RAYPA

Food analysis

OENOLOGIC DISTILLER

ENODEST

STEAM DISTILLATION SYSTEM WITH STEAM POWER REGULATOR FOR DETERMINING THE ALCOHOLIC STRENGTH BY VOLUME IN BEVERAGES

Oenologic distiller

The **ENODEST-TS** oenological distiller is designed to accurately determine the volumetric alcohol content in wines, musts, beers, liquors, and high-alcohol beverages, adhering to the standards established by the International Organisation of Vine and Wine. Additionally, it possesses the capability to assess the volatile acidity and sorbic acid levels in wines.

MAIN FIELDS OF APPLICATION

WINE AND CHAMPAGNE CELLARS

LIQUOR FACTORIES

BREWERIES

ETHANOL PRODUCTION

DETERMINES THE ALCOHOLIC STRENGTH BY VOLUME

+

ANALYZES VOLATILE ACIDITY

+

ANALYZES SORBIC ACID

BENEFITS

- **Determination of the alcoholic strength by volume, volatile acidity and sorbic acid.**
- **Versatile both for a manual or automatic distillation using different distillate volumes.**
- **Adjustable steam power.**
- **The control of the distillation is through the programmed time.**
- **Program listing organized by alcohol degree of the sample.**
- **Pilot lights and acoustic alarms indicating the fault and the corresponding remedy.**
- **Easy to use.**
- **Excellent safety measures.**

FEATURES

PROGRAMMABLE STEAM GENERATION

Steam generation control through a touchscreen. The screen allows for the input of the steam percentage value. Capable of performing alcohol distillations for different graduations, even above 40º. Prevents the formation of foam during slow boiling to achieve better results.

STEAM DISTILLATION

The sample is heated with distilled water steam, following the regulations set by OIV, CEE 2676/90 and CE 2870/2000 and thus ensuring accurate and precise results.

COLLECTION OF THE DISTILLATE AT A LOW TEMPERATURES

The temperature of the sample passes from approximately 100°C (in which boiling occurs) to 22°C, temperature at which the distillate is collected.

AUTOMATIC STOP AFTER DISTILLATION COMPLETION

The equipment allows for the manual input of the distillation time. This varies according to the amount of alcohol to be distilled and the set steam percentage.

AUDIBLE SIGNAL

The equipment has an audible signal that indicates the end of the assay.

PROCESS SUPERVISION

The distillation process occurs in an open glass tube, visible at all times. This allows for constant supervision of the equipment's operation, favoring the achievement of optimal results.

SAFETY FIRST

The equipment is equipped with numerous safety features to safeguard the user. In addition, it emits audio-visual alerts in scenarios such as water shortage, extreme temperatures, heating malfunctions, or excessive pressure.

COLLECTION OF VARIOUS DISTILLATE VOLUMES

ENODEST-TS features an adapter for volumetric flasks of different sizes.

Oenologic distiller

RAYPAnet: A NEW ONLINE PLATFORM

Our ENODEST-TS oenologic distiller is equipped with Wi-Fi connectivity.

The results of each assay are accessible either directly on the platform or by consulting the assay history log.

Utilize Wi-Fi to effortlessly connect to the online platform RAYPAnet on your PC. Visualize and export assay information in a user-friendly graphical format, and generate comprehensive reports.

All relevant information can be exported in both .CSV and .PDF formats for further review, study and archival purposes.

RAYPAnet is compatible with most web browsers.

Multiple devices can be connected and controlled simultaneously.

NEW TOUCHSCREEN MICROPROCESSOR

Enjoy up to 10 customizable programs, adjustable for distillation time, power of the steam generator and sample volume.

- Intuitive user interface with a colour LCD touchscreen that displays all relevant parameters of each assay in real time.
- Intuitive icons indicate the status and progress of each assay.
- Compatible with Celsius and Fahrenheit scales with a resolution of 0,1°C/°F.
- Language selection: ENG, FR, ESP, CAT. Other languages available on request.
- Audiovisual safety alarms.
- An acoustic signal indicates the end of the assay.
- It features a restricted-access section intended for authorized technicians.

MAIN FEATURES

Optimized cooling circuit for an efficient distillation of alcoholic beverages

5" Touchscreen and Wi-Fi connection

Resistant safety door with open door sensor

External building made of stainless steel of high durability

Sample tube detection

Automatic distillation

Oenologic distiller

TECHNICAL SUMMARY OF ENODEST-TS

	Reference	ENODEST-TS
General information	Compliance with official standards	DIN, ISO, OIV, CEE 2676/90, CE 2870/2000
	Dimensions L x D x H mm	520 x 360 x 910
	Weight Kg	27
	Power W	2000
	Frequency Hz	50/60
	Wi-Fi connection and RAYPAnet access	✔
Main applications	Alcoholic strength by volume	+
	Volatile acidity	+
	Sorbic acid	+
Materials	Sample protection door	Transparent methacrylate
	Parts made of glass	Borosilicate 3.3
	Tube stopper	Resistant rubber
	Tubing	Silicone, Teflon® and fluorinated elastomer
	External housing	AISI-304 stainless steel painted with epoxy resin
Display	Screen type	LCD TS
	Screen size	5"
	Values of steam power, distillation time and sample volume	✔
	Error messages	Open door, Insert test tube, High temperature, Low water, Voltage fault, Preheating fault
	Power of the steam generator %	30 - 100
	Available selection of languages	ESP, ENG, FR, CAT
Process control	Automatic steam generation	✔
	Automatic control of water level of the steam generator	✔
	Automatic control of cooling water consumption	✔
	Control of distillation by time	✔
Microprocessor and programs	Type of microprocessor regulation	PID digital
	Total number of programs	10
	Preheating and washing programs	✔
Adjustable program parameters	Distillation time min	✔
	Distilled volume mL	✔
Performance	Distillation rate at 100% steam power at 230V mL/min	30
	Reproducibility %	± 0,5
	Water consumption of the steam generator during the distillation phase L/min	0,03
	Cooling water consumption during the distillation phase L/min	2,4
Sample tube placement	Tube stopper material	Resistant rubber
	Max. - Min. Height mm	320 - 280
	Max. - Min. Width Ø mm	35 - 22
	Removable tray to collect eventual drops	✔

