

전자동 다항목분석기

(MT Titration and Multi-Parameter)

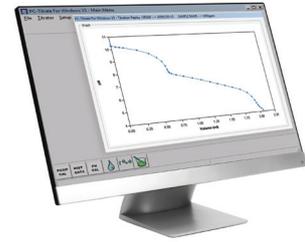
pH/EC 자동측정장비 | PC-BOD™ | PeCOD®



pH/EC 전자동 다항목측정장비

(MT Titration and Multi-Parameter)

MT-10/30/100



PC-TITRATE SOFTWARE

- 자동실행버튼
- 실시간 적정곡선
- 분석중 샘플 우선순위지정가능
- 과거데이터를 쉽게 참조가능
- 결과값 LIMS로 전송가능

- ▶ pH/EC 전처리(토양침출)과정이 자동화되어 분석시간단축
- ▶ 분석의 정확성, 재현성, 반복성이 뛰어나
- ▶ EPA, ISO, ASTM 공인분석법



26/28/30~400 개 샘플 자동측정
(자동으로 폐액방출 / 분석용기,전극 자동세척)



간편한 조작을 위한 Customizable interface



한 샘플당 최대 5개 항목측정가능 (전처리필요없는시료)



Titrasip™을 사용하여 자동화된 피펫팅으로 정밀하게 측정



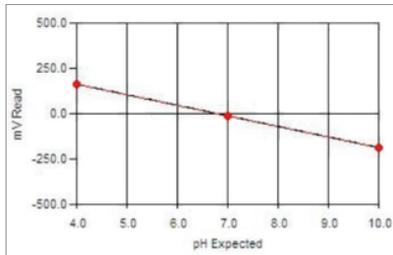
IntelliRinse™ 기능으로 샘플간 교차 오염 방지
(증류수세척 + 샘플이중세척)

Applications

- ✓ 수질환경
- ✓ 토양
- ✓ 식품/농업
- ✓ 해양
- ✓ 화학

pH

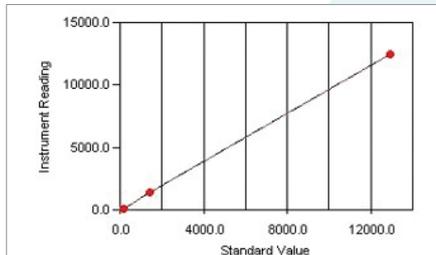
: Standard Method 4500-H+ B,
ISO 10523, NF T 90-008 and
ASTM D 1293



Parameter	Spec
Measuring Range	1-14
RSD for 4 buffer	±0.002
RSD for 7 buffer	±0.0007
RSD for 10 buffer	±0.0006
RSD for Tap water	±0.0065

Conductivity

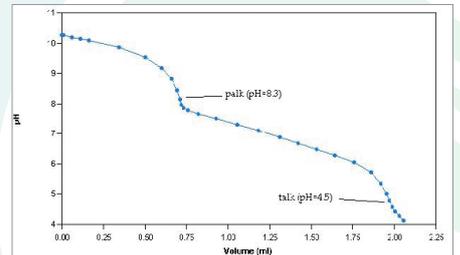
: Standard Method 2510 B, ASTM
D1125, ISO 7888 and EN 27888



Parameter	Spec
Measuring Range	0.01-199,999us
RSD for DI Water, 0.95us	19.10% or ±0.18us
RSD @ 147us	0.70% or ±1.03us
RSD @ 1413us	0.18% or ±2.54us
RSD @ 12,900us	0.11% or ±14.19us
RSD for Tap Water, 939,90us	0.33% or ±3.10us

Alkalinity by Titration

: Standard Methods 2320 B,
ASTM D 1067 and ISO 9963-2



Parameter	Spec
Measuring Range	0.3-2500ppm
MDL	0.3ppm
RSD @ 0.3ppm	24.58% or ±0.07ppm
RSD @ 1ppm	6.49% or ±0.06ppm
RSD @ 10ppm	0.96% or ±0.10ppm
RSD @ 200ppm	48% or ±0.96ppm

TITRATION ANALYSIS SYSTEM FEATURES

MODEL	MT-10	MT-30	MT-100
Capacity	26 - 400	28-400	30-400
DualProbe	✓	✓	✓
IntelliRinse™	Static and Dip Multiple Stations	Dynamic	Dynamic
SampleProtect™	✓	✓	✓
Temperature Compensation	Automated with Manual Temperature entry	Automated with Thermistor	Automated with Thermistor
PeCOD® Analyzer Add	✓	✓	✓
BOD 5 Day DUO Add	✓	✓	✓
Food Applications, total acidity, sulfite / chloride	✓	✓	✓
2 or more titration methods	In different sample cups	In different sample cups	From a single sample cups
125ml cups	✓	✓	✓
50ml tubes	✓	✓	✓
15ml tubes			✓
IntelliVOL™	✓	✓	
Automated Pipetting			✓

