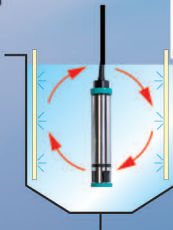
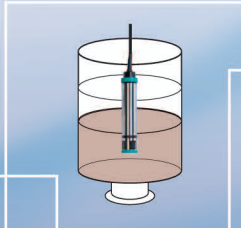


**KRK**

# WATER QUALITY SENSORS

## PortLab.3600E Part. 1 Digest Edition



**NEW DO SENSOR**  
**OXNIT<sup>®</sup>**  
**OX-V2**



**NEW DO PROBE**  
**OXNIT<sup>®</sup>**  
**OX-P-2VN**

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(※Item 49~55 are relative to Portlab Products)

# 1 IONTEST® Water Simple Analysis Kit

Anyone can Easily Analyze Water Quality, Anytime and Anywhere.



- ◆ Powder Reagent is sealed up for long/safe validity
- ◆ Convenient for on-site Testing
- ◆ Refined Colorimetry, Ion-Test  
Fine transparent Test Cell & 7 colors gradation



Exp.:Analysis of Zinc



Model	Testing item	Range (mg/ℓ = ppm)	Determination Time	Quantity
WIT-Cu	Copper	0.2/0.5/1.0/2.0/3.0/5.0/10 Bicinchoninic Acid method	2min.	50
-Cu(B)	Copper	0.2/0.5/1.0/2.0/3.0/5.0/10 Bathocuproine method ★ If Test water contains such Chelating agent as EDTA, etc., please apply WIT-Cu(B) for testing.	1min.	50
-Ni	Nickel	0.2/0.5/1.0/2.0/3.0/5.0/10 Nioxime method	2min.	50
-NH <sub>4</sub>	Ammonium ion Ammonium-Nitrogen	0.3/0.7/1.3/2.6/6.5/13/26 NH <sub>4</sub> <sup>+</sup> 0.2/0.5/1.0/2.0/5.0/10/20 NH <sub>4</sub> <sup>+</sup> -N Indophenol Blue method	5min.	50
-COD-M	COD-M(Middle range)	0/5/10/13/20/50/100 Oxidation with Potassium Permanganate in Alkalinity method	4~6min.	50
-COD-H	COD-H(High range)	0/20/40/80/120/180/250 Oxidation with Potassium Permanganate in Alkalinity method	4~6min.	50
-Cr <sup>6+</sup>	Chromium(Hexavalent)	0.05/0.1/0.2/0.5/0.8/1.0/2.0 Cr <sup>6+</sup> Diphenylcarbazide method	2min.	50
-Cr <sup>T</sup>	Total Chromium	0.5/1/2/5/8/10/20 Cr <sup>T</sup> Oxidation and Diphenylcarbazide method	30sec.	50
-HOCl	Residual Chlorine	10/20/30/50/80/100/150 KI method	10sec.	50
-O <sub>3</sub>	Ozone	0.1/0.2/0.3/0.5/0.8/1.0/2.0 DPD method	10sec.	50
-CN	Free Cyanide	0.02/0.05/0.1/0.2/0.5/1.0/2.0 4-Pyridinecarboxylic Acid method	10min.	50
-H <sub>2</sub> O <sub>2</sub> -H	Hydrogen Peroxide (High range)	10/20/30/50/80/100/150 KI method	10sec.	50
-NO <sub>2</sub>	Nitrite Nitrite-Nitrogen	0.05/0.1/0.2/0.4/0.6/0.8/1.0 NO <sub>2</sub> <sup>-</sup> 0.015/0.03/0.06/0.12/0.18/0.24/0.30 NO <sub>2</sub> <sup>-</sup> -N GR method	3min.	50
-NO <sub>3</sub>	Nitrate Nitrate-Nitrogen	0.5/1.0/2.0/4.0/6.0/10/20 NO <sub>3</sub> <sup>-</sup> 0.1/0.2/0.5/1.0/1.4/2.3/4.6 NO <sub>3</sub> <sup>-</sup> -N Reduction GR method	3min.	50
-PO <sub>4</sub>	Phosphate Phosphate-Phosphorus	0.2/0.5/1.0/1.5/2.0/3.0/5.0 PO <sub>4</sub> <sup>3-</sup> 0.1/0.2/0.3/0.5/0.7/1.0/1.7 PO <sub>4</sub> <sup>3-</sup> -P Molybdenum blue method	3min.	50
-PO <sub>4</sub> -H	Phosphate Phosphate-Phosphorus (High range)	2/5/10/15/20/30/50 PO <sub>4</sub> <sup>3-</sup> 0.7/1.7/3.3/5.0/6.6/10/17 PO <sub>4</sub> <sup>3-</sup> -P Molybdenum blue method	3min.	50
-TN-i	Total Nitrogen (Inorganic)	0/5/10/20/40/60/100 Reduction & Indophenol blue method	20min.	50
-Fe	Iron	0.2/0.5/1.0/1.5/2.0/3.0/5.0 Reduction & O-phenanthroline method	5min.	50
-Zn	Zinc	0/0.2/0.3/0.5/1.0/2.0/5.0 PAN method	2min.	50

Where and Which Parameter is IONTEST applied?

**for Environmental Research**  
COD, NO<sub>2</sub>, NO<sub>3</sub>, NH<sub>4</sub>, PO<sub>4</sub>, TN-i, etc.

**for Drinking Water Inspection**  
O<sub>3</sub>, HOCl, COD, NO<sub>2</sub>, NO<sub>3</sub>, NH<sub>4</sub>, TN-i, Fe, etc.

