seedlings
- _ Optional autoloading station

Versatility

- _ Any plant material can be analysed: leaves, seedlings, roots, flowers, peel of fruits, seeds
- _ Analysis of animal tissues from all species for ploidy screening e.g. in aquacultures

Precision

- _ Detection with ± 1 chromosome accuracy in most plants

Mobility

- _ Compact and robust instrumentation allows measurement at various locations



for Agrosience and Aquaculture

TECHNICAL DATA

CyFlow® Ploidy Analyser



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High resolution DNA analysis with DNA-specific fluorochromes DAPI or Propidium Iodide



CyFlow® Ploidy Analyser

Order-No.	Instruments
11-01-1002	Partec CyFlow® Ploidy Analyser „DAPI“ UV-LED 365 nm + 1 optical parameter DAPI
11-01-1003	Partec CyFlow® Ploidy Analyser „PI“ Nd-YAG green laser 532 nm (30 mW) + 2 optical parameters SSC, PI
11-01-1004	Partec CyFlow® Ploidy Analyser „DAPI + PI“ Nd-YAG green laser 532 nm (30 mW) UV-LED 365 nm + 2 optical parameters DAPI/PI, SSC



Order-No.	Reagents
05-5001	CyStain UV Ploidy
05-5002	CyStain UV Precise P
05-5003	CyStain UV Precise T
05-5022	CyStain PI Absolute P
05-5023	CyStain PI Absolute T
05-5004	CyStain DNA 1 step
05-5005	CyStain DNA 2 steps

General

The CyFlow® Ploidy Analyser is a compact flow cytometer for ploidy analysis, high resolution DNA analysis and genome size for plants, animals and micro-organisms.

Light Sources

This modular instrument is equipped with a UV LED (365 nm) and/or a Nd-YAG green laser at 532 nm (30 mW).

Optics

– Instrument configurations with 1 or 2 optical parameters with photomultiplier tubes (PMT).
– Standard set-up and filters for propidium iodide PI (long pass filter 590 nm) and/or DAPI/SSC (long pass filter 435 nm).

Flow System

– Synthetic quartz flow cuvette with acentric (channel dimensions: 350 x 200 µm) for laminar sample transport with sheath fluid for scatter and fluorescence light detection.
– Computer controlled precision syringe pump for contamination-free sample transport.
– Built-in vacuum pump (400 mbar) for sheath fluid and sample transport.
– Sample volume continuous up to 1000 µl and sample speed adjustable between 0.2 and 20 µl/s.
– 2 x 1 litre glass bottle for sheath and waste fluid.

Data Display

– Linear data acquisition with signal display for each histogram. Dotplot or histogram with selectable linear or logarithmic scale.
– Graphics Resolution: 256 channels resolution for 1P histogram; 256/256 channels resolution for 2P dotplot

Computer

– Built-in Intel Celeron™ computer processor
– 8.4" TFT color touchscreen (SVGA)
– Color printer HP Deskjet™
– Keyboard and mouse

Software

– Windows™ XP software
– Flow cytometry standard list mode format (FCS)
– Real-time acquisition
– Lower level hardware thresholds for event triggering parameters adjusted by software
– Range definition for 1P histograms
– Automatic peak analysis

Requirements

– Power: 100/240 V AC, 60 VA, 50/60 Hz
– Operating environment: temperature from 15 to 30 °C, humidity 20 – 85 % relative (non-condensation), clean room environment, direct sunlight should be avoided

Size

W 325 mm x H 330 mm x D 265 mm
Weight: 11.5 kg

Quality Control and Calibration

– Calibration Beads UV (Order-No. 05-4019)
– Calibration Beads green (Order-No. 05-4006)
– DNA Control UV (Order-No. 05-7302)
– DNA Control PI (Order-No. 05-7303)

Accessories

– Sample tubes (Order-No. 04-2000)
– CellTrics 30 µm disposable filters (Order-No. 04-0042-2316)
– CellTrics 50 µm disposable filters (Order-No. 04-0042-2317)
– Cleaning Solution (Order-No. 04-4009)
– Decontamination Solution (Order-No. 04-4010)
– Hypochloride Solution (Order-No. 04-4012)

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