

ErbaExpert

Microbiological expert software for evaluation
and interpretation of microorganisms



Administrator's manual

Cat n. INS00075

Last revision: 11/2025, UM/48/25A/F



The knowledge provided in this manual is essential for the proper working of the software. Therefore, pay attention to this manual.

Copyright

Copyright © Revised 2025 Erba Lachema, spol. s r.o.

All rights reserved. No part of this document may be copied, transcribed, or altered in any other form either electronically or mechanically, including photocopying and recording for any purpose other than for use by the buyer without the prior written permission of Erba Lachema, spol. s r.o.

Restrictions and obligations

The information contained in this document may be changed or modified and is not binding for Erba Lachema, spol. s.r.o. The changes will be published in the new edition of this manual.

Erba Lachema, spol. s.r.o. assumes no responsibility for the use or harmlessness of devices and software not supplied directly by the producer or authorized distributor.

Content

1. GENERAL INSTRUCTIONS AND SAFETY (RULES)	4
1.1 Administrator manual	4
1.2 Symbols and signs	4
1.3 Software application area	5
1.4 CE marking	5
1.4.1 Directive 98/79 / EC on In Vitro Diagnostic Medical Devices	5
2. INTRODUCTION	6
3. HOW TO USE THIS MANUAL	6
4. INSTALLATION OF THE SYSTEM	7
4.1 ErbaScan Reader Installation	7
5. START THE SYSTEM	8
6. LOGIN TO THE SYSTEM	8
7. SYSTEM SETUP	9
7.1 General options	9
7.2 Program mode	10
7.2.1 Registration of patients, samples, isolates and examinations	11
7.2.2 Registration of isolates and assigned examinations	11
7.2.3 Only registration of identifications	11
7.2.4 Only registration of susceptibility testing	11
7.2.5 Import data of isolates from LIS, assigning of respective examinations, export data to LIS	11
7.2.6 Import of examination requests from LIS, export results to LIS	11
7.2.7 Ad-hoc identifications or susceptibility testing only without data saving	12
7.2.8 Other settings	12
7.3 Data selection	13
7.4 Expert system	14
7.5 LIS communication	16
7.6 Reports	17
7.7 Number series	18
7.8 Adaptation of lists and diagnostic methods	19
7.8.1 Health Insurance Company	19
7.8.2 Diagnosis	19
7.8.3 Material type	20
7.8.4 Requesting ward	20
7.8.5 Laboratory station	20
7.8.6 Cultivation medium	21
7.8.7 Diagnosed taxa	21
7.8.8 Antibiotics	22
7.8.9 Primocultivation patterns	23
7.8.10 Identification matrices	24
7.8.11 Identification methods	25
7.8.12 Susceptibility methods	26
7.8.13 Diagnostic tests	27
7.8.14 Other methods	27
7.8.15 Other diagnostic tests	27
7.8.16 Readers	28
7.8.17 ATB cascade reporting	29
7.9 Adaptation of Quality Control data	29
7.9.1 Check (control) strains	29
7.9.2 Standard test results	30
7.10 Users and user roles setting	31
7.10.1 Users management	31
7.10.2 List of users roles	32
8. PROGRAM MODES	33
8.1 Registration of patients, samples, isolates and examinations mode	33
8.2 Registration of isolates and assigned examinations mode	34
8.3 Only registration of identifications mode	34
8.4 Only registration of susceptibility testing mode	34
8.5 Import data of isolates from LIS, assigning of respective examinations, export data to LIS mode	35
8.6 Import of examination requests from LIS, results export to LIS mode	35
8.7 Ad-hoc identifications only without data saving mode	36
9. SYSTEM MANAGEMENT AND MAINTENANCE	37
9.1 System log	37
9.2 System error log	38
9.3 LIS Communication log	39
9.4 Data management	39
9.4.1 Data management and maintenance	40
9.4.2 Data archiving	40
9.4.3 Archive data recovery	41
10. TERMS AND ABBREVIATIONS USED	42
10.1 Terms used	42
10.2 Abbreviations	42



1. General instructions and safety (rules)

1.1 Administrator manual

The Administrator Manual for Evaluation and Interpretation of Microorganisms has been written for the Administrator and provides information about the software and its basic settings. The manual contains instructions for installing, operating, and routine maintenance of the software.

Before using the software, please read the entire manual. Save the manual so that users can access it whenever it is needed.

1.2 Symbols and signs

These symbols provide you with basic information and warn you of possible danger.



In vitro diagnostics device



Warning: biological alert



Warning: the risk of harming your health
or your immediate surroundings



Producer



Production date



Separate collection of electrical and electronic equipment.

1.3 Software application area

ErbaExpert is an expert microbiological software that allows the interpretation and expert analysis of microbiological samples in accordance with the EUCAST and CLSI international standards.

The software may only be operated by personnel/staff trained in its use.

The software may only be used in accordance with the designated area of use.



Warning: If the user uses a device in other than the producer defined way, the protection afforded by the device may be compromised/ The protection provided by the device may be impaired/ disrupted

Provedení softwaru je v souladu s normami EU.

1.4 CE marking

 Based on the directions listed below and the information in the manual, the product is CE marked.

1.4.1 Directive 98/79 / EC on In Vitro Diagnostic Medical Devices

A risk management analysis for this software has been performed. This analysis is part of the ISO documentation of the company and CE software documentation.

2. Introduction

Information system ErbaExpert is a laboratory information system for identification of strains of microorganisms isolated from samples of clinical material, determination of their susceptibility to antibiotics and evaluating results using an expert system based on EUCAST and CLSI data.

3. How to use this manual

This manual describes procedures performed by the system administrator during installing, setting up, managing, and maintaining the ErbaExpert system.

The installation of the system is described in the chapter [Installation of the system](#).

The first step (after installation and commissioning of the system) is to set up the system according to the needs of a particular laboratory. The setup steps and available options are described in [System setup](#) chapter.

In [Users and user roles setting](#) chapter you can set user rights to access the system.

During system setup (see above), one of the system's operating modes is set.

A summary of the processes, supported by each mode, is listed in the [Program Modes](#) chapter. For each mode, a typical workflow is described, including the sequence of the individual processes. For each process, a link to a detailed description of the passage is included; detailed descriptions of wizards are provided in the System User's Guide in the System Wizards Description chapter.