+: Recommended ✔: Included

continued on next page

TECHNICAL SUMMARY OF ENODEST-TS (continued)

	Reference	ENODEST-TS
Specific characteristics	H_2O pump	✔
	H_2O tank volume L	10
	Reagent resistant drag guard and tubes	✔
	System for saving cooling water	✔
Sensors and alarms	Audiovisual warning alarms	✔
	Open door sensor	✔
	Sample tube detection	✔
	Safety thermostat	✔
	Safety pressure switch	✔

✔: Included

Oenologic distiller

Components supplied with the equipment

1 DISTILLATION TUBE FOR MAXIMUM SAMPLE VOLUME OF 100 ML	✔
1 DISTILLATION TUBE FOR MAXIMUM SAMPLE VOLUME OF 250 ML	✔
1 VOLUMETRIC FLASK OF 100 ML	✔
1 VOLUMETRIC FLASK OF 200 ML	✔
1 VOLUMETRIC FLASK OF 250 ML	✔
1 TANK OF 10 LITRES FOR H_2O	✔
ANTI-DRIP TRAY	✔
CONNECTION HOSES	✔

Accessories

ALCOHOLOMETER

- Precision glass alcoholometer class II EG-OIML.
- Models available with built-in Hg thermometer. Consult references.

References	ALC-0-10	ALC-10-20	ALC-20-30	ALC-30-40	ALC-40-50	ALC-50-60	ALC-60-70	ALC-70-80	ALC-80-90	ALC-90-100
External dimensions Ø x H mm	26 x 350	26 x 350	26 x 350	26 x 350	26 x 350	26 x 350	26 x 350	26 x 350	26 x 350	26 x 350
Alcoholic strength %	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90 - 100
Scale division % Volume	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
Calibration temperature °C	20	20	20	20	20	20	20	20	20	20

Accessories

RACK FOR DISTILLATION TUBES

References	GRA-640	GRA-680
Dimensions Ø x H mm	122 x 177 x 150	209 x 308 x 172
Positions	6	6
Tubos de destilación compatibles	TB-100ENO	TB-250ENO

- Rack with six positions for distillation tubes.
- Material: AISI-304 stainless steel.

DISTILLATION TUBES

References	TB-100ENO	TB-250ENO
Dimensions Ø x H mm	42 x 300	80 x 300
Volume mL	325	1200
Recommended sample volume mL	100	250
Material	glass	glass

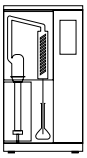
- Glass distillation tubes for samples.

TB-100ENO TB-250ENO

VOLUMETRIC FLASKS

References	MA-100	MA-200	MA-250
Dimensions Ø x H mm	61 x 170	75 x 200	80 x 220
Maximum sample volume mL	100	200	250
Material	glass	glass	glass

- Glass volumetric flasks for collecting distillates.



Specifications

Reference	ENODEST-TS
External dimensions L x D x H mm	520 x 360 x 910
Weight Kg	27
Power W	2000
Frequency Hz	50/60
Voltage* V	230
Water consumption during distillation phase L	1,6
Steam generator L/min	0,03
Cooling circuit L/min	2,4
Distillation time min/mL	7 / 200

*Other voltages and electrical configurations available on request.

International standardized methods

Our ENODEST-TS oenologic distiller is specifically designed to guarantee reliable results and complies with the following regulations: International Organisation of Vine and Wine*, EEC 2676/90, CE 2870/2000.

*This standard is met only for the determination of alcoholic strength.

Safety

- Sample tube and open door sensors.
- Multiple audiovisual alarms and error messages.
- Resistant sample door to protect the user.
- Anti-drip tray for eventual splashes.
- Corrosion-resistant easy-to-clean external frame made of stainless steel.

Regulations

Our ENODEST-TS oenologic distiller is designed to comply with the strictest international directives and standards including the following regulations:

- **EN-61010-1** Safety requirements for electrical equipment for measurement, control and laboratory use. **Part 1:** General requirements.
- **EN-61010-2-081** Part 2-081 Requirements for automatic and semi-automatic laboratory analyzers.
- **UNE-EN-ISO 9001:2015** Quality management system.
- **EN-61326** Electrical equipment for measurement, control and laboratory use. EMC Requirements.
- **2014/35/UE** Low voltage.
- **2014/30/UE** Electromagnetic compatibility.
- **OIV, CEE 2676/90, CE 2870/2000** Determination of alcoholic strength by volume.

Main fields of application

WINE AND CHAMPAGNE CELLARS

LIQUOR FACTORIES

BREWERIES

ETHANOL PRODUCTION

+ info

CLICK! ACCESS THE ENODEST VIDEO

Find out more about our **ENODEST** distiller on our Youtube Channel

Installation guide available for download on our website.

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