



884 Professional VA fully automated for VA

MVA-22

Automated analysis system for high-performance, flexible trace determinations with voltammetry and polarography with the Multi-Mode Electrode pro or the scTRACE Gold. Comprising 884 Professional VA for MME, 919 IC Autosampler plus for VA, two 800 Dosinos, 843 Pump Station, measuring head for rotating disk electrodes, and extensive accessories. For sample series of up to 28 samples.

Determinations with rotating disc electrodes can also be performed with the MVA-22, e.g. determinations of organic additives in electroplating baths with "Cyclic Voltammetric Stripping" (CVS), "Cyclic Pulse Voltammetric Stripping" (CPVS), and chronopotentiometry (CP).

The viva software is required for control, data acquisition, and evaluation. PC, electrode set, and viva license need to be ordered separately.

Below, the accessories are grouped into Scope of delivery and Optional accessories.
Please keep this printout at hand for ordering replacement material.
These lists may be subject to change.

Scope of delivery MVA-22

Qt.	Order no.	Description
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The 843 Membrane Pump Station enables the automatic rinsing and emptying of the measuring vessel in partly automated and fully automated Professional VA and CVS systems. It has two built-in membrane pumps that can be controlled via the remote signal.

The versions for VA and CVS are equipped with the complete accessories for the automatic rinsing and emptying of the measuring vessel.



884 Professional VA semiautomated for Multi-Mode Electrode (MME) is a convenient high-end routine analyzer for trace determinations with voltammetry and polarography with the Multi-Mode Electrode pro or the scTRACE Gold. The proven Metrohm electrode methods in combination with a high-performance potentiostat/galvanostat and the extremely flexible viva software open up new perspectives for the determination of heavy metals. The potentiostat with a certified calibrator readjusts itself automatically before each measurement, thus guaranteeing maximum precision.



Determinations with rotating disc electrodes can also be performed with the instrument, e.g. determinations of organic additives in electroplating baths with "Cyclic Voltammetric Stripping" (CVS), "Cyclic Pulse Voltammetric Stripping" (CPVS), and chronopotentiometry (CP). The replaceable measuring head enables rapid changes between the various applications with different electrodes.

2x 800 Dosinos (supplied) permit the automatic addition of auxiliary solutions during the determination, e.g., electrolyte, buffer or standard solutions.

The viva software is required for control, data collection, and evaluation.

The 884 Professional VA semiautomated for Multi-Mode Electrode (MME) is supplied with extensive accessories and a measuring head for the Multi-Mode Electrode pro. Electrode set and viva license need to be ordered separately.

The 919 IC Autosampler plus for VA is suitable for small sample series of fully automatic trace determinations of heavy metals using polarography and voltammetry together with Professional VA instruments and viva. The system is controlled directly by the viva software and permits automatic changes of method between different types of determinations. The sample rack supplied holds 28 samples with a maximum size of 10 mL.

The 919 IC Autosampler plus for VA is supplied with accessories, sample rack, and connection cable so you can set up a complete workplace, although it does not come with rinsing equipment.



Measuring vessel for automated VA systems. Dilution vessel for Advanced IC Sample Processor



Remote cable for the direct connection of the 843 Pump Station to the pump connectors of the Sample Processors



Optional accessories

Order no.	Description
2.800.0020	800 Dosino Drive with write/read hardware for intelligent dosing units. With permanently attached cable (length 0.65 m). 
6.5339.500	Equipment with 2x 807 Dosing Units for VA and CVS measurements Accessory set for 2 auxiliary solutions for expanding VA or CVS systems. Contains 2x 807 Dosing Units 2 mL, 2x 100 mL clear glass bottles, bottle holder for 2 bottles, and connector material. Without Dosinos. 
2.846.0010	846 Dosing Interface USB-capable control unit for connecting a maximum of four 800 Dosinos or 805 Dosimats for dosing and Liquid Handling tasks. A Touch Control or the connection to a PC with OMNIS Software, tiamo™, MagIC Net, viva, or 797 VA Computrace is required for operation. 
6.5339.030	VA electrode equipment with Multi-Mode Electrode pro for Professional VA instruments Complete electrode set for polarographic and voltammetric determinations. Includes Multi-Mode Electrode pro, reference electrode, platinum auxiliary electrode, measuring vessel, stirrer, electrolyte solution and additional accessories for setting up and operating the Multi-Mode Electrode. 

6.5339.040 VA electrode equipment with rotating disk electrode (RDE) made of glassy carbon for Professional VA instruments

Complete electrode set for voltammetric determinations, e.g. using mercury film method. Includes drive for rotating disk electrode, glassy carbon electrode tip, reference electrode, glassy carbon auxiliary electrode, measuring vessel, and electrolyte solution.



6.5339.050 VA electrode equipment with scTRACE Gold for Professional VA instruments

Complete electrode set for the determination of arsenic or mercury. Includes holders for scTRACE Gold, scTRACE Gold, stirrer and measuring vessel.



6.1256.010 RDE measuring head for Professional VA/CVS instruments

Measuring head for operation with rotating disk electrodes.



