

KRK

Transparency
TP-30



Transparency Sensor

Electronic Transparency Meter

Combined type

TP-30

Transparency : 2~200cm

Transparency
TP-10Z



Probe type

TP-10Z

Transparency : 2~200cm

Absorbance : 0~2Abs/60mm

Collecting water /
throwing
measurement



Kasahara

Transparency Sensor

Probe type

TP-10Z

Collecting water /
throwing measurement



Combined type

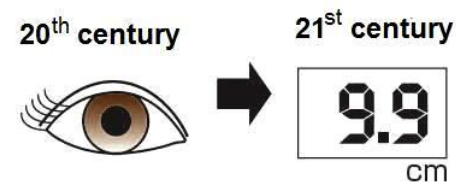
TP-30

Collecting water
measurement



OUTLINE

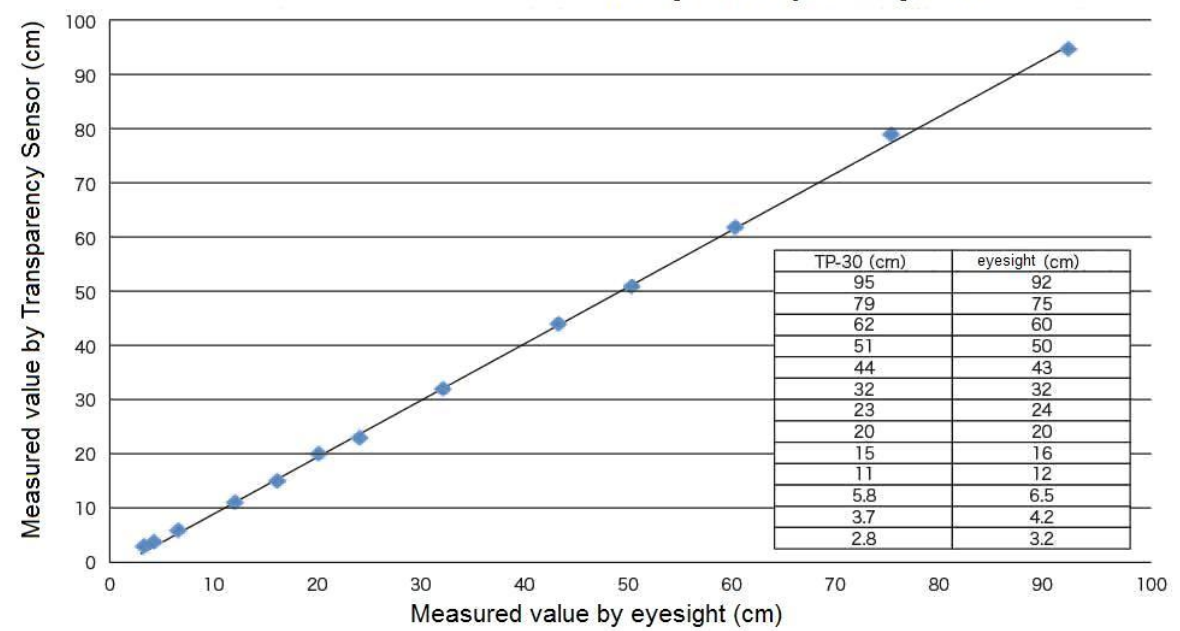
(Traditional)
Transparency was traditionally measured by
visual inspection apparatus based on JIS law.



(problem)
With the above apparatus, the value varies influenced by the inspector's
eyesight, brightness of the place to measure, or sample condition.

(solution)
Electronic Transparency Sensor dissolved the error measurement using
electronic eyes (light sensor) and realized the speedy and accurate
measurement.

Relation between transparency by eyesight
and by Transparency Sensor



⚠ In case of unspecified sample, because of the sample color, the real measured value by eyesight may differ from the measured value. In this case, obtain the correlation between visual method by eyesight or correct measured value by eyesight using supplementary unit, etc.

