

AppliCOD® Eco

On-line Water Analyzer

Budget-friendly on-line monitoring
of Chemical Oxygen Demand in
waste water and surface water



Compliance

The **AppliCOD® Eco** sets new standards in traditional wet chemistry methods by its advanced analytical mainframe, while compliance with internal industry methods is assured:

Wet-chemical oxidation complying with standard method ISO 6060 by potassium dichromate

Advanced features

- True wet-chemical determination of Chemical Oxygen Demand (2 hour method with full sample oxidation)
- Smart features and add-on units reduce down-time and unnecessary checks substantially
- Superior performance and mechanical stability by using high quality components, tubing and programmable cleaning cycles
- Up to three (3) sampling points possible
- Incorporated industrial PC with AppliTek controller software

A wide array of applications

On-line monitoring of COD levels in various environmental and industrial process applications:

- Surface water
- Waste water
- Industrial waste water

High analytical performance

- Reduced reagent consumption by batch-wise operation principle and high precision redox-titration techniques
- Smart features: automatic validation and cleaning
- High sensitivity and selectivity
- Factory configured, tested and calibrated

Technical specifications

Analytical unit

Analysis method

Wet-chemical oxidation complying with ISO 6060 by potassium dichromate (K₂Cr₂O₇)

Measuring ranges

One single range, factory set:

- 5 – 100 mg/L O₂
- 40 – 500 mg/L O₂
- 60 – 1,000 mg/L O₂
- 80 – 1,500 mg/L O₂

Cycle time

120 minutes

Validation

Automatic, free adjustable sequence

Cleaning

Automatic, free adjustable sequence

Detection limit

5mg/l (range 5 - 100 mg/L O₂)

Precision / Repeatability

Better than 2% full scale for standard solutions

Reagents

Number of containers

Outside: 4 (including demi water)

Containers come with torqueless screw caps.

Reagents

Sulphuric acid, silver sulphate, potassium dichromate, demineralized water

Optional: mercury sulphate (if required)

Environmental data

Ambient operating conditions

10 °C – 30 °C +/- 4 °C deviation at 5 - 95% relative humidity non-condensing
(50 °F – 86 °F +/- 7.2 °F deviation)

Reagent temperature

Keep between 10 °C - 30 °C (50 °F - 86 °F)

Sample pressure

Atmospheric up to 0.1 bar (1.45 psi)

Note: higher sample pressures on request

Sample flow rate

10 - 30 ml per minute

Sample particulates

Maximum size 200 µm, < 0.1 g/l

Utilities

Power

220 - 240 VAC, 10 A, 50 Hz

Other voltages available on request

Instrument air

Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air

Demineralized water

For rinsing, calibration and/or dilution

Drain

Atmospheric pressure, vented, min. Ø 64 mm

Earth connection

Dry and clean earth pole with low impedance (< 1 ohm) using an earth cable of > 2.5 mm²

Options / add-on units

Filtration

ModuSize® fast-loop filtration system with automatic blowback by solenoid controlled instrument air

MicroSize® self-cleaning microfiltration unit, various pore sizes

Reagent level detection

Installed on reagent containers; alarms are generated by controller software

Multiple streams

ModuPlex® 2 or 3 streams

Serial communication

MODBUS TCP/IP, MODBUS-RS232 -RS485

Control and communication

User interface / controller

Industrial PC with 5.7" TFT colour user interface, compact flash memory

Backlit touchscreen, brightness adjustable

Data handling, logging and security

- Standard Ethernet 10 M (RJ45) NE 2000
- Communication ports supporting Ethernet connectivity to MODBUS TCP/IP
- Log files with 1,000 values/results are stored
- Easy export to spreadsheet files
- Sealed USB port for data or result graph download and program upload
- User interface with administrator access and menu keys activated/inactivated
- Data retention in case of power failure, initialization program for safe status after restart

Analogue outputs

Maximum 8, active 4 –20 mA, max. 500 Ohm load

Alarms (digital outputs)

- Malfunctioning alarm (potential free contact)
- Result alarm (potential free contact)

MODBUS TCP/IP, MODBUS-RS232 -RS485

Optional

Certification

CE approval

Certified to CE approval

Factory Acceptance Test (FAT)

At AppliTek NV, Belgium.

Mechanical data

Protection class

Analyzer cabinet: IP55

Touch screen/Industrial PC: IP65

Cabinet and materials, hinged part

Thermoform ABS / Door: plexiglass

Cabinet and materials, wall section

Galvanized steel, powder coated

Dimensions

69 cm (27.2") x 46.5 cm (18.3") x 33 cm (13")

(H X W X D)

Total weight

25 kg (55 lbs.)



Siam Pollutek Co., Ltd.

40/25 Soi Wachirathamsatit 8, Sukhumvit 101/1 Rd,
Bangna, Bangkok 10260 Thailand
Tel (+66)2 747 8233 Fax. (+66)2 747 6185

Masters in Analytical Technology.

AppliTek