**for Plating Analysis**  
Copper, Nickel, Sulfate plating solution industry.  
Cu, Ni, Cr<sup>6+</sup>, CN<sup>-</sup>, PO<sub>4</sub>, Fe, Zn, H<sub>2</sub>O<sub>2</sub>, etc.

**for Waste Water Analysis**  
Food Factory, Chemical Factory, Drainage, etc.  
COD, TN-i, PO<sub>4</sub>, NO<sub>2</sub>, NO<sub>3</sub>, NH<sub>4</sub>, HOCl, O<sub>3</sub>, Cr<sup>6+</sup>, Cr<sup>3+</sup>, CN<sup>-</sup>, Zn, etc.

**for Fishery Management**  
COD, NH<sub>4</sub>, NO<sub>2</sub>, NO<sub>3</sub>, PO<sub>4</sub>, TN-i, etc.

**for Educational Aid**  
COD, NO<sub>2</sub>, NO<sub>3</sub>, NH<sub>4</sub>, TN-i, Cu, Ni, Cr<sup>6+</sup>, HOCl, O<sub>3</sub>, CN, H<sub>2</sub>O<sub>2</sub>, Fe, Zn, etc.

ION TEST Analysis Procedure

**1 Add Reagent**

Drop reagent into the cell

**2 Add Sample**

Drop 5 ml or 2ml of sample into the cell

**3 Shake**

Shake slightly test cell with lid

**4 Colorimetry**

Compare to analyze with standard color card

ION TEST KIT SPECIFICATION



Standard Component

1	Standard Color	1
2	Reagent	50 Pcs.
3	Test Cell	1Pc.
4	Box	1Pc.
5	Pipette	1Pc.

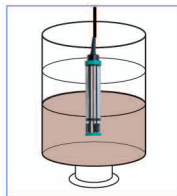


STD Component part is optionally available.

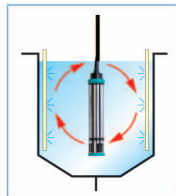
Standard Color (selective)	Reagent (50 pcs) (selective)	Test Cell with Lid (5ml)
WIT-□□□□-STD (EXP. WIT-Cu-STD.)	WIT-□□□□ (EXP. WIT-Cu)	CELL-5C

## 2 SS-10Z

MLSS / Sludge Level Meter



Sludge level /density measurement in the deposit tank



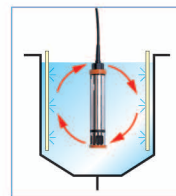
Measurement of activated sludge density

## 3 SS-10F

MLSS Meter



(Economy Type)



Measurement of activated sludge density

## Features

### 1 Optional measuring mode (common to SS-10Z and SS-10F)

MODE 1 Food and dairy sludge A

MODE 4 Sewage/combine septic tank B

MODE 2 Food and dairy sludge B

MODE 5 Human waste disposal/deposit tank A

MODE 3 Sewage/ combine septic tank A

MODE 6 Human waste disposal/deposit tank B

### 2 Simultaneous measurement of MLSS and sludge level (water depth). (SS-10Z)

### 3 Measured value can be memorized and called back (common)

	SS-10Z (with depth display)	SS-10F (without depth display)
Measuring range	MLSS : 0~20000mg/ℓ (MAX display 30000mg/ℓ)	
	Water depth 0.00~5.00m (max 10m)	none
Accuracy	MLSS: within ± 3% Water depth: within ±0.05m	MLSS: within ± 3%
Detector	SSD-10Z(with pressure sensor)	SSD-10F(without pressure sensor)
Cable length	6m standard(max.11m)	
Carrying case	Standard attachment	

## Wide range usage

Septic tank, sewage, MLSS measurement at human waste treatment plant, sludge zone surface of deposit tank, construction site, food, various sludge density of chemical plant.

## 4 DO-10 Z Dissolved Oxygen Meter (DO Meter)



New type DO probe **OX-2VN**  
With strong shock-proofed  
rubber protector

New DO sensor  
**OXNIT® OX-V2**



2 pin-contactor &  
double O-ring type

Measuring method	Cartridge type galvanic sensor
Measuring range	DO : 0.00~30.00mg/ℓ
	O <sub>2</sub> : 0.0~30.0%
	Water temperature : 0.0~50.0°C
DO sensor	<b>OXNIT OX-V2</b> 2 pin type
DO probe	<b>OX-2VN</b> (with shock-absorbing rubber protector )

## 5 KP-10 Z

pH / ORP Meter



## 6 KP-10 F

pH Meter



Product name	pH / ORP Meter	pH Meter
Model	KP-10Z	KP-10F
Measuring range	0.00~14.00pH	
	0~±1900mV(pH electrode potential)	
	0~±1900mV(ORP)	
	0.0~50.0°C	
Electrode	Collect water type:CE-106	Collect water type:CE-2106
	Throw-in type:CE-120-3	Throw-in type:CE-2120

## 7 DO-30N DO Sensor(Dissolved Oxygen Meter)

Collecting water type



NEW DO sensor  
**OXNIT®:OX-V2**

2pin-contactor & double O-ring type



Model	DO-30N (Galvanic method)
Display	3 digits LCD display
Measuring range	Dissolved oxygen(DO):0.0~20.0mg/ℓ
	Oxygen in air (O <sub>2</sub> ) :0.0~30.0%
	Water temperature(TEMP):0.0~50.0°C

## 8 ML-30N MLSS Sensor(Sludge density meter)

Measurement by collecting water!  
0~19900mg/ℓ



Specifications of MLSS detector

Measuring theory

Near-infrared pulse transmitted light method

Product name	Built-in-sensor type MLSS Meter
Model	ML-30N
Display	3·1/2digits LCD
Measuring range	MLSS:0~19900mg/ℓ
Measuring mode	1 point (standard working curve by KRK) ※ Possible to change to user's sample (sludge) in advance.