This manual also contains basic procedures for system administration and maintenance ([System management](#) and maintenance chapter).

4. Installation of the system

All actions associated with ErbaExpert installation can only be performed with system administrator privileges.

Before installing the system, verify that the destination computer meets the installation requirements:

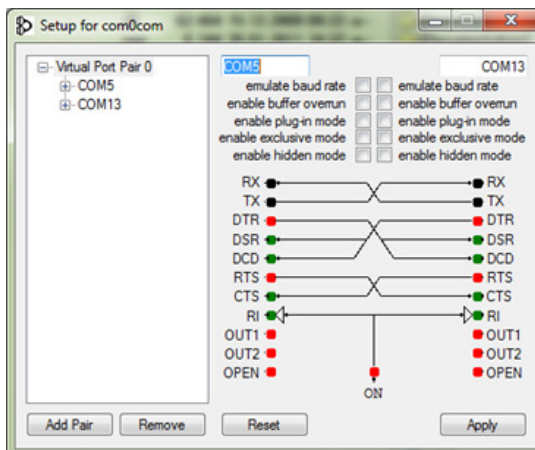
- Pentium IV processor and higher
- 256 MB or more of memory
- free disc space min. 150 MB
- Windows Vista and higher
- 1400 x 900 monitor resolution, true color

The installation of the system is started by running the setup.exe file from the installation medium. Follow the installation wizard instructions to install.

4.1 ErbaScan Reader Installation

Before using the ErbaScan reader, you need to set up your computer's virtual port.

After you run the Virtual Port Settings wizard, which is located at C:\Program Files (x86)\com0com\setupg.exe, the following form appears:



- In the top right text box, type port „COM13”.
- In the upper left text field, enter the ports from COM1 to COM10. When the port in the left field is shown in blue, press the Apply button to save the virtual pair.

After setting up the system, set the reader port (see Readers). Use the LEFT field value.

5. Start the system

To start the ErbaExpert information system, click the system icon located on your desktop:



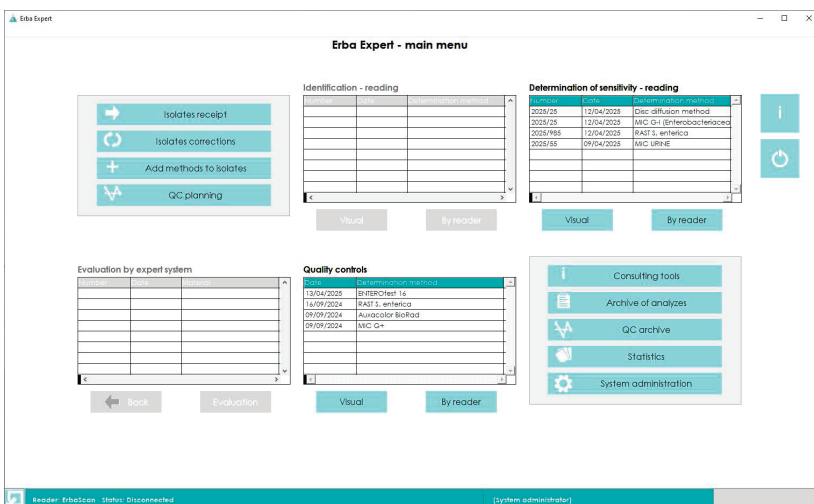
Simultaneously with the system launch, the smart interface for photometers, used by the communication system with the connected photometer (reader), is launched.

6. Login to the system

The system is set up by default without user login after installation.

When setting up users logging in (see [General options](#)), the user login screen will appear first when you start the system. The system will make all user actions available to the selected user only after entering the password.

After login, the system desktop is displayed.



Click the system exit icon at the bottom right to leave the system.



You can log in as another user by clicking on the logout icon.

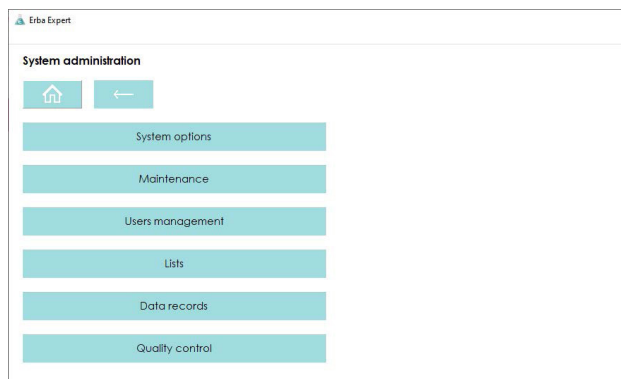


Click the information icon to view system information (version, Product ID)

7. System setup

The system allows you to set up your system according to the needs of a specific laboratory.

You can start the system setup form from the top menu bar by clicking the **System Options** button.



In the **Options Settings** form, you can set most of the optional system properties:

7.1 General options

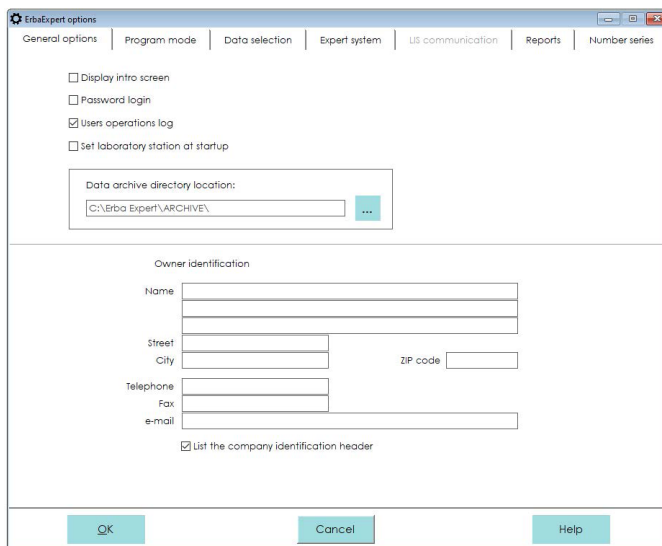
On the *General options* tab, you can set some basic system properties:

Password login – turns user accounts and user roles on

Users operations log - allows logging of selected changes caused by user activities (data changes, insertion and deletion of data, changes in access rights, etc.).