FEATURES

1. Digital display,
Electronic Transparency Sensor
2. Probe type Transparency Sensor
(TP-10Z)
3. Measurement of 2 items of transparency
and absorbance (TP-10Z)
4. Near infrared rays little influenced by
outside light
5. Transparency Sensor of long optical path
60mm
6. Simple calibration filter is attached as
standard
7. Shock absorbing rubber buffer
for Detector



Digital display



Transparency mode
(example)

Absorbance mode
(example)

32.0
cm

Change mode

0.106
Abs



Filter for calibration
attached as standard

USAGE

■ Sewage, drainage from plant



■ Discharge from septic tank

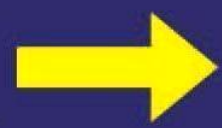


■ Lake, river water



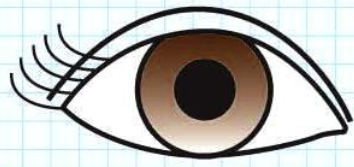
■ Dilution rate estimation at BOD measurement





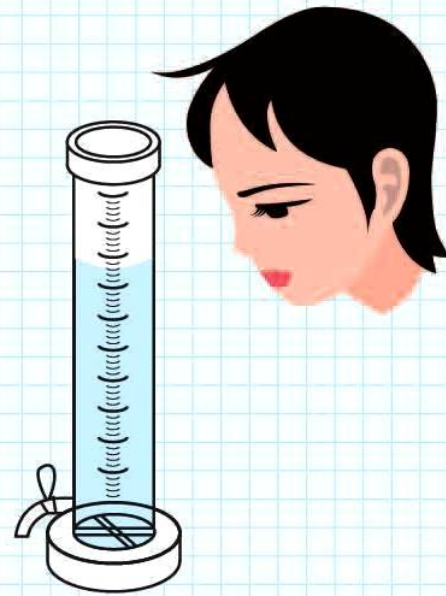
Traditional Measurement (JIS method)

Measured value differs depending upon the person.



Visually measured value

- Mr. A 45cm
- Mr. B 48cm
- Mr. C 40cm



Transparency Sensor

The same value is obtained by anybody.

Measured result

- Mr. A first time 43cm
- Mr. B second time 43cm
- Mr. C third time 43cm



Common to TP-30/TP-10Z

SPECIFICATION

Combined type Transparency Sensor TP-30

Measurement by collecting water



SPECIFICATIONS

Probe type Transparency Sensor TP-10Z

Collecting water/throw-in measurement



Product name	Combined type Transparency Sensor
Model	TP-30
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 (sold separately)
Sample temperature	2°C~40°C
Ambient temperature	0°C~40°C, humidity: 95% RH or less
Structure	Dust proofed, drip proofed (equivalent of IP63)
Power and voltage	Alkaline batteries DC6V (AAA5 × 4) With Auto power off
Material	POM, rubber
Dimensions	48×32×320(mm)
Weight	Approx. 300g
Standard components	Transparency Sensor, Shock proofed rubber buffer, batteries, case, measuring cylinder (PVC), Instruction Manual, simple filter for calibration
Optional item	Equivalent standard solution for calibration: 250ml

⚠ In case of unspecified sample, because of the sample color, the real measured value by eyesight may differ from the measured value. In this case, obtain the correlation between visual method by eyesight or correct measured value by eyesight using supplementary unit, etc.

