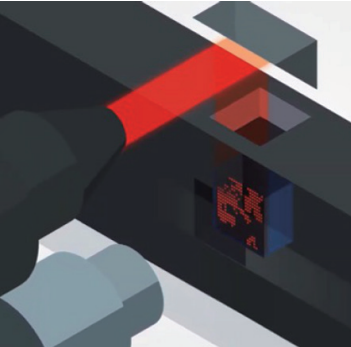




ZetaView® Evolution

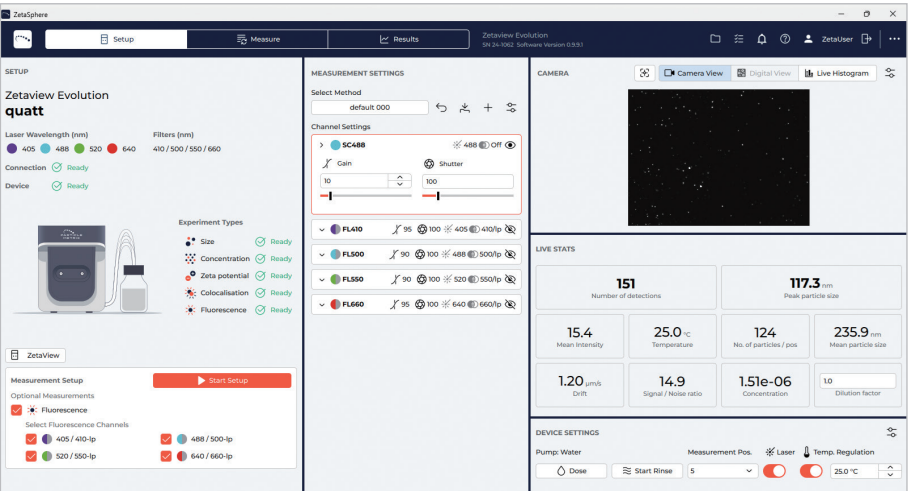
New Concentration Scanning Technology



Our new innovative Concentration Scanning Technology revolutionizes nanoparticle concentration measurements. The advanced technology captures all particles by scanning the entire measurement volume.

- Calibration free measurements
- Direct comparability between different sample types
- Direct comparability between fluorescence and scatter channels
- Precise, reproducible results across a wide concentration range : $10^5 \sim 10^9$ particles/ml

ZetaSphere software - explore the nanocosmos



By combining the popular and intuitive ZetaView® software with the requirements for Multi-level sample analysis, we created the new ZetaSphere software - designed for perfect user experience.

- Highlights:**
- Predefined settings for EVs in scatter and fluorescence
 - Live size and concentration statistics
 - Complete multiparameter sample reporting
 - Switch between lasers with one click
 - Database event logging for data integrity

F-NTA Tetraspanin Detection Antibodies



Optimized for ZetaView® F-NTA

Lyophilized Exosome Standards



TEL 02. 6956. 1935 FAX 02. 6716. 1936
(08504) 서울특별시 금천구 서부샛길 606 대성디폴리스 B동 1010호
WEB www.withinstrument.com



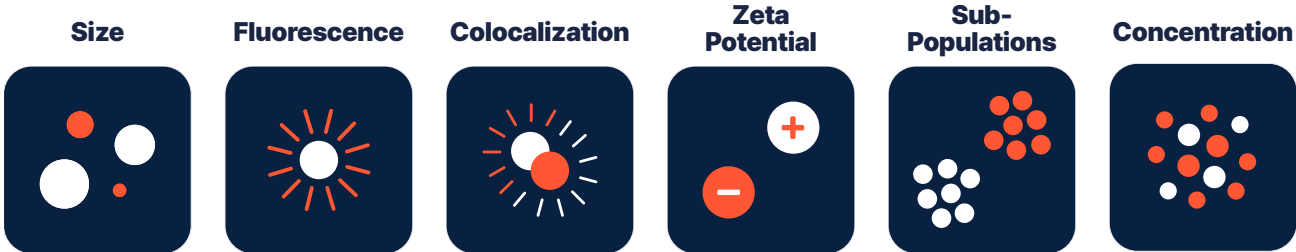
ZetaView® Evolution Your EV Solution

Next generation Nanoparticle Tracking Analyzer -
made to explore the **colorful** nanocosmos