Set station at program start – At program startup is set station of examination (laboratory station).

Owner Identification – allows you to paste the required information into the individual rows that will be listed in the report header. If the *List the company identification header* option is not enabled or turned off, the reports (to be sent) are printed without this information.



ErbaExpert options

General options | Program mode | Data selection | Expert system | US communication | Reports | Number series

☐ Display info screen
☐ Password login
☒ Users operations log
☐ Set laboratory station at startup

Data archive directory location:
 ...

Owner identification

Name

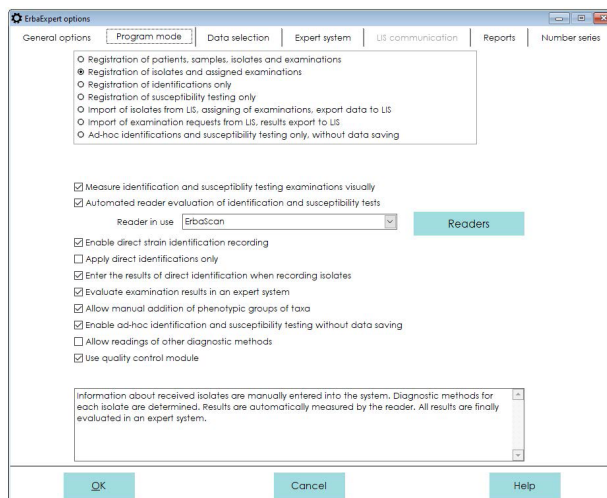
Street
City ZIP code
Telephone
Fax
e-mail

☒ List the company identification header

OK Cancel Help

7.2 Program mode

On the tab you can set the basic mode of work in the system (supported data processing).



ErbaExpert options

General options | Program mode | Data selection | Expert system | US communication | Reports | Number series

☐ Registration of patients, samples, isolates and examinations
☒ Registration of isolates and assigned examinations
☐ Registration of identifications only
☐ Registration of susceptibility testing only
☐ Import of isolates from LIS, assigning of examinations, export data to LIS
☐ Import of examination requests from LIS, results export to LIS
☐ Ad-hoc identifications and susceptibility testing only, without data saving

☒ Measure identification and susceptibility testing examinations visually
☒ Automated reader evaluation of identification and susceptibility tests

Reader in use

☒ Enable direct strain identification recording
☐ Apply direct identifications only
☒ Enter the results of direct identification when recording isolates
☒ Evaluate examination results in an expert system
☒ Allow manual addition of phenotypic groups of taxa
☒ Enable ad-hoc identification and susceptibility testing without data saving
☐ Allow readings of other diagnostic methods
☒ Use quality control module

Information about received isolates are manually entered into the system. Diagnostic methods for each isolate are determined. Results are automatically measured by the reader. All results are finally evaluated in an expert system.

OK Cancel Help

The user chooses one of the following modes:

7.2.1 Registration of patients, samples, isolates and examinations

The mode allows you to manually enter data of received samples and patients, automatically determine primocultivation of the sample (based on the set primocultivation rules) and after primocultivation reading record isolates with the required diagnostic methods. The results of the diagnostic methods are read automatically by the reader or manually by the user. In conclusion, the results of diagnostic methods can be assessed by an expert system.

7.2.2 Registration of isolates and assigned examinations

The mode allows you to manually enter data about received isolates for which the required diagnostic methods are set. The results of the diagnostic methods are read automatically by the reader or manually by the user. In conclusion, the results of diagnostic methods can be assessed by an expert system.

7.2.3 Only registration of identifications

The mode allows you to manually enter information about the identifications you have made. The identification results are read automatically by the reader or manually by the user.

7.2.4 Only registration of susceptibility testing

The mode allows you to manually input data on susceptibility measurements made. Susceptibility determination results are read automatically by the reader or manually by the user.

7.2.5 Import data of isolates from LIS, assigning of respective examinations, export data to LIS

The mode allows receiving data from individual isolates from the laboratory information system, for which the required diagnostic methods are set in the system. The results of the diagnostic methods are read automatically by the reader or manually by the user. Finally, the results are sent back to LIS.

7.2.6 Import of examination requests from LIS, export results to LIS

The mode allows receiving data of the required examinations from the laboratory information system. The results of the diagnostic methods are read automatically by the reader or manually by the user. Finally, the results are sent back to LIS.

7.2.7 Ad-hoc identifications or susceptibility testing only without data saving

The system only allows manual read-out of identifications or susceptibility testing. Data are not stored in system data.

7.2.8 Other settings

The *Program Mode* tab also contains several check boxes to specify the following system settings:

Measure identification and susceptibility testing examinations visually - allows visual reading of susceptibility and identification methods. If **Automated reader evaluation** is selected, visual readings can be disabled.

Automated reader evaluation of identification and susceptibility tests – allows automatic reading by the reader for susceptibility and identification methods.

Reader in use – when selecting the **Automated reader evaluation option**, the reader used can be chosen from the list of implemented readers.

Enable direct strain identification recording – allows you to directly record the results of the identifications from the list of available taxa. This procedure can be used, for example, in manual registration of results from other methods.

Apply direct identifications only – only the direct strains identification can be used to register the identification results; identification using diagnostic kits is disabled.

Evaluate examination results in an expert system – allows results to be evaluated by the expert system for isolates with identification and MIC / inhibition zone values.

Allow manual addition of phenotypic groups of taxa – allows the expert system to add phenotypic groups to isolates detected by other tests during the evaluation of results.

Enable ad-hoc identification and susceptibility testing without data saving – allows the use of ad-hoc identification and susceptibility testing; the results of such determinations are not stored by the system.