PARAMETER	METHODOLOGY	CONFORMS TO:	RANGE	CALCULATED METHOD DETECTION LIMIT (MDL)	RSD
Acidity	Potentiometric Titration	EPA 305.1, 305.2; SM 2310 B; ASTM D 1067	1 - 2500ppm	0.42	0.97% @ 100ppm
Alkalinity (P&M, bicarbonate, carbonate, hydroxide)	Potentiometric Titration	EPA 310.1; SM 2320 B; ASTM D 1067; ISO 9963-2	0.3 - 2500ppm	0.18	0.48% @ 200ppm
Ammonia	Ion Selective Electrode	EPA 350.3; SM 4500-NH3 D; ASTM D 1426 (B)	0.1 - 17,000ppm	0.05	2.41% @ 1ppm
	Ion Selective Electrode (Standard Addition)	SM 4500-NH3 E	0.5 - 200ppm	0.1	4.24% @ 2ppm
Chloride	Potentiometric Titration	SM 5400-Cl- D; Variation of ASTM D 512 (B); ISO 9297	1 - 1000ppm	0.28	0.24% @ 100ppm
	Ion Selective Electrode	Variation of ASTM D 512 (C)	0.05 - 35,500ppm	0.01	1.55% @ 100ppm
Color	Colorimetric	EPA 110.2; SM 2120 B	2 - 500CU	0.19	1.7% @ 5CU
Conductivity	Conductivity cell	EPA 120.1; SM 2510 B; ASTM D1125; ISO 7888	<1 - 199,999uS	0.65	0.18% @ 1413uS
Fluoride	Ion Selective Electrode	EPA 340.2; SM 4500-F- C; ASTM D 1179 (B); ISO 10359-1	0.02 - Saturated	0,005	1.57% @ 1ppm
Nitrate	Ion Selective Electrode	SM 4500-NO3- D	0.14 - 62,000ppm	0.05	0.87% @ 100ppm
Oxidation-Reduction Potential (ORP)	Redox Electrode Measurement	SM 2580; ASTM D 1498	-2000 - 2000mV	N/A	0.10% @ 220mV
Oxygen	Dissolved Oxygen Probe Measurement	EPA 360.1; SM 4500-O G; ASTM D 888 (B); ISO 5814	0 - 19.99ppm	N/A	N/A
pH	pH Electrode Measurement	EPA 150.1, 150.2; SM 4500-H+ B; ASTM D 1293; ISO 10523	1 - 14	N/A	+/- 0.05
Salinity	By Calculation	SM 2520 B	0.1 - 42	0,002	0.15% @ 10
Temperature	Thermometric	EPA 170.1; SM 2550 B	N/A	N/A	N/A
Total Hardness	Potentiometric EDTA Titration	Adapted from EPA 130.2, SM 2340 C, ASTM D 1126	1.09 - 1500ppm	0.43	1.63% @ 94ppm
Turbidity	Nephelometric	EPA 180.1; SM 2130 B; ASTM D 1889; ISO 7027	0.1 - 2000NTU	0.05	2.95% @ 1NTU

전자동 BOD 측정분석기 (PC-BOD™)



AM300 Series

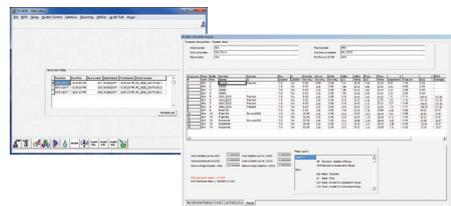


AM122



BOD Mini

PC-BOD™ SOFTWARE



- 5일 및 7일 BOD 및 CBOD 표준분석방법 자동화 (Sample Rack용량에 따라 분석 Sampler 확장가능) (DO측정후 Rack만 분리 배양기에 장착가능)
- 간편한 조작을 위한 Customizable interface
- 분석중 샘플 우선순위지정가능
- Rinsing, Dilution water, Seed, Inhibitor등 최대 5개 펌프 자동화하여 오차최소화
- 바코드 라벨로 결과를 빠르게 식별 (option)

- ▶ EPA, ISO, DIN, AOAC등 공인인증분석방법
- ▶ YSI BOD센서 장착 가능

MODEL	AM300 Series	AM122	BOD Mini
Capacity	23-90	23	11
특징	자동희석수, 식종액, 질산화억제제 주입가능 2-in-one 시스템 구성 가능 (PC-BOD / Titrate Duo™)		

전자동 COD 측정분석기 (PeCOD®)



Benchtop L100

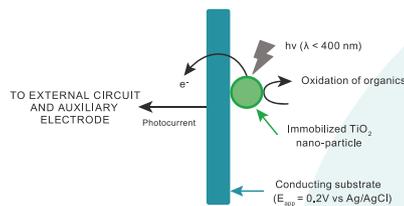


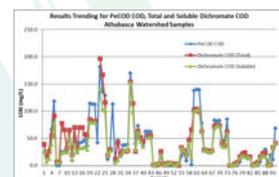
Figure 1: peCOD Nanotechnology
Roughly 2 times the oxidizing power vs. dichromate
i.e. Benzene, 1.8 by CODCr and 2.6 by peCOD



Automated L100



Online L100



- ▶ EPA, ISO, DIN, AOAC등 공인인증분석방법
- 센서(Titanium dioxide)를 이용 UV를 조사하여 측정하는 방식 (해수와 같이 많은 방해물질이 있어도 분석가능)
- 수은, 크롬산과 같은 유해화학물질 사용하지 않고 간단히 조작
- 15분 시험으로 분석비용 및 시간절약 (높은 정확도 및 재현성을 확보)
- BOD5 와 상관관계로 데이터값 연관가능성