IDEXX VetLab* UA* Analyzer
Operator's Guide

English Version

IDEXX
LABORATORIES

Proprietary Rights Notice

IDEXX
LABORATORIES

One IDEXX Drive
Westbrook, Maine 04092 USA
idexx.com

Contents

Preface

Safety Precautions

The analyzer does not contain any user-serviceable components. DO NOT disassemble.

DO NOT stack other equipment or containers on top of the analyzer.

Keep analyzer away from sources of heat or flames.

DO NOT place or operate the analyzer near x-ray equipment, photocopiers, or other devices that generate static or magnetic fields.

PROTECT your equipment from damp conditions or wet weather.

Take care not to spill water or other fluids on the unit.

DO NOT use any of the following liquids, abrasives, or aerosol sprays on or near the analyzer, as they may damage the outer case and may influence results:

- Organic solvents
- Ammonia-based cleaners
- Ink markers
- Sprays/disinfectants containing volatile liquids (except isopropyl alcohol)
- Insecticides
- Polish
- Room freshener

Use **only** the power adapter supplied (which is marked as supplying 7.5 V DC, 3000 mA). The cords from other power adapters may fit in the power socket of the UA analyzer, but may have the incorrect voltage or current for this analyzer. Using a different power adapter than the one supplied may impact results or render the analyzer unusable.

Disconnect the power cable:

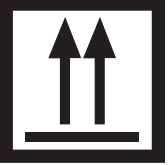- If the cable becomes frayed or otherwise damaged.
- If anything is spilled onto the equipment.
- If your equipment is exposed to excessive moisture.
- If your equipment is dropped or the case has been damaged.
- If you suspect that your analyzer needs service or repair.
- Whenever you clean the case.

If the equipment is used in a manner other than specified, the protection provided by the equipment may be impaired.

International Symbol Descriptions

International symbols are often used on packaging to provide a pictorial representation of particular information related to the product (such as expiration date, temperature limitations, batch code, etc.). IDEXX Laboratories has adopted the use of international symbols on our analyzers, product boxes, labels, inserts, and manuals in an effort to provide our users with easy-to-read information.

Symbol	Description	Symbol	Description
	Use by A utiliser avant Verwendbar bis Usare entro Usar antes de 使用期限		**Temperature limitation** Température limite Zulässiger Temperaturbereich Temperatura limite Limitación de temperatura 保存温度（下限）
LOT	**Batch code (Lot)** Code de lot (Lot) Chargenbezeichnung (Partie) Codice del lotto (partita) Código de lote (Lote) ロット番号		**Upper limit of temperature** Limite supérieure de température Temperaturobergrenze Limite superiore di temperatura Limite superior de temperatura 保存温度（上限）
SN	**Serial number** Numéro de série Seriennummer Numero di serie Número de serie シリアル番号	i	**Consult instructions for use** Consulter la notice d'utilisation Gebrauchsanweisung beachten Consultare le istruzioni per l'uso Consultar las instrucciones de uso 取扱説明書をご参照ください。
REF	**Catalog number** Numéro catalogue Bestellnummer Numero di catalogo Número de catálogo 製品番号		**Keep away from sunlight** Conserver à l'abri de la lumière Vor direkter Sonneneinstrahlung schützen Mantener alejado de la luz solar Tenere lontano dalla luce diretta del sole 遮光してください。
EC REP	**Authorized Representative in the European Community** Représentant agréé pour la C.E.E. Autorisierte EG-Vertretung Rappresentante autorizzato nella Comunitá Europea Representante autorizado en la Comunidad Europea EC内の正規販売代理店		**WEEE Directive 2002/96/EC** Directive 2002/96/CE (DEEE) WEEE-Richtlinie 2002/96/EG Directiva 2002/96/CE RAEE Direttiva RAEE 2002/96/CE 廃電気電子機器指令（WEEE Directive 2002/96/EC）
	Manufacturer Fabricant Hersteller Ditta produttrice Fabricante 製造元		**Biological risks** Risques biologiques Biogefährlich Rischi biologici Riesgos biológicos 生物学的リスク
	Caution, consult accompanying documents Attention, consulter les documents joints Achtung, Begleitdokumente beachten Attenzione, consultare la documentazione allegata Precaución, consultar la documentación adjunta 注意、添付文書をご参照ください。		**Do not reuse** Usage unique Nicht wiederverwenden No reutilizarw Non riutilizzare 再利用しないでください。

Symbol	Description
	Keep dry Conserver dans un endroit sec Mantener seco Vor Nässe schützen Tenere al riparo dall'umidità 濡らさないこと。
	This side up Haut Este lado hacia arriba Diese Seite nach oben Alto この面を上にする。

Symbol	Description
	Fragile Fragile Frágil Zerbrechlich Fragile 取扱注意
	Date of manufacture Date de production Fecha de producción Herstelldatum Data di produzione 製造年月日:

Other Symbols

Symbol	Description
	USB symbol

Symbol	Description
	Ethernet/network symbol

A | Getting Started

Introduction

The IDEXX VetLab* UA* Analyzer (UA analyzer) is a reflectance photometer designed to read and evaluate IDEXX UA Strips for canine, feline and equine urine only. The UA analyzer reads the test strips, saves the results to memory and prints them on its own internal printer.

The UA analyzer eliminates factors known to affect the visual evaluation of urine test strips, such as variable lighting conditions at the workplace, people's individual skills at matching colors and corresponding concentration ranges, different reaction times for test pads on the strips, clerical errors and color artifact imparted by some urine samples.

The IDEXX VetLab UA Analyzer, IDEXX UA* Strips, and IDEXX VetLab* UA* Calibration Strips are designed for veterinary use only.

IDEXX VetLab* Station Connectivity

The IDEXX VetLab UA Analyzer is part of the IDEXX VetLab* suite of analyzers, all of which connect to the IDEXX VetLab Station (IDEXX's laboratory information management system). Connecting multiple analyzers to the IDEXX VetLab Station helps you attain a comprehensive picture of your patient's health, with the ability to view test results from multiple analyzers on a single report, determine disease progression with parameter-trending capabilities, and more.

