HORIBA
Process & Environmental

Beyond Water with You

Oil Content Analyzer

OCMA-500/550

Comply with
ASTM
D7066-4



500

For measurement of
Oil in wastewater



Oil Content Analyzer
OCMA-500

**OCMA-500 to measure concentration of oil contained in drainage and environmental water.
After injecting the water sample and solvent, all you have to do is press the start button,
and the system will automatically conduct the monitoring operation from oil extraction to sample measurement and draining.
With no more troublesome operations like opening/closing the drainage valve, monitoring is speeded up.
In addition, the color graphic LCD and the backlit extraction tank have improved operability.**

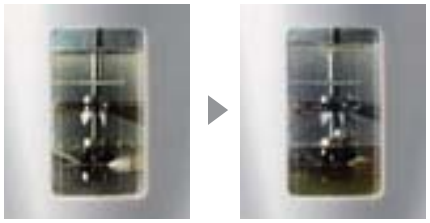


① Inject water sample, solvent
② Measurement start
③ Extraction and measurement
④ Drain sample
⑤ Measurement completion

Feature

■Backlit extraction tank

The extraction tank is equipped with LEDs. Illuminating the tank makes it easy to check the phase separation between sample and solvent and set the extraction time.



Before extraction　After extraction

*The color depends on the sample.

■Reduction of environmental impact and running cost

The OCMA-500 cuts solvent consumption by 20% compared with our previous products, reducing environmental impact. It also reduces the running cost.



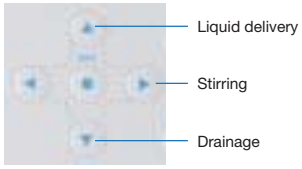
■Measurement mode

Measurement can be switched automatically or manually.

Auto mode Stirring, measurement and draining are automatically conducted after injection of the sample.

Manual mode You can conduct measurement operation at any timing while checking the extraction state.

Example of manual mode



Fully used in various applications



Factory drainage
For monitoring final discharge water



Ballast water, bilge
For monitoring discharge from ships



Vehicle maintenance site and gas station
For monitoring water quality in surrounding areas



Others
Water quality survey based on environmental standard.
For monitoring final discharge from petroleum refinery plant.
For oil dispersion research at time of an accident.

550

For measurement of
Residual oil on components



Oil Content Analyzer
OCMA-550

**OCMA-550 to measure residual oil on components and concentrations of oil adhered on solids such as soil.
Measurement can be easily made only by injecting the extracted water sample into the attached cell and setting it to the equipment.
This model features a simple design which allows opening/closing of the door to setting of cell with just one hand.
This is best for measurement of extracted samples such as evaluation of residual oil on components and measurement of oil contained in food.**



① Dip sample into solvent to extract oil



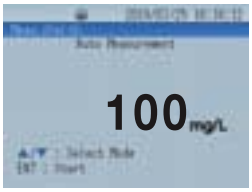
② Inject measuring solvent into cell



③ Set the cell to the equipment



④ Measurement start



⑤ Measurement completion

Feature

■Cell is easily detachable with just one hand



Simple design which allows opening/closing of door and detachment of cell with just one hand. Measurement operation becomes smoother.



■Timer function

A timer function to display a measurement value in a certain amount of time is equipped.
This saves work and time required for measurement.



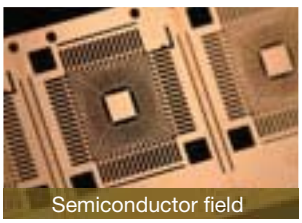
Residual oil on components

For quality control of components



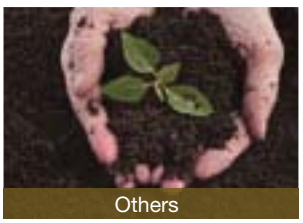
For piping of air conditioners and refrigerators

To prevent reduction of cooling function



Semiconductor field

For evaluation of degreasing capacity



Others

Useful for soil (environmental pollution), food (health hazard) and gas (quality deterioration)



Automatic operation with one switch

Compact oil content analyzer OCMA-500 series.
Operability is significantly improved while user-friendly features of the conventional products are maintained as they are.
This machine is easy for anyone to use because all you have to do is press a button.
This can be utilized across wide variety of applications such as drain monitoring and quality control for components.

Easy and speedy measurement for approx. 3 minutes*1

Measurement can be easily made in a short time only by pressing the start button. Measurement time can be significantly reduced in comparison with the n-hexane extraction method.

*Excluding time for warming and calibration.



1 minute
Put sample and solvent into OCMA.*2

1 to 2 minutes
Start measurement by the start button.

In less than 1 minute
Read the measured value.

*1 Shortest time. Measurement time depends on quality of sample.
*2 In case of OCMA–500. Put extracted sample into the cell to set in case of OCMA–550.