Water quality inspection flow of aeration tank, drain, etc.



## 9 DOP-10Z 2ch DO/pH Meter

DO, pH, ORP and water temperature measurement with One Single Unit



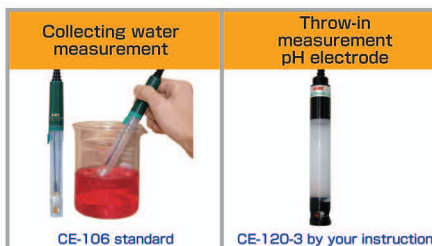
New DO sensor  
**OXNIT®:OX-V2**



2pin-contactor & double O-ring type

Avoid putting both DO probe and pH electrode together in the same sample water.

Measuring range	
DO mode	DO:0.00~30.00mg/ℓ Oxygen in the air:0.0~30.0% Water temperature:0.0~50.0°C
pH mode	pH:0.00~14.00 mV:-1900~+1900mV ORP : -1900~+1900mV Water temperature : 0.0~50.0°C





## 10 F-10Z

## Fluoride Ion Meter



■ Automatic measuring range switch function

Measuring method	Solid membrane fluoride Ion Electrode Method
Measuring range	0~2000mg/ℓ
resolution	0.1mg/ℓ (0.1~99.9)
	1mg/ℓ (100~2000)

### Usage

Semi-conductor mfg. plant, glass plant, fluoride resin mfg. process, plant drainage, city water system, etc.

## 11 CL-10Z

## Chloride Ion Meter



■ Automatic measuring range switch function

Measuring method	Solid membrane Chloride Ion Electrode Method
Measuring range	0~2000mg/ℓ
resolution	0.1mg/ℓ (0.1~99.9)
	1mg/ℓ (100~2000)
Selectivity	Unable to co-exist with S,CN

### Usage

Septic tank drainage, plant drainage, food and chemical plant, etc.

## 12 CLCU-55

## Chloride Ion Meter

Chloride Meter for Copper plating Solution without influenced Copper or  $CuSO_4$



Product Name	Chloride Ion Meter	
Model	CLCU-55(for High Density)	CLCU-55L(for Low Density)
Measuring Method	Chloride Ion Measurement in Copper Plating Liquid	
Measuring Range	0.0~199.9mg/ℓ	0.00~19.99mg/ℓ
Resolution	0.1mg/ℓ	0.01mg/ℓ
Measuring time	Approx. 3 min.	
Power Supply	Alkaline battery LR03×4(DC 6V)	
Outer Dimensions	88(W)×174(D)×65(H)mm	
Standard Components	Instrument, Measuring cell(4pcs), Reagent:CLCU-RA-H 100ml(10 tests), Carrying Case, Micro-Pipette 100μℓ Chloride Ion standard Solution : 50ml	
Optional Accessories	Macro-Pipette 10ml, Filter Paper	

## 13 10Z Set

## Water quality testing set

Septic tank doctor's water quality inspection kit  
9 items inspection by single unit **[10Z-2]**



Easy to carry.



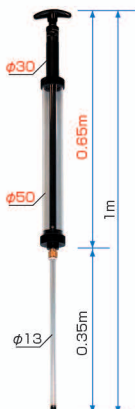
Convenient water holding kit (with SUS basket)

No.	Product name	Single model	Set model	
			10Z-1	10Z-2
1	DO Meter	DO-10Z	●	●
2	pH/ORP Meter	KP-10Z	●	●
3	Chloride Ion Meter	CL-10Z	●	●
4	Chlorine Tester	DP-1Z		●
5	Transparency Meter	30cm		●
6	SV Cylinder	1ℓ		●
7	NO <sub>2</sub> Reactor	GR reagent	●	●
8	Basket	Stainless steel		●
9	Case for 3 units		●	●

※Combination can be chosen by your needs.

## 14 MIZUTEPPPO® No.1

Piston-type water collector

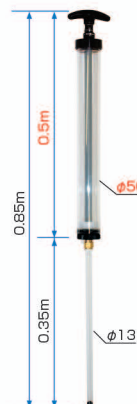


500mℓ water collection is OK by one time.

Water collection at deep, narrow or shallow place is OK.

## 15 MIZUTEPPPO® No.2

Piston-type water collector



## 16 AT type Transparency Meter



Strong and transparent plastic-made

30cm/50cm/100cm

model	length
AT-1	30cm
AT-2	50cm
AT-3	1m

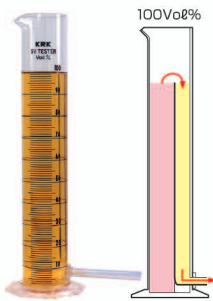
## 17 JT type Transparency Meter



30cm/50cm/100cm

model	Measuring range	length
JT-3	Max. 1m	30cm×2/ 40cm×1
JT-2		50cm×2

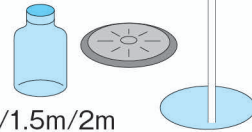
## 18 SV Tester SV-1000 Sludge deposit rate tester



0~100%  
100% level  
automatic sludge  
adjusting deposit  
rate tester

## 19 Dropper type water collector

0.5m~2m  
200mℓ water  
collection is OK  
by one time

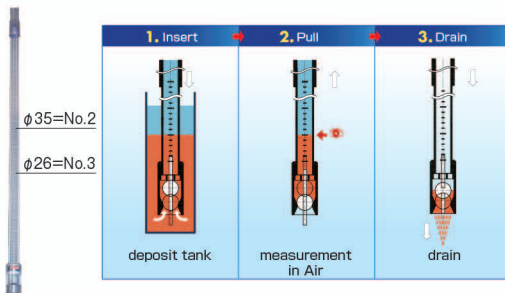


0.5m/1m/1.5m/2m

## 20 ODEI-pro® No.2/No.3 Sludge Level Detector

3m/1 set

Measurement of sludge surface,  
water fault in various deposit tank.