Allow reading of other diagnostic methods – allows the use of other diagnostic methods (not used in Identification or Antibiotic susceptibility tests)

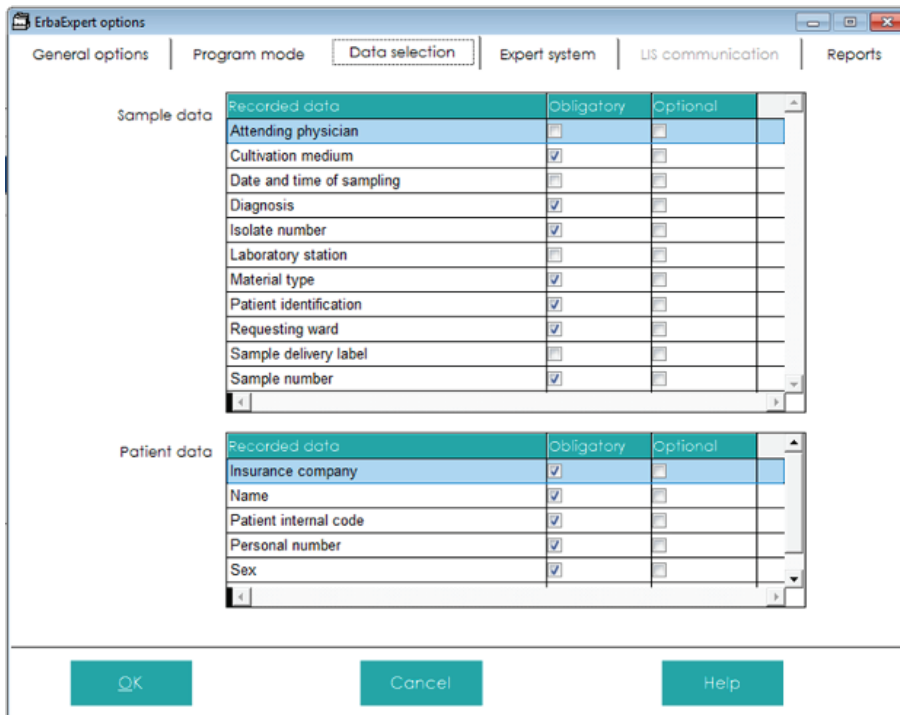
Use quality control module – allows the use of a quality control module to verify the performance of diagnostic kits using control strains.

7.3 Data selection

On this tab, you can choose which sample and patient data will be recorded in the system. Except for the laboratory (processing station) data, the data only relate to the mode of patient and sample registration.

User chooses the mandatory ones (will be strictly required by the system) or optional (the system will alert to its non-completion but will allow the process to continue) data.

When laboratory station is designated as a mandatory field, the processing lab identification will be required at all inputs. The data for individual stations will be processed separately.

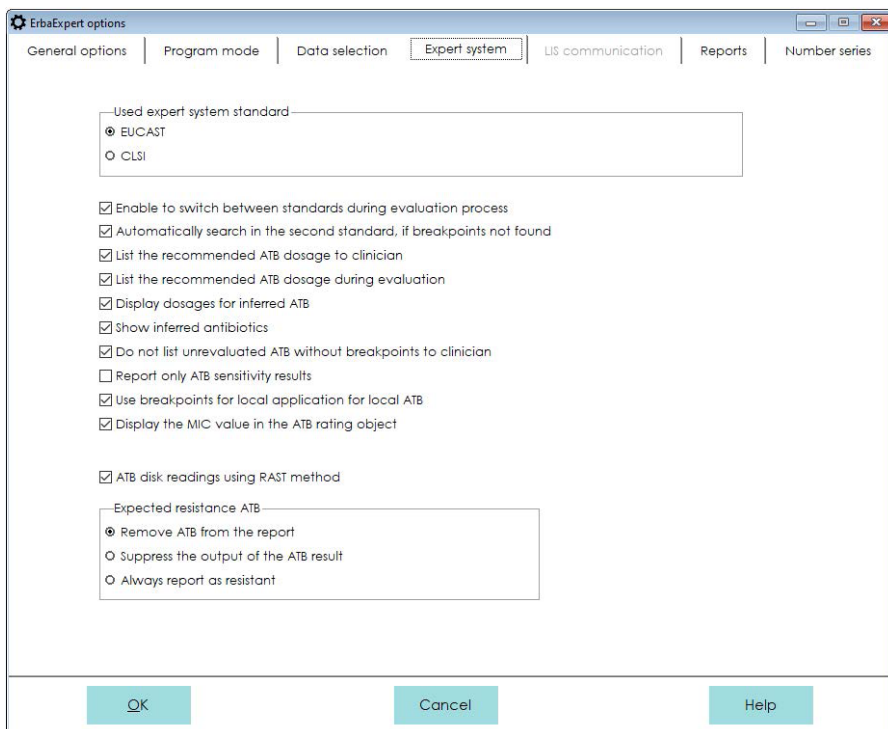


The dialog box 'ErbaExpert options' has five tabs: 'General options', 'Program mode', 'Data selection' (active), 'Expert system', and 'US communication'. The 'Data selection' tab contains two sections: 'Sample data' and 'Patient data'. Each section has a table with columns for 'Recorded data', 'Obligatory', and 'Optional'. The 'Sample data' table lists 10 items, with 'Attending physician' being optional and the others mandatory. The 'Patient data' table lists 5 items, all of which are mandatory. At the bottom are 'OK', 'Cancel', and 'Help' buttons.

	Recorded data	Obligatory	Optional
Sample data	Attending physician	<input type="checkbox"/>	<input type="checkbox"/>
	Cultivation medium	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Date and time of sampling	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Diagnosis	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Isolate number	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Laboratory station	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Material type	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Patient identification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Requesting ward	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Sample delivery label	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Sample number	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Patient data	Insurance company	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Patient internal code	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Personal number	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Sex	<input checked="" type="checkbox"/>	<input type="checkbox"/>

7.4 Expert system

On the tab, you can set the expert system properties. The tab is accessible only when *Evaluate examination results* in an expert system is set.