Any oil with low boiling point can be measured

The n-hexane extraction method needs to evaporate solvent and any oil with a low boiling point (toluene, gasoline, etc.) is evaporated along with solvent. The OCMA-500 series does not need to evaporate solvent, preventing evaporation of these kinds of oil.

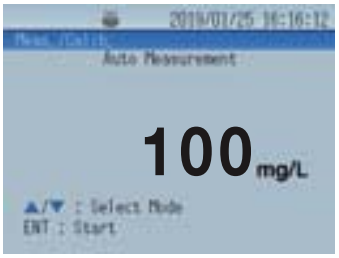


■What is the n-hexane extraction method?
Testing method used to measure oil components. Because oil of a low-boiling component such as gasoline or toluene is volatilized, an error may occur if they are included. It is necessary to take note of them when making evaluations.

Improvement of operability

■Color graphic liquid crystal

It is easier to see menu and measurement results because a 3.5 inch color graphic (LCD) is employed.



■USB data output port

It is easy to control data in a personal computer by saving data in a USB memory.

*A format supports USB of FAT/FAT32. HORIBA recommended USB is available.



Date	Value	Unit	Value(Raw)	Unit(Raw)	Status	Memo
2018/02/23 11:17	79.6	mg/L	79.6	mg/L	2	sample01
2018/02/23 11:22	100	mg/L	100	mg/L	0	sample02
2018/02/23 14:05	181	mg/L	181	mg/L	0	sample03
2018/02/23 15:58	98.6	mg/L	98.6	mg/L	0	sample04
2018/02/26 10:19	2	mg/L	2	mg/L	0	sample05
2018/02/26 16:39	6.8	mg/L	6.8	mg/L	0	sample06
2018/03/24 14:41	1.9	mg/L	1.9	mg/L	0	sample07
2018/03/24 17:57	125	mg/L	125	mg/L	0	sample08
2018/03/24 18:17	3.8	mg/L	3.8	mg/L	0	sample09
2018/03/25 15:58	110	mg/L	110	mg/L	0	sample10
2018/03/25 16:17	199	mg/L	199	mg/L	0	sample11
2018/03/26 10:07	0.7	mg/L	0.7	mg/L	0	sample12
2018/03/26 11:40	169	mg/L	169	mg/L	0	sample13

Output data (reference)

■Unit conversion function

Indication unit (mg/L, mg/kg, mg/g, mg/PC, Abs (OCMA-550)) can be changed according to the purpose by inputting the measurement conditions.

■Multi-language function

Japanese, English, Russian, Chinese, Korean, German and French languages are available. Each language can be selected from the screen menu.

■Comply with the ASTM D7066-4

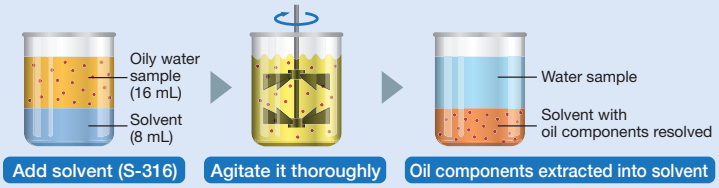
ASTM D7066-4 is a standard method which covers the determination of oil, grease and nonpolar material in the water, defined by ASTM (American Society for Testing Materials).
The OCMA series complies with ASTM D7066-4 by performing 5 point calibration with infrared determination in the measurement.

How to measure by OCMA

The OCMA-500 series extracts the oil components contained in a measurement sample into solvent (S-316) to measure the oil content with an IR analyzer.

***Carry out pre-washing for correct measurement.**

*In case of OCMA-500



※ OCMA-500/550 may not be able to measure some samples containing protein, surfactant, hydrophilic organic solvent and others. Please ask your local dealer before purchasing when considering these kind of samples.



Oil Content Analyzer

OCMA-500

Standard Accessory

Filter element	For water filter, diameter 40 mm, including 5 elements
Dropper	Made of polyethylene, 2.5 mL
Code set	Power supply cable (for domestic use)
B heavy oil	10 mL
Instruction manual	OCMA-500
Water absorptive sheet	Liquid tray from extraction tank

Option

Oil extracted solvent	S-316
Measuring Syringe set (Simple type)	Micro Syringe 25 µL Measuring Syringe (For Sample) 20 mL Measuring Syringe (For Solvent) 10 mL
Measuring Syringe set (Standard type*)	Micro Syringe 25 µL Measuring Syringe (For Sample) 20 mL Measuring Syringe (For Solvent) 20 mL
Packing	For water filter For extraction tank
Solvent Reclaimer	SR-305

*Measuring is easy because with stopper.