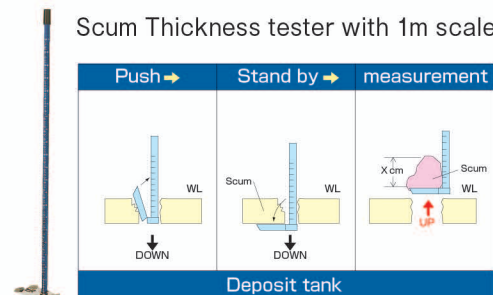


With back wash preventive function  
With automatic sludge drain function

## 21 Scummer Z Scum Thickness Tester

Scum Thickness Tester

Scum Thickness tester with 1m scale



model	Type 1 : 1m Type 2 : 2m
scale	0~1m min. scale 1cm
materials	SUS-304 pipe with corrosion resistance, etc.

## 22 TCR-5Z

## Turbidity / Colority Sensor



Measurement of turbidity and colority at the same time

Measuring range	Turbidity/colority mode 1 : 0.0~50.0 Degree
	Turbidity/colority mode 2 : 0.00~9.99 Degree
	Light absorbance mode : 0.000~1.999 Abs
Min. display	0.1↔0.01(display switch below 10 Degree)
Measuring method	Turbidity : polystyrene turbidity, transmission light
	Colority : platinum cobalt colority standard

## 23 TCR-30

## Turbidity / Colority Sensor



Measurement of both turbidity and colority by this single unit  
Double-beam type turbidity /colority sensor

Measuring range	Turbidity/colority mode 1 : 0.0~50.0 Degree
	Turbidity/colority mode 2 : 0.00~9.99 Degree
Min. display	0.1↔0.01(display switch below 10 Degree)
Measuring method	Turbidity : polystyrene turbidity, transmission light
	Colority : platinum cobalt colority standard

## 24 TR-30 Turbidity Sensor



Measuring range	0~50.0 Degree
Measuring method	polystyrene turbidity standard, transmission light method

## 25 CR-30 Colority Sensor



Measuring range	0~50.0 Degree
Measuring method	Platinum cobalt colority standard

Necessity of water quality control of city water, water tank, swimming pool, etc.

## 26 TR-5Z 90° scattered light Turbidity Sensor

Probe type Near infrared 90° scattered light Turbidity Sensor



Measuring range	0~200 Degree
Resolution	0.01 Degree(0~20)
	0.1 Degree(20~200)
Measuring unit	Formazine turbidity (NTU) standard

Measurement of 0.00~200 Degree(NTU)

## 27 SSTR-5Z SS / Turbidity Sensor

Near infrared  
90° scattered light probe type sensor  
Measurement by switching SS to Turbidity  
(after confirming fixed factor)



Measuring range	Turbidity : 0.0~500 NTU
	SS : 0 ~ 500mg/ℓ (converted value)
Converting function	$y = a+bx(x=\text{turbidity}, y=\text{SS})$

## 28 TR-55 Scattered transmitted light Turbidity Sensor

Scattered and transmitted light measurement  
Measurement from low density to high density

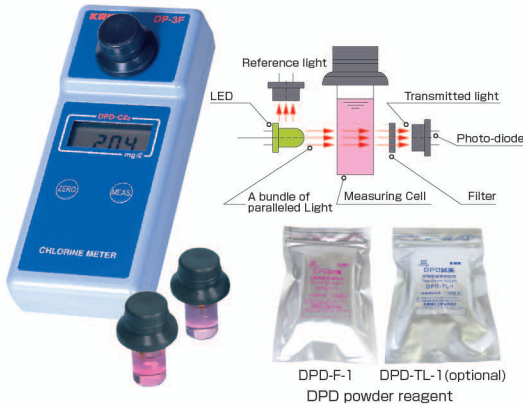


Measuring range	0~1100 Degree
Resolution	0.01 Degree(0~10.99)
	0.1 Degree(11.0~109.9)
	1 Degree(110~1100)
Measuring unit	Degree or FTU

## 29 DP-3F

### DPD Method Residual Chlorine Meter

0~5mg/ℓ Measurement



Measuring range	0~5mg/ℓ
resolution	0.01mg/ℓ (0~3)
	0.1mg/ℓ (3~5)
Measuring reagent	Free residual chloride measuring reagent : DPD-F-1 (standard)
	Total residual chloride measuring reagent : DPD-TL-1 (optional)

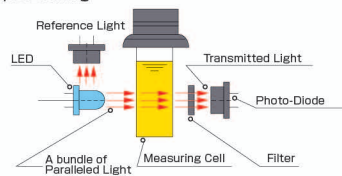
## 30 RC-3F

### High density Chlorine Meter

0~300mg/ℓ Measurement



Principle Drawing



Measuring range	0~300mg/ℓ
Coloring reagent	HOC-K-1
Measuring theory	Light absorbance method by coloring reagent

## 31 RC-V2

### Multi-range Residual Chlorine Meter

0~3mg/ℓ / 0~20mg/ℓ / 0~300mg/ℓ / 0~3000mg/ℓ / 0~200g/ℓ

Measurement from low density chlorine to high density sodium hypochlorite.