By connecting the UA analyzer to the IDEXX VetLab Station, you can:

- Automatically review patients' prior results on every printout, for easy comparison.

- Improve client communications with illustrated diagnostic or treatment progress printouts.

- Link to expert descriptions and common causes of abnormal values.

- Print information to help explain the significance of results to your clients.

Components

Printout:
optional if connected to the
IDEXX VetLab* Station

Display menu

Cover:
Press here to open the cover, load
printer paper, or load a software
upgrade code plug

Function keys

On/Off switch

Start button:
Starts the reading process
NOTE: Press the Start button
during any submenu process to
return the analyzer to ready-to-
measure mode.

Test strip tray

IDEXX UA Strip

Serial interface:
for connection
to the IDEXX VetLab
Station

Power socket:
connects the analyzer
to the AC power
adapter

5-pin DIN socket
(not used)

How it Works

A prepared IDEXX UA Strip is placed on the test strip tray, which moves it into the analyzer and
under the reading head. The analyzer reads the gray reference pad first, and then reads each of
the test pads on the strip. Results are available in approximately 80 seconds.

IMPORTANT: Only IDEXX UA Strips can be used with the IDEXX VetLab UA Analyzer.

The analyzer contains light-emitting diodes (LEDs) that emit light at various wavelengths. Reading
is done electro-optically, as follows:

Phototransistor

A/D converter
(analog to digital)

Microprocessor

LED

Test pad

Test strip

Semi-quantitative result
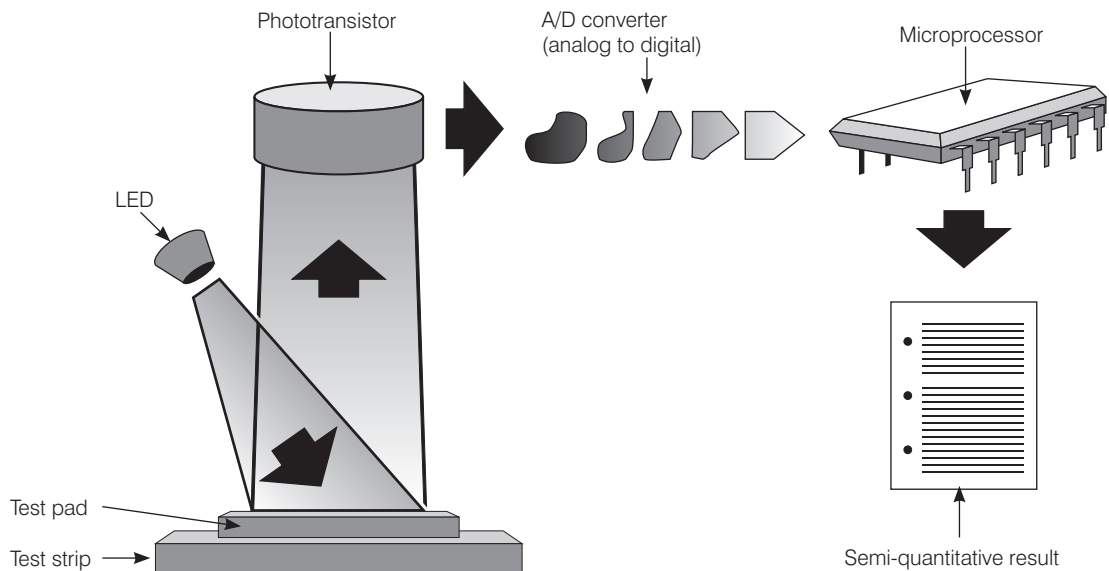
The LED emits light of a defined wavelength onto the surface of the test pad at an optimum angle. The light hitting the test zone is reflected more or less intensely depending on the color produced on the test pad, and is picked up by the detector, a phototransistor positioned directly above the test zone. The phototransistor sends an analog electrical signal to an A/D converter, which changes it to digital form. The microprocessor then converts this digital reading to a relative reflectance value by referring it to a calibration standard.

Finally, the analyzer compares the reflectance value with the defined range limits (reflectance values that are programmed into the analyzer for each parameter) and outputs a semi-quantitative result.

Installing the IDEXX VetLab UA Analyzer

1. Unpack the IDEXX VetLab UA Analyzer and place it on a stable, level surface. Choose a well-ventilated area away from obvious sources of heat, direct sunlight, cold, humidity, or vibrations. For optimum results, room temperature should be at 68°F–78°F (20°C–26°C) and relative humidity at 30%–60%.

   IMPORTANT: Allow the UA analyzer to acclimate to room temperature for two to three hours before operating it for the first time.

gray reference pad
Figure 1

2. Connect the power cord and the AC adapter. Then, connect the AC adapter to the power socket at the rear of the analyzer and plug the power cord into an outlet.

   NOTE: Use **only** the power adapter supplied (which is marked as supplying 7.5 V DC, 3000 mA). The cords from other power adapters may fit in the power socket of the UA analyzer, but may have the incorrect voltage or current for this analyzer. Using a different power adapter than the one supplied may impact results or render the analyzer unusable.

Figure 2

3. Hold the test strip tray with the gray reference pad facing up (Figure 1). Slide it into the slot below the function keys so that the edge of the tray is flush with the edge of the analyzer (Figure 2).

   IMPORTANT: Be careful not to touch the gray reference pad. Contamination of the reference pad may impair the quality of the results.

Figure 3

4. Load the printer paper. To release the printer cover, press the raised dots immediately below the cover (Figure 3). After the cover pops open, lift it back.

   Place the paper roll in the compartment and pull out the first few inches of paper to just beyond the edge of the compartment. The thermosensitive side of the paper (the outer surface of the paper roll) should be facing downward (Figure 4).

   Close the cover by pressing it until it locks audibly.

Figure 4

5. Select the printing, units, and connection (interface) options (for more information, see pages 20–21).

   NOTE: If your UA analyzer is connected to the IDEXX VetLab Station, you can turn off the analyzer's print option, but you must still have paper in the analyzer. UA analyzer results will be transferred to the IDEXX VetLab Station automatically and included in the patient's integrated diagnostic report.