Oil Content Analyzer

OCMA-550

Standard Accessory

Dropper	Made of polyethylene, 2.5 mL
Code set	Power supply cable (for domestic use)
B heavy oil	10 mL
Instruction manual	OCMA-550
Cell	Quartz (20 mm): 1 piece
Cell cap	Cap for cell: 1 cap

Option

Oil extracted solvent	S-316
Measuring Syringe set (Simple type)	Micro Syringe 25 µL Measuring Syringe (For cell injection) 10 mL
Solvent Reclaimer	SR-305

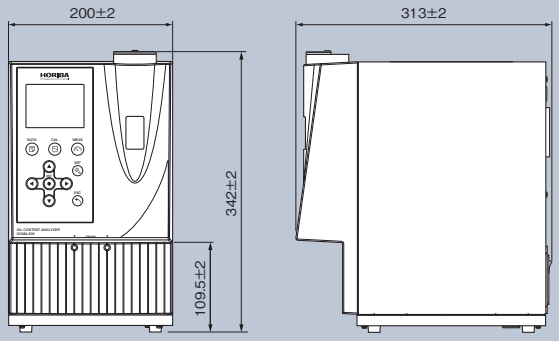
For the first purchase customer

In order to measure oil content with OCMA-500 series, you need the following products.
If you don't have these products, please purchase from optional list.

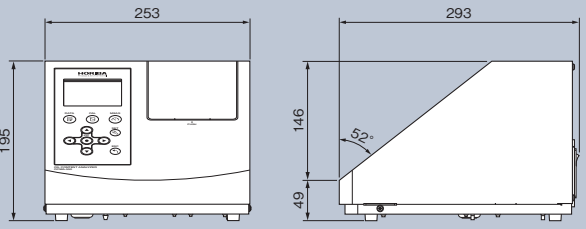
Must items for measurement		Recommended options (Not including maintenance parts)	
Standard Set	**Solvent**	**Measuring Syringe set**	**Solvent Reclaimer**
OCMA-500  + Standard Accessory	S-316 	Standard type (with Stopper)  *Choose from standard type or simple type	SR-305  Desigened especially for recycling S-316 solvent, it features a 2- layer column of activated carbon and alminum
OCMA-550  + Standard Accessory		Simple type 	

Dimensional Outline (Unit: mm)

OCMA-500



OCMA-550



■Specifications

	OCMA-500	OCMA-550
Measurement method	Solvent extraction – non-dispersive infrared absorption analysis method	
Measured objects	Substances extracted from sample water into solvent and having infrared absorption near a wavelength from 3.4 µm to 3.5 µm	
Measurement range	0 mg/L to 200 mg/L	
Resolution	For mg/L 0 to 99.9: 0.1, 100 to 200: 1	
Repeatability	0 mg/L to 9.9 mg/L: ±0.3 mg/L 10.0 mg/L to 99.9 mg/L: ±2.1 mg/L 100 mg/L to 200 mg/L: ±5 mg/L *For standard liquids at constant temperature	0 mg/L to 9.9 mg/L: ±0.5 mg/L 10.0 mg/L to 99.9 mg/L: ±2.1 mg/L 100 mg/L to 200 mg/L: ±5 mg/L *For standard liquids at constant temperature
Display method	3.5 inches 320×240 dots Backlight color graphic LCD	
Calibration method	Select each optionally zero calibration and span calibration.	
Amount of test sample required	2:1 (Sample water : Solvent)	—
Extraction solvent	S-316 *Do not use any other solvent than S-316.	
Amount of extraction solvent required	8 mL (possible to measure even at 10mL)	Approx. 6.5 mL (Amount of extraction solvent required)
Extraction method	Built-in extractor	Using the extraction solvent, and extracted manually outside the product
Ambient operating temperature	0°C to 40°C (no condensation)	
Power supply	AC 100 V to 240 V ±10%, 50/60 Hz	
Power consumption	AC 100 V: Approx. 60 VA, AC 240 V: Approx. 90 VA	AC 100 V - 240 V: Approx. 60 VA
External dimensions	342 (H) X 200 (W) X 313 (D) mm	195 (H) X 253 (W) X 293 (D) mm
Mass	Approx. 7 kg	Approx. 5 kg
External output	Output to a USB memory stick	
Measurement flow	Automatic measurement (automatic switching sequence) and manual measurement after injection of liquid	—
Cell length	—	20 mm
Cell material	—	Quartz
Functions	300-item data memory (measurement history) Self-error determination Stabilized measurement value display Clock function With backlight for stirred batch tank Unit conversion function Compliant with ASTM D7066-4	300-item data memory (measurement history) Self-error determination Stabilized measurement value display Clock function Unit conversion function Compliant with ASTM D7066-4

IMS

The HORIBA Group adopts IMS (Integrated Management System) which integrates Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System OHSAS18001.
We have now integrated Business Continuity Management System ISO22301 in order to provide our products and services in a stable manner, even in emergencies.

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