Measuring object	Chlorine disinfectant water, electrolytic hypogenerated water, city water, bath tub water, swimming water	
Measuring range	DPD mode	0.00 ~ 3.00mg/ℓ
	RC-L mode	0.0 ~ 20.0mg/ℓ
	RC-H mode	0 ~ 300mg/ℓ
	RC-T mode	0 ~ 3000mg/ℓ
	RC-U mode	0.0 ~ 200.0g/ℓ

## 32 O<sub>3</sub>-3F

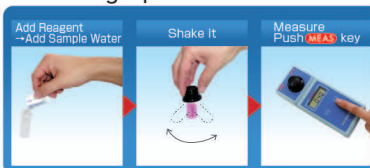
## Dissolved Ozone Meter

Measurement of dissolved ozone in the water within 0~3 mg/ℓ



OZ-K-1  
Reagent for  
ozone test

### Measuring Operation



Measuring range	0.00~3.00mg/ℓ
Measuring object	Ozone treated city water, etc.
Measuring purpose	Sterilization, ozone density control and measurement of sterilizing process.
Measuring reagent	OZ-K-1

## 33 TP-10Z Transparency Sensor

Probe type  
Digital display,  
Electronic Transparency Sensor



Transparency mode  
(example)

32.0  
cm

Change mode

Absorbance mode  
(example)

0.106  
Abs

## 34 TP-30 Transparency Sensor

Combined type



Filter for  
calibration  
attached as  
standard

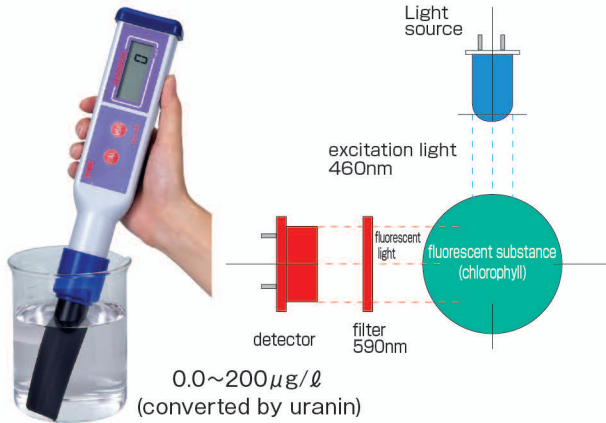
Wave length	Near Infrared Ray(880nm)
Display	LCD 4 digits
Range	Transparency :2.0~200cm Absorbance :0.000~2.000Abs/60mm
Minimum resolution	0.1cm(2.0~99.9cm) 1cm(100~200cm) 0.001Abs
Accuracy	Within ±3%(FS) (at fixed condition)
Calibration	① Simple calibration filter ② Equivalent standard solution for calibration

Wave length	Near Infrared Ray(880nm)
Range	2.0~200cm
Display	LCD 3 digits
Minimum resolution	0.1cm(2.0~99.9cm) 1cm(100~200cm)
Accuracy	Within ±3%(FS) (at fixed condition)
Calibration	① Simple calibration filter ② Equivalent standard solution for calibration

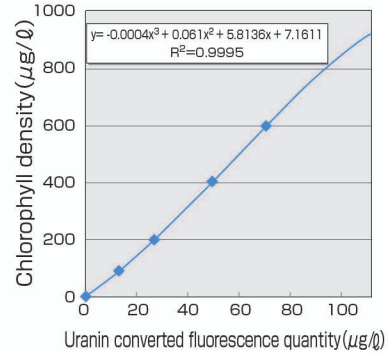
## 35 CHL-30

## Chlorophyll Sensor

<Fluorescence strength sensor>



Correlation between uranin converted fluorescence quantity and chlorophyll



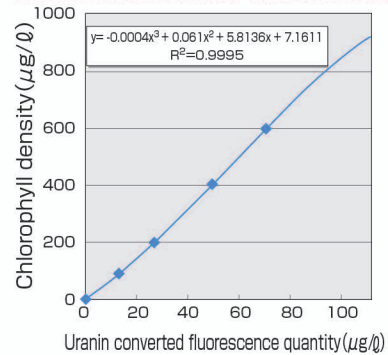
## 36 CHL-5Z

## Chlorophyll Sensor

Measurement of fluorescence strength of phytoplankton's chlorophyll.



Correlation between uranin converted fluorescence quantity and chlorophyll



## 37 EC-5Z

## Electric Conductivity Meter

Measurement of EC, salt, water temp. by a single unit



- ◇ Convenient to switch from **SI unit** (mS/m) to **old unit** (mS/cm)
- ◇ Chemical-proofed carbon EC sensor

Measuring method	AC 2 electrode Method	
Measuring range	EC-5Z-H	EC-5Z-L
SI unit	0~20S/m	0~2S/m
Old unit	0~200mS/cm	0~20mS/cm
Cell constant	$\theta = 400\text{m}^{-1}$	$\theta = 100\text{m}^{-1}$



## 38 LQ-5Z Electrode type liquid density Meter



With this sensor, you can measure liquid density without using any reagent.