Connecting to the IDEXX VetLab Station

Connecting your IDEXX VetLab UA Analyzer to the IDEXX VetLab Station computer lets you identify your patient and automatically transfer urinalysis results to the patient's record.

To connect the UA analyzer to the IDEXX VetLab Station computer:

1. Verify the UA analyzer is set to **bidirectional mode** (for more information, see "Modifying the Interface Options" on page 20).

2. Power off the UA analyzer and the IDEXX VetLab Station computer.

3. Plug the interface cable into the UA analyzer and the IDEXX VetLab Station.

4. Power on the analyzer and the IDEXX VetLab Station. When the UA icon appears on the Home screen on the IDEXX VetLab Station computer, your connections are complete.

   NOTE: If the UA icon does not appear, contact IDEXX Technical Support (see "IDEXX Technical Support Contact Information" on pages 37–38).

Powering on the Analyzer

1. Turn on the IDEXX VetLab UA Analyzer using the on/off switch on the back of the analyzer. The analyzer automatically performs a self-check. After the self-check is complete, the test strip tray returns to its start position and the retaining bar opens (Figure 5). "Self Check OK" prints on the printout along with a date-and-time stamp.

Figure 5   retaining bar

2. Customize the language and date/time settings (if necessary) and then press the **Start** button to save your changes and return to the ready-to-measure mode.
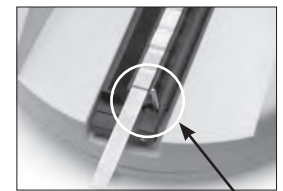
   For more information on setting the language, date, and time, see pages 22–23.

clip

Figure 6

3. Before using the UA analyzer, it must be calibrated using the IDEXX VetLab UA Calibration Strips.

   a. After the self-check is complete, the "Repeat Calibration" message appears on the display. Press the **Yes** key to advance to the calibration mode.
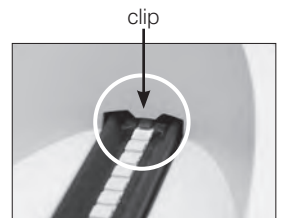
      NOTE: If the "Start Calibration" message is not displayed, then the UA analyzer is in the ready-to-measure mode and will display the "Insert Strip" message. Press the **Calibr** key to advance to the calibration mode.

   b. Place an IDEXX VetLab UA Calibration Strip, with the pads facing upward, on the tray so that its leading edge is held by the clip at the front end of the insertion slot (Figure 6). The retaining bar must be open.

      IMPORTANT: Be careful not to touch the pads on the calibration strip and do not allow them to come into contact with urine.

   c. Press the **Start** button. During the calibration process, a beep will sound, the test strip tray will move in and out of the analyzer, and the retaining bar will open and close. **Do not remove the calibration strip until the "Calibration OK" message prints.**

      After the calibration is complete, "Calibration OK" and a date-and-time stamp appear on the printout and the analyzer reverts to ready-to-measure mode.

   d. Remove and dispose of the calibration strip. Use each calibration strip only once.

   NOTE: For more information about calibrating the analyzer, see pages 26–27.

B | Using the IDEXX VetLab UA Analyzer

Overview

The IDEXX VetLab UA Analyzer's display menu and function keys provide an easy-to-use interface (Figure 7). The first line of the display menu provides system status and user information. The second line of the display menu provides options for the three function keys.

Self-Check

When you turn on the UA analyzer, the self-check function automatically runs to ensure that the software code plug, the tray transport mechanism, the printer connection and the optical system are all functioning properly. After the self-check is complete, "Self Check OK" prints on the printout, along with the date-and-time stamp, and then the analyzer displays the ready-to-measure mode.
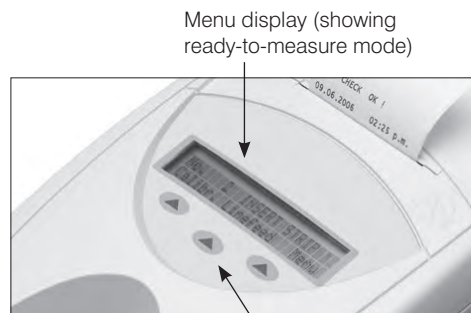
Menu display (showing ready-to-measure mode)

Figure 7

Function keys

Reading IDEXX UA Strips

The IDEXX VetLab UA Analyzer is very easy to use. Simply insert an IDEXX UA Strip when the "Insert Strip" message appears, which indicates the analyzer is in the ready-to-measure mode.

IMPORTANT: Only IDEXX UA Strips can be used on the IDEXX VetLab UA Analyzer. Do not use any other brand of strips.

NOTE: If the analyzer requires attention, a notification appears on the display menu. See the "Troubleshooting" section on pages 29–34 for more information.

IMPORTANT: Always wear protective gloves when handling and disposing of veterinary samples. Dispose of used test strips according to the regulations for handling potentially infectious material.

To read a test strip:

1. If your UA analyzer is connected to the IDEXX VetLab Station, always initiate the sample on the IDEXX VetLab Station. For more information, see the *IDEXX VetLab Station Operator's Guide.*

2. Use fresh urine that has not been centrifuged. Thoroughly mix the urine sample. The sample should be at room temperature when the test is performed and should not have been standing for more than one hour.

3. Use a pipette to flood the IDEXX UA Strip with the urine sample, making sure that all the test pads are moistened. Do not bend the strip.

Figure 8

4. Briefly (approximately one second) dab the long edge and then the back of the test strip on an absorbent surface (e.g., a paper towel) (Figure 8).

clip

5. Place the test strip, with the test pads facing up, on the test strip tray so that its leading edge is held firmly by the clip at the insertion slot. The retaining bar must be open. Approximately 2 mm of strip must be held under the clip (Figure 9).
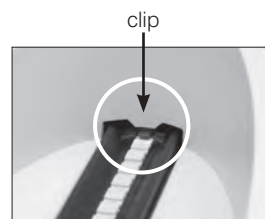

Figure 9

6. Press the **Start** button. A beep sounds. The tray advances slightly and the retaining bar closes.

   Each time a test strip is read, the gray reference pad in the tray is evaluated for temperature and aging effects that may influence the optical system.