Full Extracellular Vesicle Characterization:

- Calibration free size and concentration determination
- Sensitivity improved fluorescence NTA (F-NTA) with up to 4 lasers and 11 fluorescence channels
- Colocalization NTA (C-NTA)
- Zeta potential measurement
- Concentration Scanning Technology



Nano Metal

Virus

LNP

Exosome

Nano Bubble

Liposome

EVs

ZetaView® Evolution

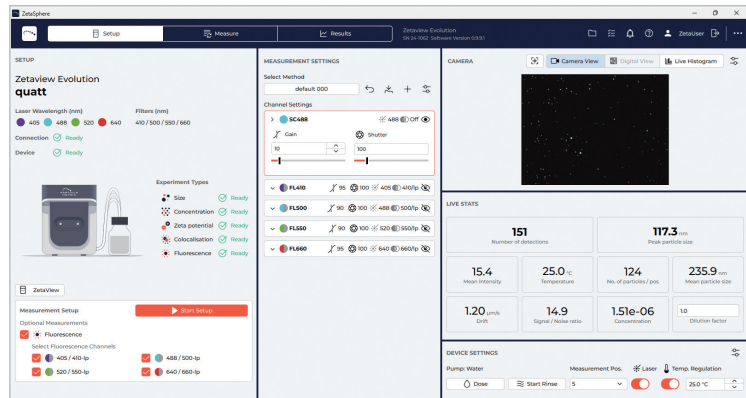
ZetaView®는 브라운 운동을 하거나 마이크로 전기 영동에 의해 움직이는 개별 입자를 Camera로 직접 촬영하여 나노 입자의 크기, 제타 전위, 입자 개수 및 형광 입자 분석을 하는 시스템입니다.
저농도 시료의 분석이 용이하며 분석 전 Auto-Alignment와 Auto-Focusing 등의 기능을 통해 사용자간 데이터 편차를 제거하여 정확하고 신뢰성 있는 분석이 가능합니다.

하나의 기기에 최대 4개 Laser 동시 장착 (QUATT)
Size, Concentration, Zeta Potential, Fluorescence 분석
Concentration Scanning Technology(220nl / 1회)
Multi SOP를 레시피화하여 1-Click으로 분석
1-Click 만으로 Auto focusing & Fluorescence Filter 변경
Intensity 차이에 의한 동일 샘플 내 입자 분리 분석
Colocalization 형광 분석 (C-NTA)



분석 범위

Size Distribution	10nm ~ 1µm
Concentration	10 ⁵ ~ 10 ⁹ particles / Size, Concentration 10 ⁶ ~ 10 ¹⁰ particles / Zeta Potential
Zeta Potential	20nm ~ 5µm, -500 ~ +500mV
pH Range	1 ~ 13
Conductivity Range	3µS/cm ~ 15mS/cm



제품 특징

나노 입자의 Size Distribution, Concentration, Zeta Potential, Fluorescence 및 Colocalization 분석
직육면체 Sample Cell 내 최대 39 positions를 분석하고 소프트웨어가 각 position의 결과를 필터링하여 통계적으로 정확한 입자 크기 분석
30초 내에 20,000개 이상의 입자를 스캐닝(Concentration Scanning Technology)하여 입자 개수, 농도 분석
Zeta potential 측정을 통해 시료의 분산 안정성 분석
Fluorescence Mode : 형광 염색 샘플의 분석
Colocalization : 이중 염색 입자 분석 (웁션 기능)
Subpopulations : 혼합물 내 각각 입자의 크기 및 농도 분석

Application

EVs, Exosome, Liposome, Virus, Protein, Nano Bubble, Nano Metal, Nano Colloid etc...