ErbaExpert options

General options | Program mode | Data selection | **Expert system** | LIS communication | Reports | Number series

Used expert system standard

- ☒ EUCAST
- ☐ CLSI

☒ Enable to switch between standards during evaluation process

☒ Automatically search in the second standard, if breakpoints not found

☒ List the recommended ATB dosage to clinician

☒ List the recommended ATB dosage during evaluation

☒ Display dosages for inferred ATB

☒ Show inferred antibiotics

☒ Do not list unevaluated ATB without breakpoints to clinician

☐ Report only ATB sensitivity results

☒ Use breakpoints for local application for local ATB

☒ Display the MIC value in the ATB rating object

☒ ATB disk readings using RAST method

Expected resistance ATB

- ☒ Remove ATB from the report
- ☐ Suppress the output of the ATB result
- ☐ Always report as resistant

OK Cancel Help

Used expert system standard – allows you to choose the EUCAST or CLSI standard available in the system.

Enable to switch between standards during evaluation process – allows to switch the used evaluation standard during the evaluation of the isolate.

Automatically search in the second standard, if breakpoints not found – allows you to automatically search for susceptibility data in the second standard when no data is available for the currently set standard (see the Used expert system standard option).

List the recommended ATB dosage to the end user (clinician) – allows to list the recommended ATB dosage in the output report, based on expert evaluation of particular isolate.

List the recommended ATB dosage during evaluation – allows to list the recommended ATB dosage to the laboratory personnel during the evaluation process.

Display dosage for inferred ATB – List the recommended dosage for ATB inferred from the analyzed data.

Show inferred ATB – List the inferred ATB on the expert system evaluation page.

Do not list unevaluated ATB without breakpoints to clinician – if ATB cannot be evaluated, it is not listed even if there is MIC.

List only the sensitivity results to the clinician – only the sensitivity is reported in the clinic protocol without all other reports

Use local application breakpoints for local ATB – if the isolate is flagged as requiring local ATB application, local application breakpoints will be used.

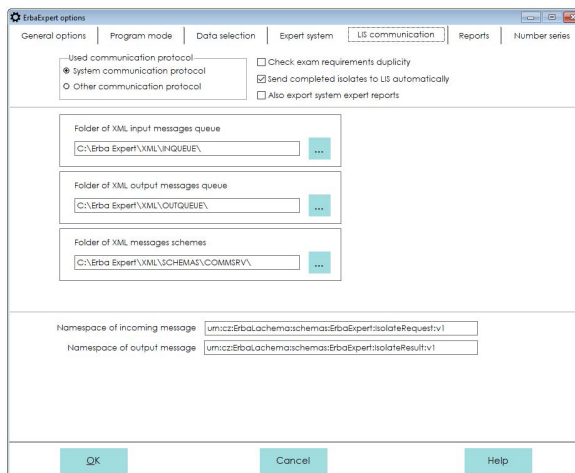
Display the MIC value in the ATB rating object – in the expert system form, the MIC / zone diameters are listed in the sensitivity results objects of individual ATBs

ATB disk readings using the EUCAST RAST method - sets the possibility of using the RAST (Rapid Antibiotic Sensitivity Testing) method of the EUCAST standard. The RAST method supports disk sensitivity readings directly from blood cultures after 4, 6, and 8 hours.

Expected resistance ATB – sets the system behavior when expected antibiotic resistance occurs.

7.5 LIS communication

On the tab, you can set up communication with an external laboratory information system (LIS). The tab is accessible only if the user sets one of the LIS communication modes.



The screenshot shows the 'ErbaExpert options' dialog box with the 'LIS communication' tab selected. The 'Used communication protocol' section has 'System communication protocol' selected. The 'Check exam requirements duplicity' checkbox is unchecked, while 'Send completed isolates to LIS automatically' and 'Also export system expert reports' are checked. The 'Folder of XML input messages queue' is set to 'C:\Erba Expert\XML\INQUEUE\'. The 'Folder of XML output messages queue' is set to 'C:\Erba Expert\XML\OUTQUEUE\'. The 'Folder of XML messages schemes' is set to 'C:\Erba Expert\XML\SCHEMAS\COMMERV\'. The 'Namespace of incoming message' is 'urn:cz:ErbaLachemaSchemas:ErbaExpert:isolateRequest.v1' and the 'Namespace of output message' is 'urn:cz:ErbaLachemaSchemas:ErbaExpert:isolateResult.v1'. The 'OK', 'Cancel', and 'Help' buttons are at the bottom.

The ErbaExpert system has a built-in custom communication protocol that allows communication with external information systems. The protocol is based on sending XML messages between LIS and ErbaExpert. A detailed description of the communication protocol is available in the separate documentation of the ErbaExpert interface.

Used communication protocol – the switch sets the communication protocol used to communicate with LIS. When setting the ErbaExpert protocol, the LIS on the input and output must conform to the communication rules specified in the ErbaExpert interface documentation.

When using the *Other communication protocol option*, it is always necessary to retrofit the ErbaExpert system to the rules of the protocol used; it is usually necessary to create an interface component between LIS and ErbaExpert. If you use your own communication protocol, always contact the system provider.

Send completed isolates to LIS automatically – evaluated isolates are immediately sent to LIS after saving.

Check exam requirements duplicity – If a recurring request for examination by the same method is sent from the LIS for the same isolate, the request is ignored.

Also export system expert reports – all expert reports from the ErbaExpert system are included in the XML message sent by the system.

Folder of XML input messages queue – defines the directory that serves as the system input queue. LIS enters examination queries into this queue, and the ErbaExpert system continually picks up and processes it. The directory can be located anywhere on the network; it must be accessible for reading and writing both for LIS and ErbaExpert.

Folder of XML output messages queue – defines the directory that serves as the system output queue. ErbaExpert enters this queue with the results of the exams and the LIS system continuously picks up and processes it. The directory can be located anywhere on the network; it must be accessible for reading and writing both for LIS and ErbaExpert.

Folder of XML messages scheme – Defines the system message directory. The schemes are used to validate input and output messages. The directory can be located anywhere on the network; it must be accessible for reading both for LIS and ErbaExpert.

Namespace of incoming/output messages – serves as an identification of the version of the communication protocol used.

7.6 Reports

You can set some system output properties on the tab.

Implicit output for expert system – defines which report will be used as the output of the expert system for the end user (clinician).