   IMPORTANT: Ensure that the retaining bar is locked into place and that the test strip is in the correct position. If the test strip is not correctly located in the middle of the tray, move it gently to the side until it is properly aligned.

   The test strip tray automatically pulls the test strip into the analyzer so it can be read and then returns to its start position. Do not remove the test strip until the analyzer returns to ready-to-measure mode. It takes approximately 80 seconds from when you press the Start button until all measurements are complete.

7. The UA analyzer prints the test results and the next sequence number appears on the display menu.

   NOTE: If the UA analyzer is connected to the IDEXX VetLab Station, test results are transmitted automatically.

8. Remove and dispose of the test strip. Wipe any urine residue from the tray with a lint-free wipe (Figure 10). For more information about cleaning the tray, see "Cleaning the Test Strip Tray" on page 25.

Figure 10

Sending Results to the IDEXX VetLab Station Computer

If the IDEXX VetLab UA Analyzer is connected to the IDEXX VetLab Station computer, data transmission occurs automatically. However, you can manually transmit data, as needed. For more information see "To Manually Send Results to the IDEXX VetLab Station" on page 20.

Patient Report Printout

The IDEXX VetLab UA Analyzer patient report printout contains the sequence number, date and time, and the results of the test (Figure 11). If a patient name was entered on the IDEXX VetLab Station, it will appear on the UA analyzer printout as the patient ID.

To remove the printout, pull it forward and tear it horizontally across the edge.

NOTE: Thermal printing paper is sensitive to light and liable to age with prolonged exposure to bright light. The UA analyzer patient report printouts are best kept in a place away from light. If you choose to tape the results report to another source, be sure that the tape does not cover the results as the type will fade over time.
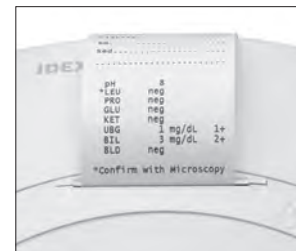

Figure 11

Results Table

The IDEXX VetLab UA Analyzer prints the results in the following gradation of concentration:

Parameter	Conventional Units (Conv.)		SI Units (SI)		Arbitrary Units (Arbitrary)
pH	5		5		5
	6		6		6
	6.5		6.5		6.5
	7		7		7
	8		8		8
	9		9		9
LEU (leukocytes)	neg		neg		neg
	25	Leu/μL	25	Leu/μL	1+
	100	Leu/μL	100	Leu/μL	2+
	500	Leu/μL	500	Leu/μL	3+
	Confirm all canine leukocyte results with microscopy.				
	NOTE: Leukocyte results have not been validated on feline samples under any current veterinary urinalysis strip methodology.				
PRO (protein)	neg		neg		neg
	TR		TR		TR
	30	mg/dL	0.3	g/L	1+
	100	mg/dL	1.0	g/L	2+
	500	mg/dL	5.0	g/L	3+
GLU (glucose)	neg		neg		neg
	50	mg/dL	3	mmol/L	1+
	100	mg/dL	6	mmol/L	2+
	300	mg/dL	17	mmol/L	3+
	1000	mg/dL	56	mmol/L	4+
KET (ketones)	neg		neg		neg
	15	mg/dL	1.5	mmol/L	1+
	50	mg/dL	5	mmol/L	2+
	150	mg/dL	15	mmol/L	3+
UBG (urobilinogen)	norm		norm		norm
	1	mg/dL	17	μmol/L	1+
	4	mg/dL	70	μmol/L	2+
	8	mg/dL	140	μmol/L	3+
	12	mg/dL	200	μmol/L	4+
BIL (bilirubin)	neg		neg		neg
	1	mg/dL	17	μmol/L	1+
	3	mg/dL	50	μmol/L	2+
	6	mg/dL	100	μmol/L	3+
BLD/HGB (blood/ hemoglobin)	neg		neg		neg
	10	Ery/μL	10	Ery/μL	1+
	25	Ery/μL	25	Ery/μL	2+
	50	Ery/μL	50	Ery/μL	3+
	250	Ery/μL	250	Ery/μL	4+

NOTE: NIT (nitrite) and SG (specific gravity) results are not read or printed by the IDEXX VetLab UA Analyzer.

Manually enter the following information on the patient report printout (Figure 12) or on the integrated diagnostic report generated by the IDEXX VetLab Station:

- Collection Method (Coll. Meth.)
- Volume (Vol.)
- Color
- Clarity
- Specific Gravity (SG)
- Sediment Analysis (Sed)

Figure 12

C | Modifying the Settings on the Analyzer

Overview

Some of the features on the IDEXX VetLab UA Analyzer have factory-default settings. This chapter describes how to customize these settings to meet the needs of your practice.

Using the Memory Options

The UA analyzer memory can store up to 100 results, which can be retrieved at any time during the current calendar day. Results stored in memory can be printed or sent to the IDEXX VetLab Station.

NOTE: Results stored in memory are automatically cleared when the date changes.

The "Memory Full" message appears when the memory is full. You must clear the memory before the UA analyzer can return to the ready-to-measure mode. Press the **Start** button to return to the Main menu and then clear the memory.

To Clear Memory

The Clear Memory option lets you clear all results from memory.

1. Press **Menu**.
2. Press **Memory**.
3. Press **Clear** and then press **Yes** to confirm. After the memory has been cleared, the "No Results Stored" message appears when you press the Memory key.

To Print Results From Memory

The Print Results option lets you generate a printout of stored results.

1. Press **Menu**.
2. Press **Memory**.
3. Press **Print**.
4. Press a memory option:
    - **All**: prints all results in memory
    - **Last Series**: prints the most recent series of results
    - **Last One**: prints the most recent result

NOTE: To interrupt printing, press the **Stop** key on the display menu. Press the **Continue** key to continue printing. To advance the printer paper, press the **Linefeed** key on the display menu. Press the **Stop** key on the display menu to stop the line feed. Tear off the paper by pulling it forward and horizontally across the edge.

To Manually Send Results to the IDEXX VetLab Station

NOTE: The IDEXX UA Strip results are sent automatically to the IDEXX VetLab Station, if connected.