### ■ LQ-5Z series

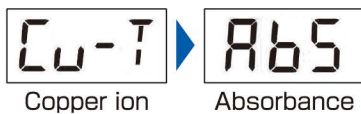
TMAH meter	LQ-5Z-TMAH	0.00~5.00%
Sulfuric acid meter	LQ-5Z-H <sub>2</sub> SO <sub>4</sub>	0.00~2.00%
Nitric acid meter	LQ-5Z-HNO <sub>3</sub>	0.00~2.00%
Sodium hydroxide meter	LQ-5Z-NaOH	0.00~3.00%
Potassium hydroxide meter	LQ-5Z-KOH	0.00~3.00%
Ammonium sodium meter	LQ-5Z-NH <sub>3</sub>	0.00~2.00%

## 39 Cu-V2 Copper Ion Meter

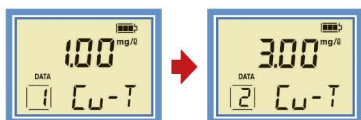
Water quality inspection of Copper Ion for plating & Etching Process



■ Copper Ion & Abs can be measured with one single instrument



■ With memory Function



Model	Cu-V2
Measuring object	Copper Ion
Measuring Method	Reduction and Bicinchoninic Acid Method
Measuring range	Copper Ion :0.00~10.00mg/l (Cu <sup>T</sup> ) Absorbance:0.000~2.000Abs
Repeatability	Within ±2%(FS)
Memory function	Max19 Data
Standard Component	Instrument,measuring Cell(4pcs) Reagent(Cu-V2-RA):50tests Carring Case,Spoit

■ Bicinchoninic Acid Method Reagent



## 40 Ni-V2

## Nickel Ion Meter

Water quality inspection of Nickel Ion for plating Process

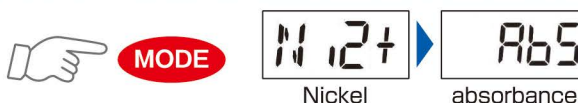


■ Nioxime Method Reagent



Model	Ni-V2
Measuring object	Nickel Ion
Measuring method	Nioxime Method
Measuring range	Nickel Ion :0.00~10.00mg/ℓ (Ni <sup>2+</sup> ) Absorbance:0.000~2.000Abs/cm
Repeatability	Within ±2%(FS)
Memory function	Max19 Data
Standard Component	Instrument,measuring Cell(4pcs) Reagent(Ni-V2-RA):50tests Carrying Case,Spoit

■ Nickel Ion & Abs can be measured with one single instrument



## 41 H<sub>2</sub>O<sub>2</sub>-V series Hydrogen peroxide density Meter

H<sub>2</sub>O<sub>2</sub> measurement of plating liquid, etching liquid and disinfectant liquid



	High density	Medium density	Low density
Model	H <sub>2</sub> O <sub>2</sub> -V1	H <sub>2</sub> O <sub>2</sub> -V2	H <sub>2</sub> O <sub>2</sub> -V3
Measuring object	H <sub>2</sub> O <sub>2</sub> in copper plating liquid		H <sub>2</sub> O <sub>2</sub> in disinfectant liquid
Measuring range	0.0~120.0g/ℓ	0~1200mg/ℓ	0.00~25.00mg/ℓ
Measuring time	Approx. 1 minute		
reagent	1 kind (with 50 pieces)		

## 42 H<sub>2</sub>SO<sub>4</sub>-55

## Sulfuric Acid Meter

Measurement of H<sub>2</sub>SO<sub>4</sub> Density for Plating & Etching Process Liquid



Possible to measure Sulfuric Acid Density by 0-199g/ℓ

Model	H <sub>2</sub> SO <sub>4</sub> -55
Measuring Method	Light Absorbance Method
Measuring Range	0.0~199.9g/ℓ (H <sub>2</sub> SO <sub>4</sub> )
Display	LCD 3·1/2 digits
Standard Components	Instrument (H <sub>2</sub> SO <sub>4</sub> -55), Measuring cell (4pcs) Reagent : H <sub>2</sub> SO <sub>4</sub> -RA 500mℓ (50 tests), Carrying Case. Micro-Pipette 100μℓ

**43 CU-5Z**

**Copper Meter**



- ◇ Copper density measurement of copper sulfate plating solution, etching solution
- ◇ Copper sensor not influenced by sulfuric acid nor hydrogen peroxide
- ◇ Sensor is PFA treated and chemical-proofed

■ Measurement of 3 selective mode

Copper density	Cu: 0.0~76.3g/ℓ
Copper sulfate	CuSO <sub>4</sub> : 0~300g/ℓ
Mole density	0.000~1.200mol/ℓ

**44 Ni-5Z / Ni-5ZL**

**Nickel Meter**

Measurement of Nickel density at plating process



Model	High density Ni-5Z	Low density Ni-5ZL
Measuring range	0.0~199.9g/ℓ	0.00~19.99g/ℓ

■ Usage

Nickel density measurement of nickel sulfate solution, nickel sulfamate solution

**45 CuNi-5Z**

**Copper/Nickel Meter**

Copper and Nickel density of copper sulfate or Nickel plating solution by this single unit



Measuring range	Copper density	Cu: 0.0~80.0g/ℓ
	Copper sulfate	CuSO <sub>4</sub> : 0.0~300g/ℓ
	Nickel density	Ni: 0.0~199.9g/ℓ

# Colorimetric Tester ( Aqua Tester, DPD reagent)

## 46 1Z/2Zseries (9-grade measurement)



### Colorimetric disk series



Multi item water quality measurement is available with this single unit by changing the colorimetric disks and reagents.