The screenshot shows the 'ErbaExpert options' dialog box with the 'Reports' tab selected. The dialog has several tabs: 'General options', 'Program mode', 'Data selection', 'Expert system', 'LIS communication', 'Reports', and 'Number series'. The 'Reports' tab contains the following settings:

- Implicit output for expert system:** A dropdown menu set to 'Tabular listing of antibiotic sensitivity results'. To its right is a checkbox 'Use cascade reporting of ATB results' which is unchecked.
- Implicit output for identification methods:** A dropdown menu set to 'Taxon identified with test results'. To its right is a checkbox 'Printing all isolates in batch' which is unchecked.
- Implicit output for susceptibility testing methods:** A dropdown menu set to 'Isolate - susceptibility testing results'.
- Implicit reports for other diagnostic methods:** A dropdown menu.
- Records timeline:** A group box containing three radio buttons: 'Month' (unchecked), 'Q' (checked), and 'Year' (unchecked).
- Sorting ATB lists in reports:** A group box containing three radio buttons: 'sorted alphabetically' (unchecked) and 'sorting by order in the kit' (unchecked).
- Reports destination:** A group box containing two radio buttons: 'screen' (checked) and 'printer' (unchecked).
- Printer selection:** A button located to the right of the 'Reports destination' group box.

At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

Implicit output for expert system – defines which report will be used as the output of the expert system for the end user (clinician).

Use cascade reporting of ATB results – the CLSI cascade reporting methodology is used.

Printing all isolates in batch – defines, if all results of isolates identification methods will be printed in one batch, or individually.

Implicit output for susceptibility testing methods – defines which report will be used as output of the system when the determination of the MIC or the inhibition zone diameter of the unknown strain serves as the definitive result.

Implicit reports for other diagnostic methods – defines, which report will be used for results in other diagnostic methods.

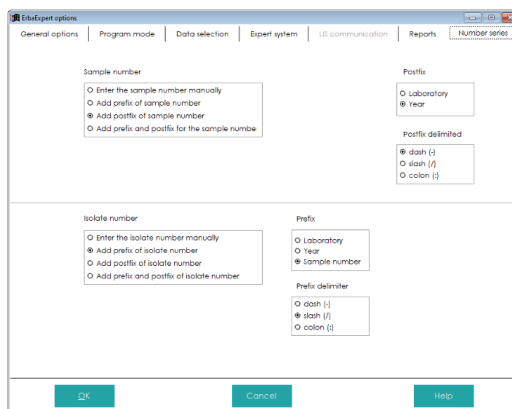
Records timeline – shows the default time breakdown of outputs in the statistics module.

Reports destination – the primary output routing of the system can be determined by this switch. If routing is set to the screen, the user can still print the output to the printer after controlling the report.

Printer selection – using this button you can set printer properties available to the operating system of the computer running ErbaExpert.

7.7 Number series

The tab allows you to define how to create numerical series of samples and isolates. For both the sample number and the isolate number, it is possible to define the prefix and / or postfix of the sample / isolate number from the options offered. Numbers are automatically generated when entering samples / isolates.



7.8 Adaptation of lists and diagnostic methods

An important step in setting up the system is to adapt the lists and exam methods. Access to individual lists and methods is possible from the **System Options** form in the top menu bar.

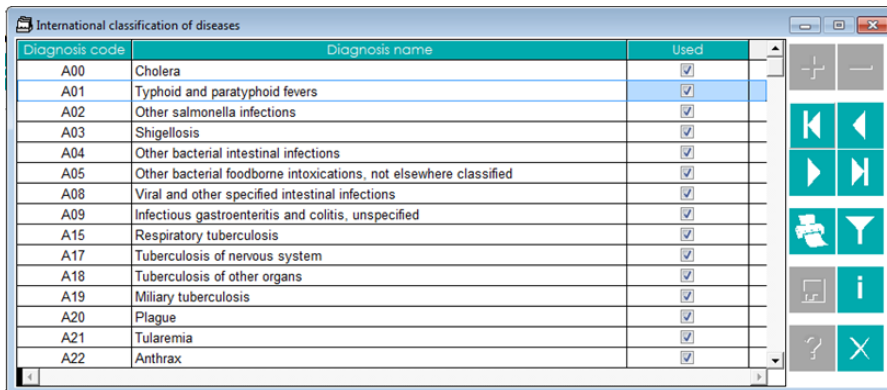
The range of displayed lists and methods is dependent on system mode (see System Mode). For each list or group of methods, the condition for browsing / editing is specified.

7.8.1 Health Insurance Company

The list pad is accessible if the patient's health insurance company is allowed in the [Data selection](#) setting. You can add, edit, and delete the list items.

7.8.2 Diagnosis

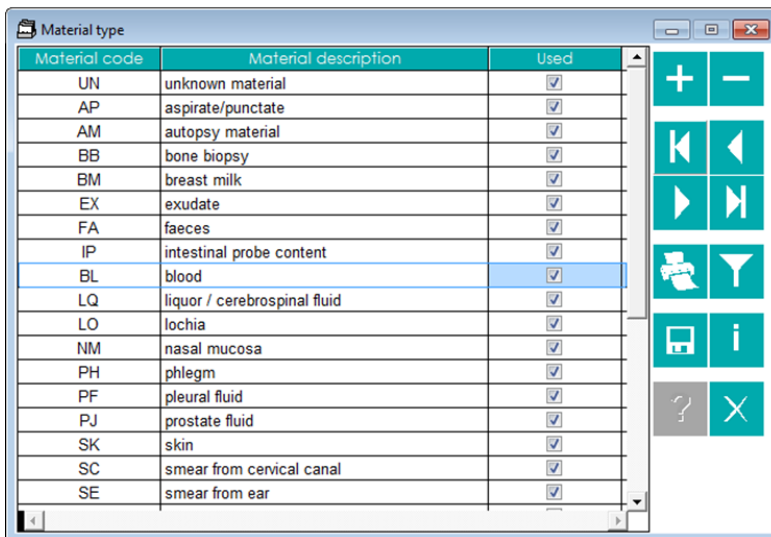
The list pad is accessible when the Diagnosis setting is enabled in the [Data selection](#) setting. The list records can only be edited. The column *Used* indicates whether this list item will be used in the system (item can be disabled).