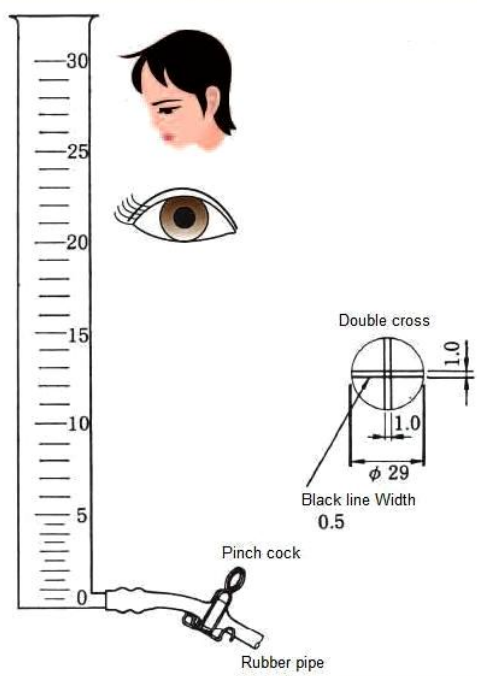


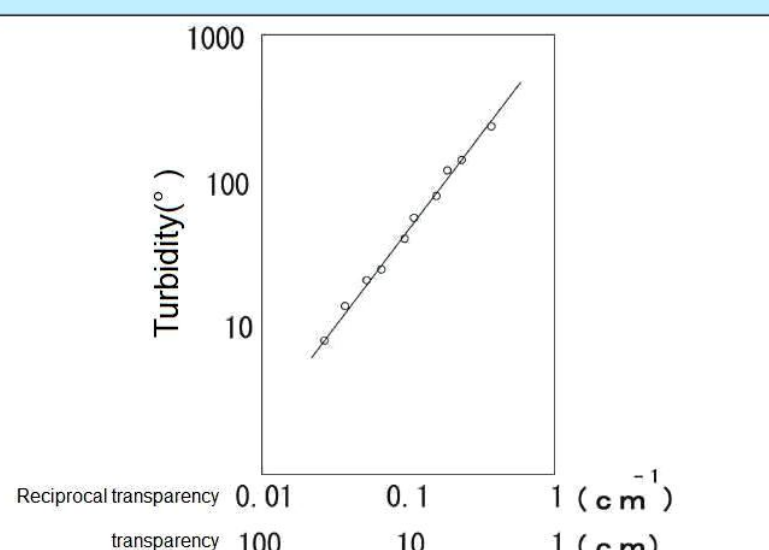
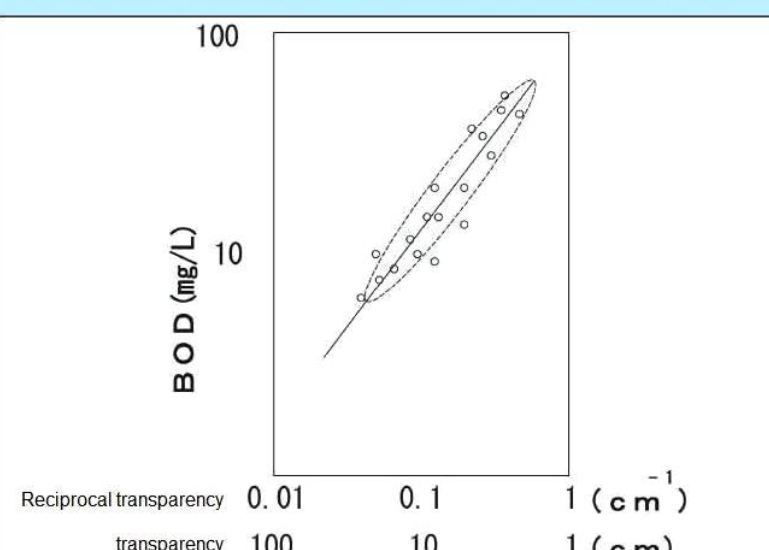
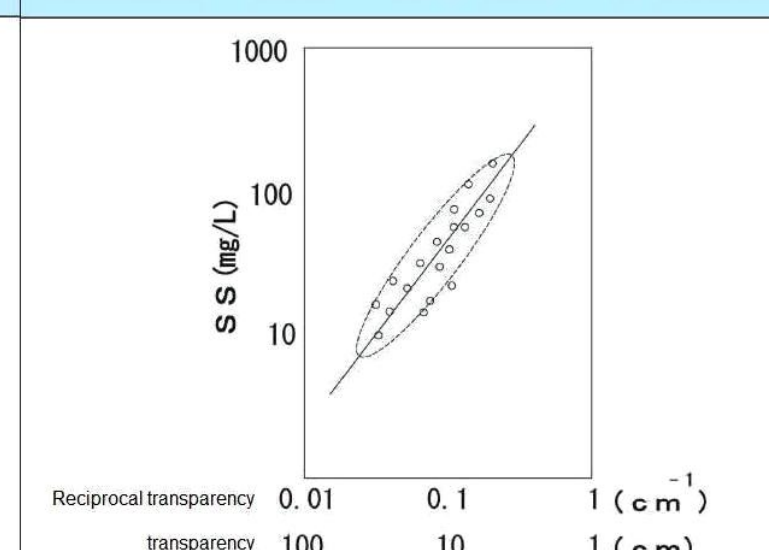
Product name	Probe type Transparency Sensor (electronic transparency meter)
Model	TP-10Z
Wave length	Near infrared ray (880nm)
Display	LCD 4 digits
Range	Transparency :2.0~200cm Absorbance :0.000~2.000Abs/60mm
Minimum resolution	0.1cm(2.0~99.9cm) 1cm(100~200cm) 0.001 Abs
Accuracy	Within ±3%(FS) (at fixed condition)
Calibration	① Simple calibration filter ② Equivalent standard solution for calibration (sold separately)
Memory capacity	Max. 30 items
Ambient temperature	0°C~40°C, humidity: 95% RH or less
Power and voltage	Alkaline batteries DC4.5V (LR3 × 3) With Auto power off
Dimensions	70(W)×170(D)×36(H)(mm)

