

# STEAM DISTILLATION WITH RESULTS

KJELDAHL ANALYSIS SYSTEM WITH EXTERNAL TITRATOR



C. Gerhardt proudly presents the brand new development of the successful VAPODEST® line.

Additional functions increase the range of applications.

VAPODEST® 450 comes micro processor controlled and equipped with embedded PC and 7 inch TFT touch display.

When connected to a C. Gerhardt titrator, titration is performed automatically after distillation.

VAPODEST® 450 complies with the data management requirements of certified or accredited laboratories (ISO 9001, ISO 17025, GLP).



## UNRIVALED EASE OF USE

- + Quick start concept
- + Favourite method menu
- + Easy menu navigation
- + 7 inch TFT fully coloured display
- + Easy-clean surfaces
- + Back lit glass components

## SAFETY

- + Intelligent supervision of all vital functions
- + Components meet highest safety standards
- + Comprehensive built-in safety systems for operator protection

## EFFICIENCY

- + Energy-saving mode
- + Long-life, robust housing
- + Huge range of glassware options
- + High-quality, reliable components

## FUNCTIONS

- + Programmable, automatic addition of NaOH, H<sub>2</sub>O and H<sub>3</sub>BO<sub>3</sub>
- + Programmable distillation time
- + Programmable reaction time
- + Programmable steam power, 10–100 %
- + Programmable suction of sample residue
- + Steam soft start
- + User accounts with different levels
- + Comprehensive documentation and log function
- + Designed for results to fully conform (e.g. DIN EN ISO, AOAC, EPA, ASTM, EC regulation, APHA, Ph.Eur. 2.5.33 method 7, procedure A)
- + Data export e.g. to LIMS
- + Language selection
- + Tamper-free documentation
- + The optional Software ISOdoc-CREATOR creates ISO 17025-compliant documentation

## ADDITIONAL FUNCTIONS WITH A C. GERHARDT TITRATOR

- + Automatic endpoint titration
- + Display of titration solution consumption
- + Display of pH-value





„Menu navigation  
as easy as using  
a Smartphone!“



## ACCESSORIES

Tanks, level sensors for tanks, catalyst tablets, different sizes of glassware and many more accessories are available on request.



## APPLICATIONS

Benefit from our analytical know how and our comprehensive C. Gerhardt Application Data Base.

## SERVICE

Our authorized, well-trained, C. Gerhardt partners offer service and maintenance for your Gerhardt systems according to our guidelines.

## MODELS

- + Distillation system with titrator
- + Distillation system without titrator, prepared for connection to a C. Gerhardt titrator

## TECHNICAL INFORMATION

| Technical Specifications                           | VAP 450                            |
|--|------------------------------------|
| Variable steam power                               | 10 - 100 %                         |
| Size of Display                                    | 7 inch, 480x800 pixel, touchscreen |
| Stand-By-Mode                                      | Yes                                |
| Distillation time / sample                         | approx. 3.5 min                    |
| Recovery   | > 99.5 %                           |
| Reproducibility                                    | ± 1 %                              |
| Detection limit                                    | 0.1 mg N absolute                  |
| Safety door  | Yes                                |
| KJELDATHERM®-tube KTG 250/300 ml volume            | Standard configuration             |
| Different sizes of digestion tubes can be used     | Yes                                |
| Different sizes of Kjeldahl-flasks can be used     | Yes                                |
| Connection to level control                        | Yes                                |
| Level sensors for tanks                            | Optional                           |
| Cooling water pressure                             | 0.5 - 6 bar                        |
| Nominal voltage*                                   | 230 V, 50 Hz                       |
| Nominal wattage                                    | 2200 W                             |
| Weight   | approx. 34 kg                      |
| Dimensions (W x D x H)                             | 527 x 390 x 697 mm                 |
| Pre-defined methods                                | Yes                                |
| Customer defined methods                           | Yes                                |
| Pump calibration                                   | Yes                                |
| Model with external titrator                       | Yes                                |
| Model prepared for connection to external titrator | Yes                                |
| Order-no. VAPODEST® 450 <b>with</b> Titrator       | 12-0545                            |
| Order-no. VAPODEST® 450 <b>without</b> Titrator    | 12-0550                            |

\* Other voltages on request

Since 1846  
C. Gerhardt



EN ISO  
9001:2008

Member of  
*Gafta*

Your Dealer:

**Gerhardt**  
Analytical Systems

C.GERHARDT GMBH & CO. KG  
Cäsariusstraße 97  
53639 Königswinter  
GERMANY

Tel.: +49 (0)2223 / 29 99 0  
Fax: +49 (0)2223 / 29 99 99  
E-Mail: info@gerhardt.de  
www.gerhardt.de

Technical details correct as from 08/2016  
Later modifications possible