Diagnosis code	Diagnosis name	Used
A00	Cholera	<input checked="" type="checkbox"/>
A01	Typhoid and paratyphoid fevers	<input checked="" type="checkbox"/>
A02	Other salmonella infections	<input checked="" type="checkbox"/>
A03	Shigellosis	<input checked="" type="checkbox"/>
A04	Other bacterial intestinal infections	<input checked="" type="checkbox"/>
A05	Other bacterial foodborne intoxications, not elsewhere classified	<input checked="" type="checkbox"/>
A08	Viral and other specified intestinal infections	<input checked="" type="checkbox"/>
A09	Infectious gastroenteritis and colitis, unspecified	<input checked="" type="checkbox"/>
A15	Respiratory tuberculosis	<input checked="" type="checkbox"/>
A17	Tuberculosis of nervous system	<input checked="" type="checkbox"/>
A18	Tuberculosis of other organs	<input checked="" type="checkbox"/>
A19	Miliary tuberculosis	<input checked="" type="checkbox"/>
A20	Plague	<input checked="" type="checkbox"/>
A21	Tularemia	<input checked="" type="checkbox"/>
A22	Anthrax	<input checked="" type="checkbox"/>

7.8.3 Material type

The list is accessible if the sample source material entry is enabled in the [Data selection](#) setting. You can add, edit, and delete the list items. The column *Used* indicates whether this list item will be used in the system (item can be disabled).



Material code	Material description	Used
UN	unknown material	<input checked="" type="checkbox"/>
AP	aspirate/punctate	<input checked="" type="checkbox"/>
AM	autopsy material	<input checked="" type="checkbox"/>
BB	bone biopsy	<input checked="" type="checkbox"/>
BM	breast milk	<input checked="" type="checkbox"/>
EX	exudate	<input checked="" type="checkbox"/>
FA	faeces	<input checked="" type="checkbox"/>
IP	intestinal probe content	<input checked="" type="checkbox"/>
BL	blood	<input checked="" type="checkbox"/>
LQ	liquor / cerebrospinal fluid	<input checked="" type="checkbox"/>
LO	lochia	<input checked="" type="checkbox"/>
NM	nasal mucosa	<input checked="" type="checkbox"/>
PH	phlegm	<input checked="" type="checkbox"/>
PF	pleural fluid	<input checked="" type="checkbox"/>
PJ	prostate fluid	<input checked="" type="checkbox"/>
SK	skin	<input checked="" type="checkbox"/>
SC	smear from cervical canal	<input checked="" type="checkbox"/>
SE	smear from ear	<input checked="" type="checkbox"/>

7.8.4 Requesting ward

The list pad is accessible when entering the requesting department is enabled in the [Data selection](#) setting. You can add, edit, and delete the list items.

7.8.5 Laboratory station

The list pad is accessible when the Laboratory station in which the sample / isolate is further processed is enabled in the [Data selection](#) setting. You can add, edit, and delete the list items.

7.8.6 Cultivation medium

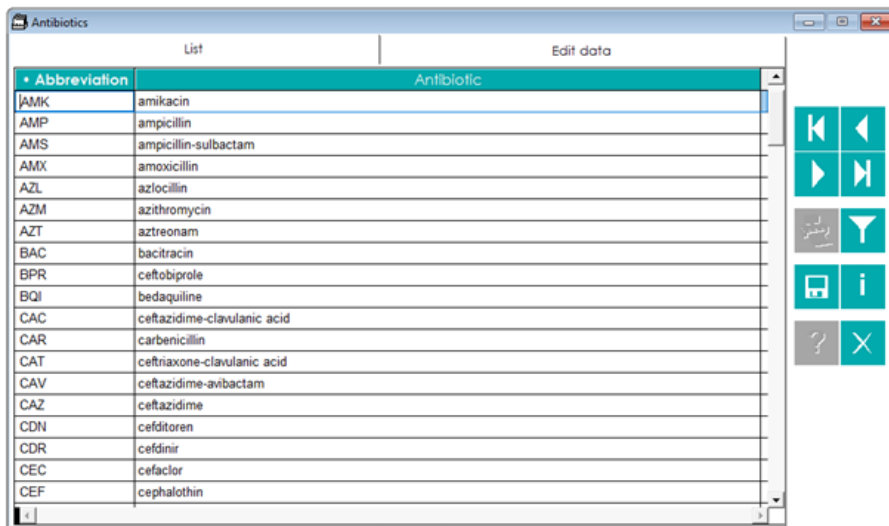
Medium code	Medium name	Used
PPA	Pseudomonas agar P base	<input checked="" type="checkbox"/>
PCA	Pseudomonas selective agar base-cetrimide agar	<input type="checkbox"/>
RLA	Rogosa agar (Lactobacillus selective agar)	<input type="checkbox"/>
RVB	Salmonella enrichment broth (RV broth)	<input type="checkbox"/>
SCB	Selenite cystine broth	<input type="checkbox"/>
SSA	SS agar (Salmonella Shigella agar)	<input checked="" type="checkbox"/>
LJM	Tb medium base acc. to Lowenstein-Jensen	<input type="checkbox"/>
TCBS	TCBS agar (vibrio selective agar)	<input checked="" type="checkbox"/>
TTB	Tetrathionate broth base	<input type="checkbox"/>
TMA	Thayer-Martin agar base (gc agar base)	<input type="checkbox"/>
TBR	Thioglycollate broth	<input type="checkbox"/>
VRB	VRB agar (violet red bile agar)	<input checked="" type="checkbox"/>
VRBD	VRBD agar (violet red bile dextrose agar)	<input checked="" type="checkbox"/>
XLD	XLD agar (xylose lysine deoxycholate agar)	<input type="checkbox"/>
YSA	Yersinia selective agar acc. to Wauters	<input type="checkbox"/>
CIN	Yersinia selective agar base (CIN-agar)	<input checked="" type="checkbox"/>
EM	Edwards medium	<input type="checkbox"/>
SAM	Schaedler anaerobic medium	<input type="checkbox"/>
WCA	Wilkins-Chalgren anaerobe agar	<input checked="" type="checkbox"/>

The list is accessible if the input of the cultivation medium for primocultivation is enabled in the [Data selection](#) setting. You can add, edit, and delete the list items. The column *Used* indicates whether this list item will be used in the system (item can be disabled).