## 1Z/2Z series (9-grade measurement)

Measuring item	model	Measuring range
Residual chlorine(DPD)	DP-1Z	0.05~2.0mg/l
pH/ Residual chlorine	DP-2Z	0.05~2.0mg/l
		6.0~7.6pH
High Density chlorine	CL2-1Z-H	10~150mg/l (20~300mg/l)
pH(BTB)	BTB-1Z	6.0~7.6pH
pH(BTS)	BTS-1Z	5.8~8.6pH
pH(BTM)	BTM-1Z	5.0~9.0pH
Dissolved ozone	O3-1Z	0.1~1.5mg/l
Ammonium nitrogen	NH4-N-1Z	0.2~10.0mg/l
Nitric nitrogen	NO2-N-1Z	0.006~0.3mg/l
Nitrate nitrogen	NO3-N-1Z	0.05~4.5mg/l
Phosphate	PO4-1Z-T	0.2~5.0mg/l
H. phosphate	PO4-1Z-H	10~240mg/l
COD	COD-2Z	5~100mg/l
		1~25mg/l
Total iron	Fe-1Z	0.1~5.0mg/l
Manganese	Mn-1Z	0.5~20.0mg/l
Total copper	Cu-1Z-N	0.1~10mg/l
Chromium hexavalent	Cr-1Z	0.05~10mg/l
Free cyanide	CN-1Z	0.01~5mg/l
Nickel	Ni-1Z	0.3~10mg/l
Zinc	Zn-1Z	0~5mg/l
Formaldehyde	HCHO-1Z	0~2mg/l

## 47 7Zseries (10-grade measurement)



## 7Z series (10-grade measurement)

Measuring item	model	Measuring range
Residual chlorine(DPD)	DP-7Z	0.05~2.0mg/l
Available chlorine	RC-7Z	10~200mg/l
pH(BTB)	BTB-7Z	5.8~7.6pH
pH(BTS)	BTS-7Z	5.8~8.6pH
pH(BTM)	BTM-7Z	4.5~9.0pH
Total hardness	TH-7Z	5~300mg/l

## 48 DPD measuring reagent for Residual Chlorine

Line-ups of separately packed powder reagent and liquid reagent.



DPD-WA-50 DPD-WA-18 DPD-F-1 DPD-TL-1  
DPD liquid reagent DPD powder reagent

**NEW**

### DPD Reagent, Liquid Type

For Free Chlorine



DPD-GL

- Just one drop for Free Residual Chlorine Measurement
- Long-Term storable DPD Liquid Reagent
- A Mere one drop, add it, so rapid Measurement
- Assorted Waste-Free DPD Liquid Reagent

Product Name	DPD Reagent, Liquid Type
Object	Free Chlorine
Model	DPD-GL-10(10mℓ)
Volume	10mℓ (approx 200 Times)
Using Volume	1 Drops/1 time(approx:0.05mℓ)
Optional	DPD-GL-25(approx:500 times)

# 49 700/800series Field installing type, industrial water quality Meters



Field Installing Type 700/800 series

Product name	Model	Measuring range
pH Meter	PC-700	0.00~14.00pH
ORP Meter	OC-700	0~±1900mV
DO Meter	DC-700	0.00~20.00mg/l
Turbidity Meter	TR-700Z	0.0~500 Degree
MLSS Meter	MC-700	0~20000mg/l
Electromagnet Density Meter	EMC-700	0.0~20.0%(NaCl)
Electric Conductivity Meter	EC-700	0~20S/m
SS/Turbidity Meter	TSS-700W	0~1000(FTU or mg/l)
Turbidity/Colority Meter	TCR-700W	Turbidity 0~50 Degree Colority 0~50 Degree
Copper Meter	CU-800	0.0~80.0g/l Cu
Nickel Meter	Ni-800	0.0~200.0g/l Ni

# 50 502/301series Panel Installing Type



Panel Installing Type 502/301 series

Product name	Model	Measuring range
pH Meter	PC-502	0.00~14.00pH
ORP Meter	OC-502	0~±1900mV
DO Meter	DC-502G	0.00~20.00mg/l
Turbidity Meter	TR-502Z	0.0~500Degree
MLSS Meter	MC-502	0~20000mg/l
Electromagnet Density Meter	EMC-502	0.0~20.0%(NaCl)
Electric Conductivity Meter	EC-502	0~20S/m
Colority Meter	CR-502	0~50 Degree
Turbidity/Colority Meter	TCR-502	Turbidity 0~50 Degree Colority 0~50 Degree
Copper Meter	CU-502	0.0~80.0g/l Cu
Nickel Meter	Ni-502	0.0~200.0g/l Ni
Chlorine Meter	RC-301Z	0~2mg/l Cl <sub>2</sub>