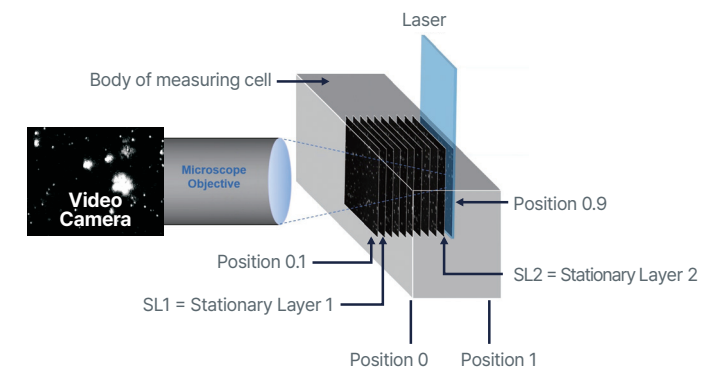
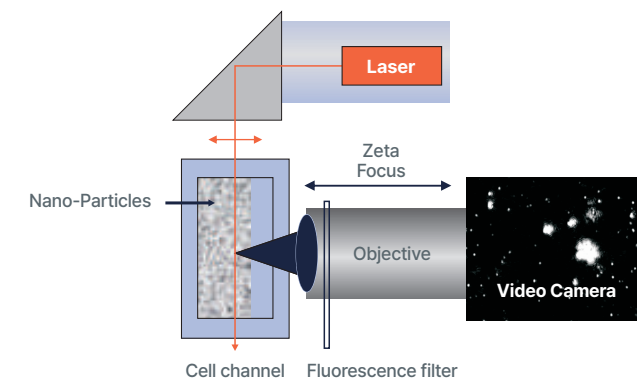
사용 편의성

Compact하고 가벼워 설치 및 이동이 용이하며 Pump에 의한 세척이 가능하여 유지 보수가 매우 편리합니다.



기기 구성

시료에 따라 다양한 파장의 Laser를 광원으로 하여 발광하는 입자를 Camera로 Tracking하게 되며, Laser와 Camera 모두 Auto Alignment가 가능하여 보다 정확한 분석이 가능합니다.



레이저 및 카메라의 1 Click 전자동 Alignment 및 Focusing

Model. **PMX-140** 1 Laser

MONO ZetaView® Evolution

추천
405nm 488nm 520nm 640nm

Size, Concentration, Zeta Potential 분석
자동 Fluorescence Filter를 통한 형광 분석
Pump를 이용한 Cell Cleaning 및 Sample Dosing
405nm, 488nm, 520nm, 640nm 레이저 중 선택 가능



Model. **PMX-240** 2 Lasers

TWIN ZetaView® Evolution

추천
488nm / 640nm 405nm / 488nm 405nm / 520nm 405nm / 640nm 488nm / 520nm 520nm / 640nm

2개의 Laser와 자동 Fluorescence Filter가 동시 장착되어 있으며 소프트웨어상 원클릭 교체가 가능하여 동일 샘플 내 2종의 형광 입자 분석
Size, Concentration, Zeta Potential 분석
Pump를 이용한 Cell Cleaning 및 Sample Dosing
Colocalization 옵션 추가 가능 (이중 염색 입자 분석)



Model. **PMX-440** 4 Lasers

QUATT ZetaView® Evolution

405nm / 488nm / 520nm / 640nm

4개의 Laser와 자동 Fluorescence Filter가 동시 장착되어 있으며 소프트웨어상 원클릭 교체가 가능하여 동일 샘플 내 4종의 형광 입자 분석
Size, Concentration, Zeta Potential 분석
Pump를 이용한 Cell Cleaning 및 Sample Dosing
Colocalization 옵션 추가 가능 (이중 염색 입자 분석)



F-NTA Kit for ZetaView®

Particle Metrix사의 F-NTA Kit는 CD9, CD63 및 CD81에 높은 결합 친화력을 가지고 있으며 NTA 응용 분야에서 EV 검출에 최적화되어 있습니다.