1. Press **Menu**.
2. Press **Memory**.
3. Press **Send**.
4. Press a send option:
   - **All**: sends all results in memory
   - **Last Series**: sends the most recent series of results
   - **Last One**: sends the most recent result

NOTE: It may take a few minutes for the UA analyzer to return to ready-to-measure mode.

Restarting the Sample Numbering

Each sample run on the UA analyzer is assigned a consecutive sequence number (1–100). At any time, you can begin a new series starting at sequence number 1.

1. Press **Menu**.
2. Press **New Ser**.

Modifying the Interface Options

The Interface options let you specify whether the UA analyzer is operating in a stand-alone mode or is connected to other analyzers.

1. Press **Menu**.
2. Press **Setup 1**.
3. Press **Modes**.
4. Press **Interf**.
5. Press an interface option:
   - **Unidirectional (Unidir.):** The unidirectional interface option indicates that the UA analyzer is operating as a stand-alone analyzer.
   - **Bidirectional (Bidir.):** The bidirectional data transfer option is the default interface option. It allows the analyzer to communicate with the IDEXX VetLab Station.
6. Press the **Start** button to save the changes.

Printing Settings

The Printer options let you determine what is printed immediately after a test strip is read.

NOTE: If your analyzer is connected to the IDEXX VetLab Station and set to bidirectional mode, results will be automatically transferred to the patient's record and included in the patient's integrated diagnostic report.

1. Press **Menu**.
2. Press **Setup 1**.
3. Press **Modes**.
4. Press **Printer**.

5. Press a printing option:

- **On:** turns on the printer and prints one copy of the results for the test strip just read

- **2 copies:** turns on the printer and prints two copies of the results for the test strip just read

- **Off:** turns off the printer; no results are printed. If this option is chosen, ensure that you still leave paper in the analyzer.

6. Press the **Start** button to save the changes.

Selecting Units of Measurement

The Units option lets you select the units of measurement used for results. You can select a single option or combined options (e.g., conventional/arbitrary or SI/arbitrary).

To Select a Single-Unit Option

1. Press **Menu**.

2. Press **Setup 1**.

3. Press **Strip**.

4. Press **Units**.

5. Press **Single**.

6. Press **Conv.** (conventional units [mg/dL]) , **SI** (SI units), or **Arbitr** (arbitrary units [1+, 2+, 3+, 4+]).

7. Press the **Start** button to save the changes.

To Select a Combined-Units Option

1. Press **Menu**.

2. Press **Setup 1**.

3. Press **Strip**.

4. Press **Units**.

5. Press **Combined**.

6. Press **CONV/ARB.** (conventional units [mg/dL]/arbitrary units [1+, 2+, 3+, 4+]) or **SI/ARB** (SI units/arbitrary units [1+, 2+, 3+, 4+]).

7. Press the **Start** button to save the changes.

Changing the Reflectance Range Limits

The Range Limits option changes the reflectance range limits.

IMPORTANT: The Range Limits option is only for use by an authorized IDEXX Technical Support representative. If any range limit is changed, an asterisk appears beside the parameter on the Range Limit Report.

Changing the Display Language

The Language option lets you set the display language for the UA analyzer.

1. Press **Menu**.

2. Press **Setup 1**.

3. Press **Setup 2**.

4. Press **Language**.

5. Press **Other** repeatedly until the desired language (English, German, Italian, French or Spanish) is found.

6. Press the **Start** button to save the changes.

Selecting Parameter Options

The Parameter (PAR) option allows you to select the order and number of parameters to include in the patient report printout.

To Change the Order or Number of Parameters

1. Press **Menu**.

2. Press **Setup 1**.

3. Press **Setup 2**.

4. Press **Par**.

5. Press the **New** key on the Sequence Parameters display menu.

6. Press the **No** key until you find the first parameter that you want to display in the patient report printout. Once the desired parameter is found, press the **Yes** key to select the parameter. Continue this process until all of the parameters you want to include in the printout have been selected and are in the desired order.

   NOTE: If the UA analyzer does not return to ready-to-measure mode automatically after all parameters are ordered, press the **Start** button.

To Use the Default Parameter Order and Number

1. Press **Menu**.

2. Press **Setup 1**.

3. Press **Setup 2**.

4. Press **Par**.

5. Press the **Default** key on the Sequence Parameters display menu.

Changing the Date/Time

The factory default for the date is in month-day-year order and the default for the time is in the 12-hour a.m./p.m. format. The time can also be displayed in hours (24-hour) and minutes.

1. Press **Menu**.

2. Press **Setup 1**.

3. Press **Setup 2**.

4. Press **Date/Time**.

5. Select a time or date format:

- Press the **Sequence** button on the display menu to change the date format.

- Press the **12/24** button to change the time format.

- Press the **Set** button to access keys for changing the actual date and time. Press the **<<<** key to move the cursor from minutes to hours, and to year, day and month. Press the **+** key to increase the value of the selected item (where the cursor is) or the **–** key to decrease the value.

6. Press the **Start** button to save the changes.

D | Maintenance

Overview

It is recommended that you:

- Clean the test strip tray daily.
- Calibrate the analyzer weekly.
- Keep the exterior parts and surfaces of the analyzer clean.
- Upgrade software promptly.

Cleaning the Test Strip Tray

IMPORTANT: Always wear protective gloves when handling the test strip tray.

At the end of each day, clean the tray using the following procedure:

1. Turn off the IDEXX VetLab UA Analyzer and pull the test strip tray out of the analyzer.

2. Rinse the contaminated parts of the test strip tray under running water and then clean it with 70% isopropyl alcohol (if necessary). Slight crystalline deposits, especially those contaminating the retaining bar mechanism or the cogs on the underside of the test strip tray, can be removed with a soft brush. Dry the tray with a lint-free wipe.

   IMPORTANT: Be careful not to damage the gray reference pad (Figure 13) during cleaning, and ensure that it is completely clean and dry before reading a test strip.

   IMPORTANT: Ensure that the positioning hole on the side of the tray is absolutely dry and clean (Figure 14). This hole is used to ensure that the test strip tray is positioned correctly in the analyzer.

3. With the retaining bar nearest to you, slide the tray into the slot below the function keys so that the edge of the tray is flush with the edge of the analyzer (Figure 15).

