

PRECISION IN EVERY DETAIL

FXJ-12W

COD reflux digester for the Chinese national-standard method

Batch reflux digestion for water-sample analysis.

**12**

Sample positions

PID

Timed temperature control

2000 W

Heating power

From specialist instruments to complete laboratory solutions.

Product brochure · V0.0.7

01

PRODUCT ADVANTAGES

A continuous workflow from heating to condensation.

Product introduction

A glass-ceramic heating panel and microcomputer control support the basic principles of the HJ828-2017 dichromate method, including reflux digestion at a gentle boil for 2 hours. Reagent preparation and quantities correspond to the cited method.

01

Structure and simultaneous heating

The system comprises the cabinet, glass-ceramic heating panel, conical-flask/reflux-condenser assemblies and cooling fans. Microcomputer PID timing and temperature control heat 12 assemblies simultaneously.

02

Glass-ceramic heating panel

The imported glass-ceramic panel withstands up to 800°C, distributes heat evenly and responds rapidly to heating and cooling. A high-temperature ceramic-fibre heating element helps reduce heat loss.

03

Cleaning and maintenance

The smooth panel can be cleaned with a damp cloth, reducing damage from reagents and handling impacts.

04

Reflux and condensation

The glass reflux condenser has an upper spherical section for catalyst addition and suppression of volatile light components; the lower textured structure enhances condensation.

05

Air cooling

Air cooling replaces conventional tap-water cooling and works with internal fans to support reflux performance and sample parallelism.

06

Automatic stop and assisted cooling

Heating stops automatically after digestion, while the fans continue for 120 minutes to assist sample cooling.

07

Method and range handling

Reagent preparation, operation and COD calculation follow the HJ828-2017 method cited in the source. For COD < 50 mg/L, the titrant and oxidant may be diluted; water samples with COD > 700 mg/L require proportional dilution before measurement.

02

PRODUCT VIEWS

Complete instrument and glass reflux components.



Front view from the original brochure



Additional view from the original brochure

Component structure

The glass-ceramic panel, conical flasks, reflux condensers, cabinet and cooling fans form the digestion system. Check appearance and configuration against the corresponding source images and specifications.

03

FULL SPECIFICATIONS

Digestion configuration and technical specifications.

Item	Values and conditions
Sample capacity	12 positions; 12 conical flasks of 250 ml with 24# ground joints
Measurement range	10–700 mg/L; 700–10000 mg/L after sample dilution
Measurement time	10 minutes–2 hours
Measurement error: standard solution	Potassium hydrogen phthalate standard solution, 500 mg/L; relative standard deviation $\leq \pm 5.0\%$
Measurement error: industrial wastewater	Industrial organic wastewater, 500 mg/L; relative standard deviation $\leq \pm 8.0\%$
Temperature-control range	Room temperature–300°C; real-time digital panel-temperature display and adjustable settings
Timing range	5–150 min; real-time digital display and adjustable settings
Ambient temperature	–20–55°C
Ambient humidity	$\leq 85\%$ RH, non-condensing
Power supply	AC 220 V / 50 Hz
Heating power	2000 W
Dimensions	440 × 350 × 590 mm; height including reflux tubes 765 mm
Weight	17.5 kg

04

APPLICATIONS & METHOD

COD preparation for different water samples.

Surface water

Domestic sewage

Industrial wastewater

Environmental protection

Research

Papermaking

Petrochemicals

Metallurgy

Printing and dyeing



Environmental application image from the original brochure

Standard cited in the original literature

HJ828-2017: Water quality — Determination of chemical oxygen demand — Dichromate method.

Application scope

This instrument performs sample digestion for COD analysis. Sample dilution, reagents and measurement calculations must follow the selected method.

Specifications, appearance and configuration are compiled from the source. Verify actual supply and method requirements during project acceptance.