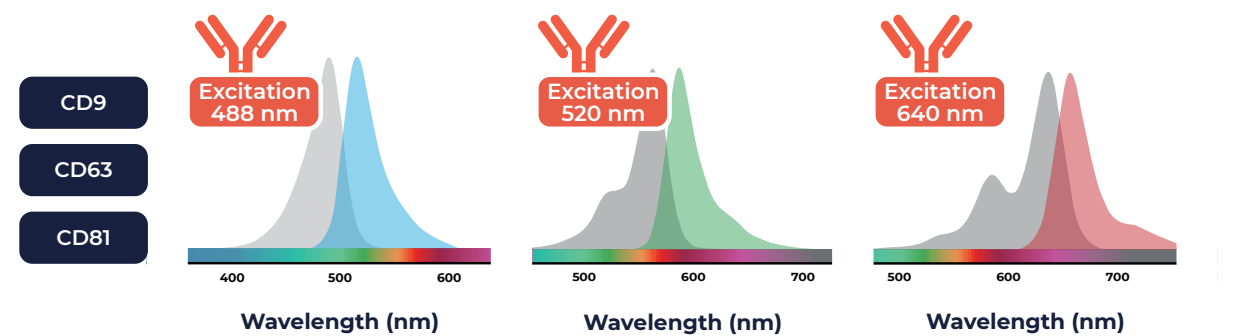
488nm, 520nm, 640nm 레이저에 최적화된 3가지 밝은 형광 조합으로 제공됩니다.

항체는 ZetaView®에 최적화된 염색 프로토콜 및 기기 설정과 함께 제공되므로 F-NTA 기반 CD9, CD63, CD81 검출이 용이합니다.

Easy EV Detection with PAN EV staining
Customized for F-NTA
High binding affinity
Bright and stable fluorescence
3 Color conjugations
Matching controls
Matching exosome standards



Optimized for ZetaView® F-NTA



Antibodies and Exosome Product Overview

	488nm	520nm	640nm
F-NTA CD9 Detection Antibody	 500 tests 700384	 500 tests 700385	 500 tests 700386
F-NTA CD63 Detection Antibody	 500 tests 700387	 500 tests 700388	 500 tests 700389
F-NTA CD81 Detection Antibody	 500 tests 700390	 500 tests 700391	 500 tests 700392
F-NTA IgG Control Antibody	 500 tests 700393	 500 tests 700394	 500 tests 700395
F-NTA EV Tetraspanin Detection Kit	 750 tests + 250 IgG 700381	 750 tests + 250 IgG 700382	 750 tests + 250 IgG 700383
Lyophilized Exosomes from thrombocytes and CD63-EGFP from HEK293 cells			
Exosome Standards 10µg / 50µg	50 µg 700375	10 µg 700365	50 µg 700377 10 µg 700378

Measurement principle in scatter and fluorescence

Size	Motorized scanning Nanoparticle Tracking Analysis (NTA) for measurement of up to 39 subvolumes per sample (129nl measurement volume)
Concentration	Concentration Scanning Technology or NTA (220nl or 129nl measurement volume)
Zeta potential	Video based electrophoretic mobility tracking
Colocalization*	NTA based 2 channels overlay

Data management

Software	ZetaSphere control software featuring measurement of size, concentration, zeta potential and colocalization* in scatter and fluorescence
Quality control	- Integrated instrument performance check - Outlayer control by automatic Grubbs statistical analysis of measurement data - Database event logging for data integrity - Live monitoring of particle size and concentration, temperature, scattering intensity, conductivity, particle drift and signal to noise ratio - Predefined measurement settings for several applications which are fully customizable
Data output	- PDF multiparameter sample reporting - CSV - PNG - FCS

Physical characteristics

Dimensions	W x D x H : 20cm x 30cm x 25cm (excluding computer)	Electrical supply	90V - 240V ; 47 - 63Hz ; 50VA
Weight	13.5kg (excluding computer)	Power consumption	max. 30W