4. Turn on the UA analyzer. The self-check begins automatically and verifies that the reference pad is in good condition and that the positioning hole in the test strip tray is unobstructed. If not, a notification will appear (see the "Troubleshooting" section on pages 29–34).
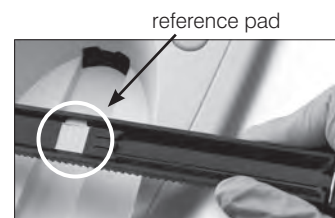

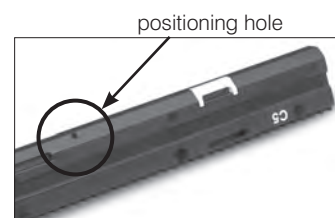reference pad

Figure 13

positioning hole

Figure 14

Figure 15

Calibrating the IDEXX VetLab UA Analyzer

The IDEXX VetLab UA Analyzer is calibrated before it leaves the factory. After you have installed the UA analyzer, you must recalibrate it using the IDEXX VetLab UA Calibration Strips before you begin reading test strips. **The UA analyzer must be recalibrated every seven days thereafter.**

The IDEXX VetLab UA Calibration Strips consist of a gray plastic material that is standardized to give constant, defined reflectance readings. Calibrating the analyzer compensates for aging effects that influence the optical system and the gray reference pad in the test strip tray.

IMPORTANT: IDEXX VetLab UA Calibration Strips should be stored on their side.

To calibrate the IDEXX VetLab UA Analyzer:

1. Ensure that the test strip tray is clean and dry.

2. Press the **Calibr.** key on the display menu. The "Start Calibration" message appears.

3. Place an IDEXX VetLab UA Calibration Strip, with the test pads facing upward, on the tray so that its leading edge is held by the clip at the front end of the insertion slot (Figure 16). The retaining bar must be open (Figure 17).

   IMPORTANT: Be careful not to touch the test pads on the calibration strip and do not allow them to come into contact with urine.

   IMPORTANT: Only IDEXX VetLab UA Calibration Strips can be used with the IDEXX VetLab UA Analyzer.

clip

Figure 16

retaining bar

Figure 17

4. Press the **Start** button. A beep sounds. The tray advances slightly, the retaining bar closes, and the gray reference pad on the tray and the calibration pads are read. After the calibration is complete, the tray returns to its start position and the retaining bar opens. If the calibration is valid, the result is stored with the date and time, and is printed.

   NOTE: To cancel a calibration run, press **Stop** on the Display menu screen or power off and then power on the UA analyzer.

5. Remove and dispose of the calibration strip. Use each calibration strip once only.
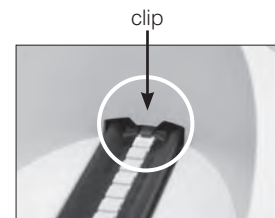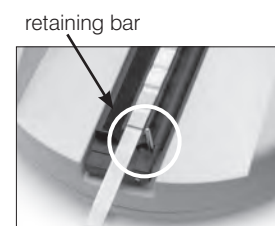
Weekly Calibration Reminder

Regular calibration, every seven days, is necessary to ensure the quality of the results obtained. IDEXX cannot warrant the validity of results if the analyzer is not calibrated regularly.

"Repeat Calibration" will appear in the menu display to remind you to perform the weekly calibration. Running a calibration strip takes approximately 80 seconds. You can recalibrate the UA analyzer at any time.

Calibration Printout

If the calibration results are within the defined range, the "Calibration OK" message automatically prints with the date and time, as well as a list of reflectance values for measuring positions 1–11 for the orange LED (middle column of values) and green LED (right column of values) (Figure 18).

Figure 18

Calibration Notifications

If the results obtained for the reference pad or the calibration strip are outside of the defined range, one of the following notifications appears:

- Reference Pad Error
- Calibration Invalid
- Calibration Error

If a calibration notification appears, repeat the calibration procedure with a new IDEXX VetLab UA Calibration Strip. When the "Calibration OK" message prints, you can begin reading IDEXX UA Strips. For more information, see the "Troubleshooting" section.

Cleaning the Case

Always disconnect the power cable before cleaning the IDEXX VetLab UA Analyzer.

Clean the outside of the UA analyzer with a lint-free cloth dampened with a suitable disinfectant (10% bleach or isopropyl alcohol), ensuring no liquid enters the analyzer. Do not use any of the following near the analyzer: organic solvents, ammonia-based cleaners, ink markers, sprays/disinfectants containing volatile liquids (except isopropyl alcohol), insecticides, polish, or room freshener.

Care should be taken not to spill any samples, chemicals, cleaning agents, water, or other fluids on/into the UA analyzer.

Note: Dust and animal hair can lead to analyzer failures. Routinely dust off the UA analyzer with a damp cloth and dust around its location.

Replacing the Printer Paper

1. Press the raised dots immediately below the cover to release the printer cover (Figure 19). After the cover pops open, lift it back.

2. Place the paper roll in the compartment and pull out the first few inches of paper to just beyond the edge of the compartment. The thermosensitive side of the paper (the outer surface of the paper roll) should be facing downward (Figure 20).

3. Close the cover by pressing it until it locks audibly.

Figure 19

Figure 20

Upgrading the Software

IDEXX will provide you, at no charge, updated instrument software on a periodic basis. These updates may include new features and should be installed immediately.

E | Troubleshooting

Analyzer Notifications

Notifications for the IDEXX VetLab UA Analyzer are shown on the display menu, but are not printed. After three minutes of inactivity, the UA analyzer switches to the ready-to-measure mode. If the situation is not resolved, the notification appears again when you press the **Start** button.

Note: When a notification is displayed, press the **Start** button to clear the notification and then perform the application action (see below).