DETECTOR SPECIFICATIONS

Product name	Probe type Transparency Sensor
Model	TPD-10
Theory	Transmission light measurement by light focusing lens
Sample temperature	2°C~40°C (not freezing)
Cable length	2m
Dimensions, weight	φ25×270 approx. 250g
Materials	POM, SUS-316, rubber
Standard components	Meter (with batteries), detector, measuring cylinder, plastic cover, strap, Instruction Manual, carrying case, simple calibration filter
Optional item	Equivalent standard solution for calibration: 250ml

Q & A about Transparency Sensor

Questions	Answers
<p>What is Transparency Meter?</p>	<p>Visual method (JIS method)</p> <p>Fill a cylindrical Transparency Sensor with sample water. Looking into it from above, flow sample from the below outlet. When you recognize the double cross at bottom, the depth of water (cm) is regarded as transparency. Read the value from the scale of the transparent cylinder. A weak point is error by brightness or human becomes bigger.</p>
<p>What is Transparency Sensor?</p>	<p>Electronic Transparency Meter (digital display)</p> <p>High sensitive Transparency Meter by Near Infrared Transmission Light measurement, optical path length of 60 mm. Little difference of value measured by ambient brightness or measuring person. It succeeds to shorten measuring time.</p> <p>Two kinds of sensor: ① Combined type Sensor range: 2~200cm ② Probe type Sensor range: 2~200cm 0~2Abs/60mm</p> <p>⚠ Attention Reciprocal Transparency may show good correlation with turbidity or SS, therefore, it is possible to guess turbidity or SS by measuring transparency.</p>
<p>Applied example</p>	<p>① Reciprocal Transparency and turbidity have good correlation. (Turbidity can be obtained from transparency by getting correlation.)</p> <p>② Reciprocal transparency and SS may show good correlation. (Possible to guess SS from transparency of the sample at the specified field.)</p> <p>⚠ Attention Transparency and turbidity, SS or BOD may show good correlation with the specified sample. In case of unspecified sample, use the Transparency Sensor by getting correlation from each data. The correlation graph of this catalogue is only for your information and not guaranteed correlation.</p>

Visual type	Combined type	Probe type
		
<p>Example of correlation between reciprocal transparency and turbidity</p> 	<p>Example of correlation between reciprocal transparency and BOD</p> 	<p>Example of correlation between reciprocal transparency and SS.</p> 

※ The rights reserved for changing the specifications for improvement.

KRK

笠原理化工業株式会社

KASAHARA CHEMICAL INSTRUMENTS CORP.

1-10-10 Yoshiba, Kuki-City, Saitama, Japan 〒346-0014

TEL.0480-23-1781(代) FAX.0480-23-2749

URL : <http://www.krkjpn.co.jp>

E-mail : krk@krkjpn.co.jp