Hardware

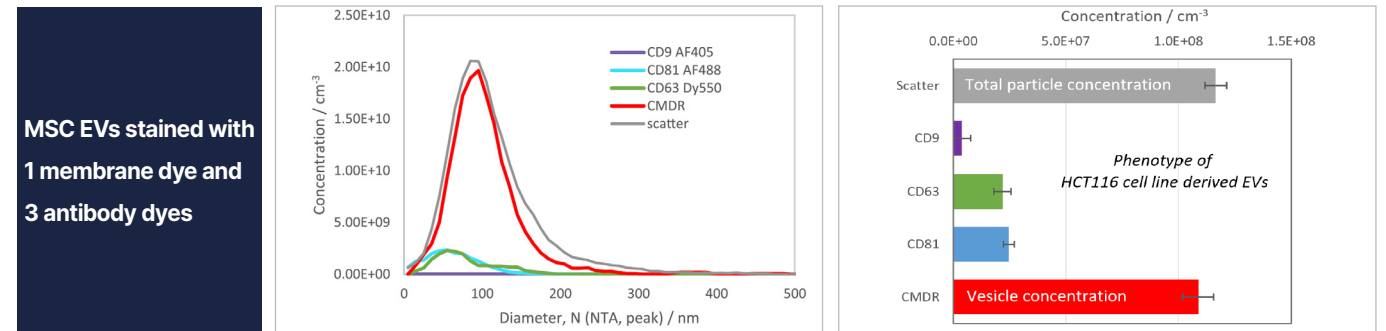
Instrument	90° laser scattering video microscope with x10 magnification for maximized sample volume and highest statistics - One, Two or Four simultaneous aligned, software controlled lasers for use in scatter and fluorescence - Software controlled 12 positions fluorescence filter wheel for scatter and 11 fluorescence channels - Software controlled 2 pumps for liquid transport and sample dosing - Designed for automated sample loading - Automated alignment and focusing of laser and microscope - External temperature range : 5°C to 45°C - Sample temperature control via peltier element from RTP -5°C to 55°C with automated due point sensing
Camera	- High sensitive CMOS camera with 1280×960 pixels - Variable frame rate from 2Hz to 60Hz for optimal resolution and fast acquisition
Lasers	- Mono, Twin or Quatt lasers design with 405nm (130mW), 488nm (40mW), 520nm (80mW) and 640nm (130mW) - Pulse duration each laser : 0.1ms up to continuous
Filters	- Software controlled automated 12 positions filter wheel equipped with 4 fluorescence emission long pass filters at 410nm, 500nm, 550nm and 660nm cut-off - Customized emission filters available on request
Measurement cell	- Quartz class cuvette for low protein binding - Tool free access for quick and simple cleaning process
Computer	- i5 Asus® NUC Mini PC (i7 optional) 1TB SSD hard drive - Windows 11 Professional - Keyboard and mouse
Monitor	LED screen