6.5339.000 CVS electrode equipment with 1 mm platinum electrode for Professional VA/CVS instruments

Complete electrode set for the determination of organic additives in electroplating baths with CVS (Cyclic Voltammetric Stripping). Contains rotating platinum working electrode (electrode diameter: 1 mm), reference electrode, platinum auxiliary electrode, measuring vessels and electrolyte solutions.



6.5339.010

CVS electrode equipment with 2 mm platinum electrode for Professional VA/CVS instruments

Complete electrode set for the determination of organic additives in electroplating baths with CVS (Cyclic Voltammetric Stripping). Contains rotating platinum working electrode (electrode diameter: 2 mm), reference electrode, platinum auxiliary electrode, measuring vessels and electrolyte solutions.



6.5339.020

CVS electrode equipment with 3 mm platinum electrode for Professional VA/CVS instruments

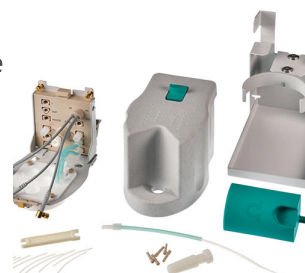
Complete electrode set for the determination of organic additives in electroplating baths with CVS (Cyclic Voltammetric Stripping). Contains rotating platinum working electrode (electrode diameter: 3 mm), reference electrode, platinum auxiliary electrode, measuring vessels and electrolyte solutions.



6.1256.030

SPE measuring head for Professional VA instruments

Measuring head for operation with *screen-printed electrodes* (SPE) or the scTRACE Gold.



6.5339.060

CVS electrode equipment with 2 mm platinum electrode for Professional VA/CVS instruments for intensive use

Complete electrode set for the determination of organic additives in electroplating baths with CVS (Cyclic Voltammetric Stripping). Contains rotating platinum working electrode (electrode diameter: 2 mm), driving axle with mercury contact, maintenance-free gel reference electrode, platinum auxiliary electrode, measuring vessels and KCl electrolyte solution.



6.5339.070

VA accessory equipment with SPE electrode shaft for professional VA instruments

Accessory equipment for use with *screen-printed electrodes* (SPE). Contains electrode shaft for screen-printed electrodes, stirrer, and measuring vessel. Without electrodes.



6.5339.100

VA electrode equipment with rotating glassy carbon disc electrode (RDE) for antioxidant determination for Professional VA instruments

Complete electrode set for determinations of antioxidants. Includes drive for rotating disk electrode, glassy carbon electrode tip, platin reference electrode, platin auxiliary electrode and measuring vessel.



6.5339.110

CVS electrode equipment with 2 mm platinum electrode, gel reference electrode and steel auxiliary electrode for Professional VA/CVS instruments

Complete electrode set for the determination of organic additives in electroplating baths with CVS (Cyclic Voltammetric Stripping). Contains rotating platinum working electrode (electrode diameter: 2 mm), driving axle with mercury contact, maintenance-free gel reference electrode, steel auxiliary electrode, measuring vessels and KCl electrolyte solution.



Client/server-compatible computer program for control and data management of Professional VA/CVS instruments. The software permits checks, data acquisition, evaluation, and monitoring, as well as report generation.



Graphic user interface for routine operations, extensive database programs with reevaluation, graphic method editor with numerous templates, system configuration, very flexible user management, extensive data export functions, individually configurable report generator.

Includes the "Differential Pulse" (DP), "Square Wave" (SQW), "Linear Sweep Voltammetry" (LSV), "Cyclic Voltammetry" (CV), "Cyclic Voltammetric Stripping" (CVS), "Cyclic Pulse Voltammetric Stripping" (CPVS), and Chronopotentiometry (CP) measuring modes. The following calibration techniques are supported: Standard addition, external calibration, DT (Dilution Titration), LAT (Linear Approximation Technique), MLAT (Modified Linear Approximation Technique), RC (Response Curve).

Dialog languages: German, English, Chinese, Japanese.

The following instruments are supported: 884 Professional VA, 894 Professional CVS

Client/server version with 3 licenses for 3 computers with a max. of 4 Professional VA/CVS instruments per computer. Contains USB flash drive and installation documentation.

Computer program for control and data management of Professional VA /CVS instruments. The software permits checks, data acquisition, evaluation, and monitoring, as well as generation of reports.



Graphic user interface for routine operations, extensive database programs with reevaluation, graphic method editor with numerous templates, system configuration, very flexible user management, extensive data export functions, individually configurable report generator.

Includes the "Differential Pulse" (DP), "Square Wave" (SQW), "Linear Sweep Voltammetry" (LSV), "Cyclic Voltammetry" (CV), "Cyclic Voltammetric Stripping" (CVS), "Cyclic Pulse Voltammetric Stripping" (CPVS), and Chronopotentiometry (CP) measuring modes. The following calibration techniques are supported: Standard addition, external calibration, DT (Dilution Titration), LAT (Linear Approximation Technique), MLAT (Modified Linear Approximation Technique), RC (Response Curve).

Dialog languages: German, English, Chinese, Japanese.

The following instruments are supported: 884 Professional VA, 894 Professional CVS

1 license for a maximum of 4 Professional VA/CVS instruments on a single computer. Contains USB flash drive and installation documentation.