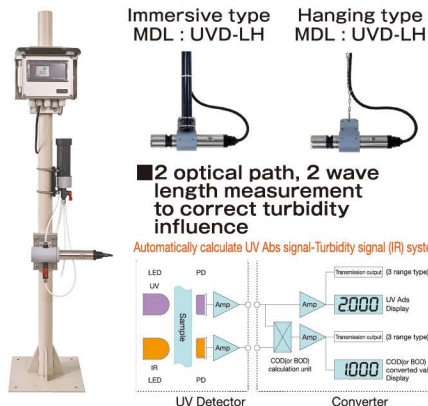
Detectors for Process Measurement



# 51 UV-700W

# UV/COD Monitor

Prove type UV/LED detector With cleaning wiper



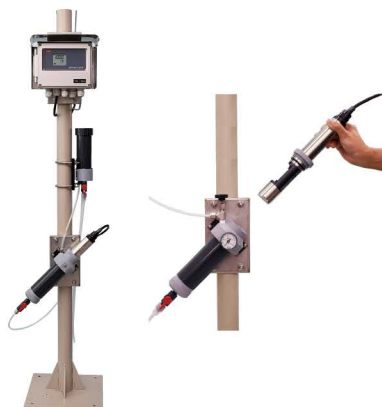
### Specifications of converter

Product Name	UV organic pollution monitor(UV/COD Monitor)
Model	Standard Type :UV-700W-10 (CELL length:10mm) High Density Type:UV-700W-5 (CELL length:5mm)
Display	LCD 4-digits 2 Steps, Upper:COD converted value Lower:UV Abs(255nm)
Measuring Range	[UV-700W-10] UV:0~2.000Abs/cm COD(cr):0~500mg/ℓ (converted Value):MAX [UV-700W-5] UV:0~4.000Abs/cm COD(cr):0~1000mg/ℓ (converted Value):MAX △ Attention;Depending upon the water quality,conversion Measurement can not be made below500 or 1000mg/ℓ (cr)
Transmission output	4~20mA DC 2 system,3 range switch

# 52 TSS-700W

# SS/Turbidity Sensor

With cleaning wiper



### Meter

Model	TSS-700W-20(STD)/TSS-700W-60(Low density)
Measuring unit	Formazine Turbidity(FTU)or SS mg/ℓ (instruct us Measuring unit at the time of order)
Measuring range	TSS-700W-20:0.1~1000 degree TSS-700W-60:0.01~50 degree
Transmission output	4~20mA DC (isolation type)
Accuracy	Within ±2% (FS)

### SS/turbidity detector TSSD-20W

Measuring theory	Near infrared rays transmission light
Detector model	TSSD-20W(STD)/TSSD-60W(Low density)
Cleaning wiper	Wiper built-in detector
Optical path	20mm(STD) or 60mm(for Low density)

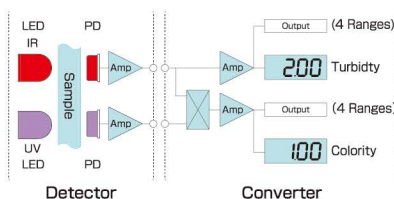
# 53 TCR-700W

# Turbidity/Colority Monitor

Simultaneous Measurement and display of both Turbidity and Colority



With cleaning wiper



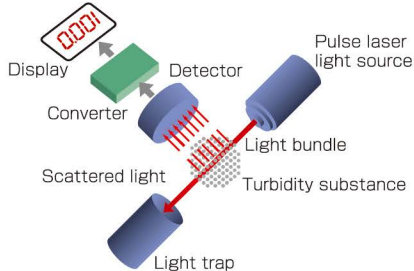
### Meter

Measuring range	Turbidity: 0~50degree(FTU or mg/ℓ) Colority: 0~50degree(Pt cobalt degree)
Resolution	0.01degree(at under 10),0.1degree(at 11~50degree)
Transmission output	DC4~20mA 4range(Manual change) 0~5/0~10/0~20/0~50
Accuracy	±0.1degree/at Full Scale 10degree

# 54 TR-502L Turbidity Monitor of Laser scattered Light Method

Laser scattered light method, sensitive turbidity detector  
Sensitive of 0.001 measurement of 0.000~2.000

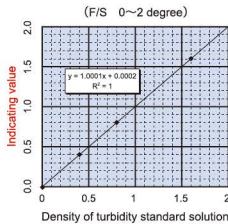
### Measuring Diagram



If 660nm red pulse laser bundle is projected into the sample water, strong scattered light occurs. This scattered light is detected by the light receiving element angled at 90°, transferred to the converter as density signal, calculated, amplified and digitally displayed. Laser turbidity monitor sensitively measures molecule turbidity little influenced by colority.

### Linearity features

Turbidity	Display
0	0.0
0.4	0.402
0.8	0.798
1.6	1.601



TRDH-5L

- Laser scattered light method, sensitive turbidity detector  
Sensitive of 0.001 measurement of 0.000~2.000
- 3-range manual selection of transmission output  
0~0.5/0~1.0/0~2.0
- Either PSL or formazine turbidity is possible to measure
- Simple and reliable zero calibration
- Simple and reliable span calibration
- Detector and converter of simple fixing and instrumentation
- With function of checking list of detector's trouble and calibration

# 55 DC-502G DO Monitor



OXP-2VNY-SK

OXP-2VNY-H

NEW DO SENSER  
**OXNIT**® **OX-VW2**

※OXNIT is the KASAHARA's registered trademark.

- Sensor cartridge is easily replaced and maintained



### Meter

Measuring range	0.00~19.99mg/ℓ
Resolution	0.01
Power supply	AC85~240V 50/60Hz
Transmission output	DC4~20mA (insulation type) Range1: 0.00~5.00mg/ℓ Range2: 0.00~10.00 mg/ℓ Range3: 0.00~19.99 mg/ℓ (Initial setting)

### DO Detector

Product Name	Galvanic DO Detector
Measuring Method	Cartridge type DO Sensor
Model	Immersion Type DO Probe :OXP-2VNY-H DO Sensor :OXNIT[OX-VW2] Throw in Type DO Probe with sinker :OXP-2VNY-SK DO Sensor :OXNIT[OX-VW2]



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