Measurement specifications

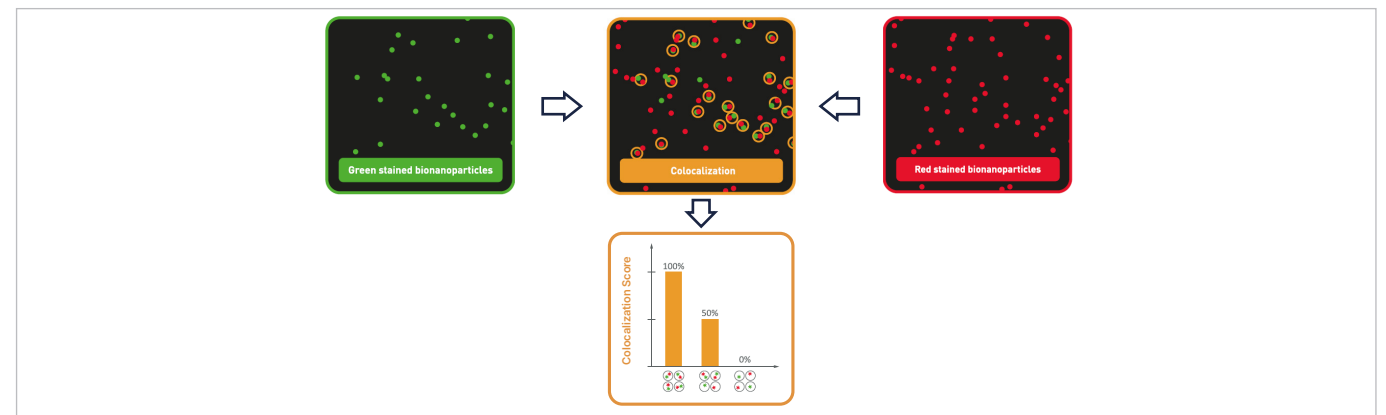
Size	10 ~ 1,000nm (dependent on sample and laser) - Accuracy : ±5% (for 100nm polystyrene latex)
Concentration	- Concentration range : 10⁵ ~ 10⁹ particles/ml - Accuracy : ±5% (for 100nm polystyrene latex)
Fluorescence	- Concentration range : 10⁵ ~ 10⁹ particles/ml - Sensitivity level : <20AF488 molecules
Zeta potential	- Working range : -500mV ~ +500mV - Concentration range : 10⁶ ~ 10¹⁰ particles/ml - Conductivity range : 3μS/cm ~ 15mS/cm - Reproducibility : ±2mV (Zeta potential standard)
General	- Minimum sample quantity : 500μl of sample at 10⁵ particles/ml - pH range : 1 ~ 13
Reference material	- Nominal 100nm size and concentration reference suspension - Nominal 100nm or 200nm reference suspensions for fluorescence - Nominal -50mV reference suspension for zeta potential

* When ordered with colocalization option

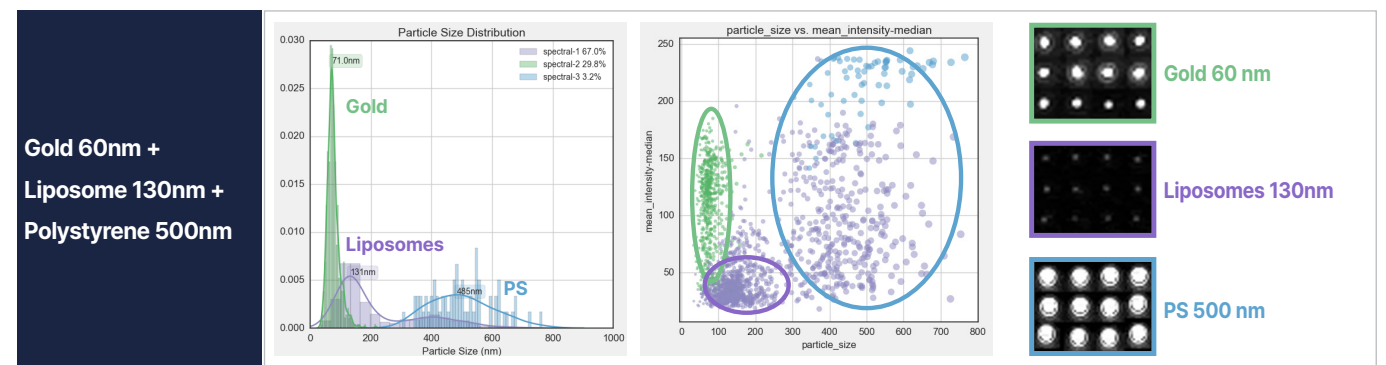
Purity 분석 및 Phenotyping of EVs



Colocalization : 이중 형광 염색 입자 분석



Subpopulations : 혼합물 Sample내 성분이 다른 입자의 분리 분석



Exosome 샘플의 입자 크기, 제타 전위, 전도도 비교 분석

Exosome 샘플의 Conductivity, Zeta Potential, Size Distribution의 결과를 비교 분석 함으로써 샘플의 응집성 및 분산 안정성을 확인할 수 있습니다.