Notification	Cause	Action
E1 Reference Pad Error	The gray reference pad on the test strip tray is soiled or damaged.	Turn off the analyzer, remove the test strip tray, carefully clean and dry the tray (for instructions, see "Cleaning the Test Strip Tray" on page 25), and then recalibrate the analyzer using an IDEXX VetLab UA Calibration Strip. If the notification persists, contact IDEXX Technical Support to obtain a replacement test strip tray.
E2 Wrong Strip	The test strip used is not an IDEXX UA Strip or an IDEXX VetLab UA Calibration Strip.	Repeat the test using an IDEXX UA Strip or an IDEXX VetLab UA Calibration Strip.
	The test strip is not properly positioned on the test strip tray.	Repeat the test using an IDEXX UA Strip. Ensure the test strip is properly aligned in the middle of the tray before processing. For more information, see "Reading IDEXX UA Strips" on page 15.

Notification	Cause	Action
E3 Strip Measurement Error	No test strip is present on the test strip tray.	Test the urine sample using an IDEXX UA Strip.
	The test strip is not properly positioned on the test strip tray.	Repeat the test using a new IDEXX UA strip. Ensure the test strip is properly aligned in the middle of the tray before processing. For more information, see "Reading IDEXX UA Strips" on page 15.
	The urine on the test strip has dried.	Repeat the test using a new IDEXX UA strip. For more information, see "Reading IDEXX UA Strips" on page 15.
	The pads on the test strip were not completely moistened with urine.	Repeat the test using a new IDEXX UA strip. Ensure that all of the test pads are completely moistened with urine. For more information, see "Reading IDEXX UA Strips" on page 15.
E4 Calibration Error	Calibration values differ from those obtained in the last valid calibration.	Repeat the calibration with a new IDEXX VetLab UA Calibration Strip. For more information, see "Calibrating the IDEXX VetLab UA Analyzer" on page 26.
E5 Calibration Invalid	Calibration values are out of tolerance.	Turn off the analyzer and remove the test strip tray. Carefully clean and dry the tray (for instructions, see "Cleaning the Test Strip Tray" on page 25). If the notification persists, contact IDEXX Technical Support to obtain a replacement test strip tray.

Notification	Cause	Action
E6 Chip Error E6 Please Wait	The software code plug is missing.	Turn off the analyzer. Open the cover by pressing the raised dots immediately below and to the right of the paper slot. Insert the software code plug. Power on the analyzer and wait for the self-check process to complete.
	The software code plug is not inserted properly or is damaged.	Turn off the analyzer. Open the cover by pressing the raised dots immediately below and to the right of the paper slot. Remove the software code plug and reinsert. Power on the analyzer and wait for the self-check process to complete.
E7 Missing Tray E8 Tray Position Error	The test strip tray is not inserted properly.	Turn off the analyzer and remove the test strip tray. With the retaining bar nearest to you, reinsert the tray so that the edge of the tray is flush with the edge of the analyzer. Power on the analyzer and wait for the self-check process to complete.
E9 Wrong Tray Error	The test strip tray needs to be cleaned or is damaged, or an LED on the phototransistor is defective.	Turn off the analyzer and remove the test strip tray. Carefully clean and dry the tray (for instructions, see "Cleaning the Test Strip Tray" on page 25). If the notification persists, contact IDEXX Technical Support to obtain a relacement test strip tray.
E10 Light Barrier Error	The light barrier used to control the position of the test strip tray is defective or the tray transport is blocked.	Turn off the analyzer and remove the test strip tray. With the retaining bar nearest to you, reinsert the tray so that the edge of the tray is flush with the edge of the analyzer. Turn on the analyzer and wait for the self-check process to complete. If the notification persists, contact IDEXX Technical Support to obtain a replacement test strip tray.

Notification	Cause	Action
E12 Optics Error	The gray reference pad is missing from the test strip tray or an LED or the phototransistor is defective.	Turn off the analyzer and remove the test strip tray. Check the tray for damage or a missing gray reference pad. If the notification persists, contact IDEXX Technical Support to obtain a replacement test strip tray.
E13 Printer Error	There is a paper jam.	Turn off the analyzer. Open the cover by pressing the raised dots immediately below and to the right of the paper slot. Clear the paper jam. Turn on the analyzer and wait for the self-check process to complete.
E14 Interface Error	Data did not transfer to the IDEXX VetLab Station.	Verify that the analyzer interface option is set to bidirectional mode. (For more information, see "Modifying the Interface Options" on page 20.) Check that the data cable is properly connected. Verify that the IDEXX VetLab Station is ready to receive data. Manually send the results to the IDEXX VetLab Station (see "To Manually Send Results to the IDEXX VetLab Station" on page 20) or press the **Start** button to return the analyzer to the ready-to-measure mode. (For more information, see "Using the Memory Options" on pages 19–20.)
	The analyzer is not connected to the IDEXX VetLab Station.	If the analyzer is not connected to the IDEXX VetLab Station, set the interface option to unidirectional mode. (For information on setting interface options, see "Modifying the Interface Options" on page 20.)

Notification	Cause	Action
E15 Reference Pad Error Bottom	The gray reference pad on the test strip tray is soiled or damaged.	Turn off the analyzer, remove the test strip tray, carefully clean and dry the tray (for instructions, see "Cleaning the Test Strip Tray" on page 25), and then recalibrate the analyzer using an IDEXX VetLab UA Calibration Strip.
E16 Reference Pad Error Top		If the notification persists, contact IDEXX Technical Support to obtain a relacement test strip tray.
Close Printer Cover	The printer cover is open. Results did not print.	Close the printer cover and ensure that it locks properly. To retrieve test results, see "Using the Memory Options" on pages 19–20.
No Paper In Printer	No paper has been inserted or the paper roll is finished.	Load or replace the printer paper. For more information, see "Replacing the Printer Paper" on page 27.
Check Measurement	The analyzer prints out the software version number and three-digit numbers without naming the parameters. The service function is activated.	Press the **Back** key to return to the ready-to-measure mode.

Notification	Cause	Action
Values obtained are different when compared with those from visual evaluation	The test strip is not properly positioned on the test strip tray.	Repeat the test using a new IDEXX UA strip. Ensure the test strip is properly aligned in the middle of the tray before processing. For more information, see "Reading IDEXX UA Strips" on page 15.
	The urine on the test strip has dried.	Repeat the test using a new IDEXX UA Strip. For more information, see "Reading IDEXX UA Strips" on page 15.
	Strong urine color.	The analyzer uses the compensation pad on the IDEXX UA Strip to compensate for the strong color. Since this is not possible to do visually, the analyzer's reading is more accurate.
No Printout	The printer is not powered on.	Change the printer setting to On. For instructions, see "Printer Settings" on pages 20–21.
	No paper has been inserted or the paper roll is finished.	Load or replace the printer paper. For more information, see "Replacing the Printer Paper" on page 27.

For assistance, contact IDEXX Technical Support (see "IDEXX Technical Support Contact Information" on pages 37–38).

F Appendix

Technical Specifications

Dimensions
Width: approximately 6 in (150 mm)

Depth: approximately 11.5 in (290 mm)

Height: approximately 3.7 in (94 mm)

Weight: approximately 1.7 lb (0.8 kg)

Power supply
External power adapter, Model SA 125A-0735U-S (Sino-American)

Input: 100–240 V AC, 50/60 Hz, 800 mA

Output: 7.5 V DC, 3000 mA

Consumption
Operating: maximum 15 W

Standby: 1.3 W

System description

Type:	reflectance photometer
Light source:	six LEDs
Wavelengths:	565 nm (green) 3x 610 nm (orange) 3x
Reader head:	1 head with six LEDs
Measuring cycle:	approximately 80 seconds
Max. throughput:	approximately 45 strips/hour
Printer:	thermal printer
Display:	liquid crystal display, two lines of 24 characters each
Memory:	100 samples
Date/time:	integrated clock

Operating conditions

	Operating	Storage
Temperature:	59°–90°F (15°–32°C)	-4°–158°F (-20°–70°C)
Relative humidity:	20%–80%	20%–85%

Optimum operating conditions

Temperature:	68°–78°F (20°–26°C)
Relative humidity:	30%–60%

Safety Information

The IDEXX VetLab UA Analyzer was designed and manufactured to comply with the following international regulations, "Safety requirements for electrical equipment for measurement, control and laboratory use," and left the factory in a safe condition. To keep the analyzer in a safe condition, you must observe all instructions and warnings included in this manual.

This product fulfills the requirements of Directives 2006/95/EC for low voltage and 2004/108/EC for electromagnetic compatibility.

Approved by Underwriters Laboratories, Inc. (UL) for the USA and Canada.

The analyzer must be operated only with the prescribed power supply unit (Class II protection).

The analyzer is classified as Category II for over voltage and Degree 2 for pollution according to IEC 664.

Opening covers or removing parts of the analyzer, except where this can be achieved manually without the use of any tools, may expose voltage-carrying components. Connectors can be live. Never try to maintain or repair an open analyzer that is carrying voltage.

If you suspect that the analyzer can no longer be operated safely, turn it off and take steps to ensure that no one will subsequently attempt to use it. Make sure that only trained members of the staff operate the IDEXX VetLab UA Analyzer.

ATTENTION: The data and information contained in this manual are accurate at the time of printing. Any substantial changes will be incorporated in the next edition. In case of conflict between this manual and information given in package inserts, the package inserts shall take precedence.

IDEXX Technical Support Contact Information

IDEXX Sales Representative: _____

Telephone/Voice Mail: _____

United States

IDEXX Laboratories, Inc.
One IDEXX Drive
Westbrook, Maine 04092 USA

Toll-Free Technical Support 1-800-248-2483
Main Telephone Number 1-207-556-0300
Toll-Free Fax 1-800-248-3010

idexx.com

The Netherlands

IDEXX Europe B.V.
Scorpius 60 Building F
2132 LR Hoofddorp
The Netherlands

Toll-Free Technical Support 00800 1234 3399
Telephone .... (31) 23 558 7000
Toll-Free Fax 00800 1234 3333
Fax... (31) 23 558 7233

www.idexx.nl

France

IDEXX S.A.R.L.
Bâtiment Floride - Eragny Parc
11 Allée Rosa, Luxembourg
95610 Eragny, sur Oise
France

Toll-Free Technical Support 00800 1234 3399
Telephone .... (33) 1 34 32 62 00
Fax... (33) 1 34 30 02 08

www.idexx.fr

Germany

IDEXX GmbH
Mörikestraße 28/3
D-71636 Ludwigsburg
Germany

Toll-Free Technical Support 00800 1234 3399
Fax... 0800 6645627

www.idexx.de

Italy

IDEXX Laboratories Italia, S.r.l.
Via Canova 27
20145 Milano
Italy

Toll-Free Technical Support 00800 1234 3399
Telephone .... (39) 02 319 20 31
Fax... (39) 02 319 20 347

www.idexx.it

Spain

IDEXX Laboratorios, S.L.
c/ Plom, n° 2–8, 3°
08038 Barcelona
Spain

Toll-Free Technical Support 00800 1234 3399
Telephone .... (34) 93 414 26 08
Fax... (34) 93 414 74 78

www.idexx.es

United Kingdom

IDEXX Laboratories Ltd.
Milton Court, Churchfield Road
Chalfont St Peter
Buckinghamshire SL9 9EW
United Kingdom

Toll-Free Technical Support 00800 1234 3399
Telephone .... (44) 01753 891 660
Fax... (44) 01753 891 520

www.idexx.co.uk

Australia

IDEXX Laboratories Pty. Ltd.
Metro Centre
Unit 20, 30-46 South Street
Rydalmere, New South Wales 2116
Australia

Toll-Free Technical Support 1300 44 33 99
Telephone .... (61) 2 9898 7300
Fax... (61) 2 9898 7302

www.idexx.com.au

Canada

IDEXX Laboratories Canada Corporation
C/O UPS
4071 North Service Rd
Burlington, ON L7L 4X6
Canada

Toll-Free Technical Support 1-800-248-2483
Telephone 1-905-602-9499
Toll-Free Fax 1-800-248-3010
Fax... 1-905-602-6640

idexx.com

Japan

IDEXX Laboratories KK
3-3-7 Kitano, Mitaka-shi, Tokyo
181-8608 Japan

Toll-Free Technical Support 0120-71-4921
Telephone .... (81) 422 71 4921
Fax... (81) 422 71 4922

www.idexx.co.jp