7.8.7 Diagnosed taxa

The list is accessible if the identification of isolates is enabled in the [Program mode setting](#). The list items can only be viewed.

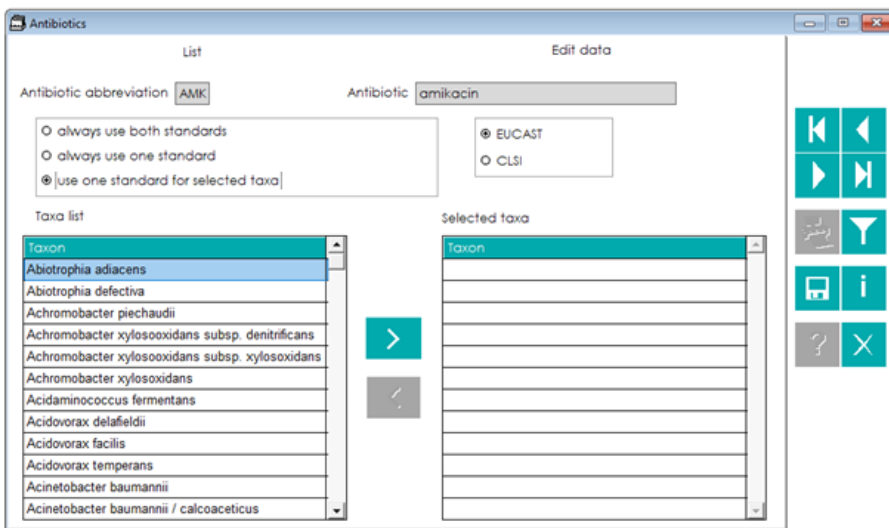
7.8.8 Antibiotics



Abbreviation	Antibiotic
AMK	amikacin
AMP	ampicillin
AMS	ampicillin-sulbactam
AMX	amoxicillin
AZL	azlocillin
AZM	azithromycin
AZT	aztreonam
BAC	bacitracin
BPR	ceftobiprole
BQI	bedaquiline
CAC	ceftazidime-clavulanic acid
CAR	carbenicillin
CAT	ceftriaxone-clavulanic acid
CAV	ceftazidime-avibactam
CAZ	ceftazidime
CDN	cefditoren
CDR	cefdinir
CEC	cefaclor
CEF	cephalothin

The record is accessible unless the [Program mode](#) setting is set to *Registration of identification only* or *Ad-hoc identification only without data saving*. Records can only be edited.

For the selected antibiotic, in the Edit Data tab, choose which standard to evaluate:



Antibiotic abbreviation: Antibiotic:

☐ always use both standards
☐ always use one standard
☒ use one standard for selected taxa

☒ EUCAST
☐ CLSI

Taxa list

Taxon
Abiotrophia adiacens
Abiotrophia defectiva
Achromobacter piechaudii
Achromobacter xylosoxidans subsp. denitrificans
Achromobacter xylosoxidans subsp. xylosoxidans
Achromobacter xylosoxidans
Acidaminococcus fermentans
Acidovorax delafeldii
Acidovorax facilis
Acidovorax temperans
Acinetobacter baumannii
Acinetobacter baumannii / calcoaceticus

Selected taxa

Taxon

- *Always use both standards* – the ATB will be evaluated using the currently set standard (the default option for all ATBs).
- *Always use one standard* – all taxa will be evaluated using the selected standard
- *Use one standard for selected taxa* – the ATB will be evaluated by the selected standard for selected taxa.

7.8.9 Primocultivation patterns

In this register, the user defines what culture media should be used for primocultivation of particular types of materials. One type of material can be cultivated on multiple cultivation media. The register is implicitly blank; it is filled according to the procedures used in the particular laboratory. You can add, edit, and delete the register items.

The register is accessible when [Registration of patients, samples, isolates and examinations](#) mode is set.

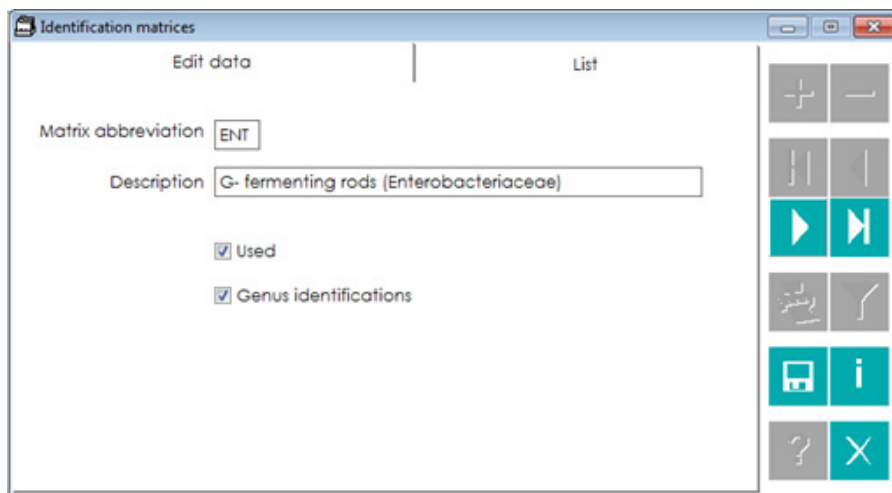
7.8.10 Identification matrices

The identification matrices (groups of microorganisms) are used to identify unknown isolates. The system only allows you to edit registered records.

The register is accessible if identifications are part of the set processes.

Accessible – A group of microorganisms can be identified by appropriate identification methods.

Genus identifications – allows to use identification to the genus level when identifying a group of microorganisms. For groups consisting predominantly of one or few genera, genus identification is not recommended (for example, the G + catalase positive cocci consists predominantly of the genus *Staphylococcus*; thus, identification to the genus level would fit in almost every time).



7.8.11 Identification methods

The register contains the identification methods (sets, kits) used to identify unknown isolates of microorganisms. The records can only be edited.

The register is accessible if identifications are part of the set processes.

The screenshot shows a software window titled "Identification methods" with three tabs: "Edit data", "Diagnostic tests", and "List". The "Edit data" tab is active. It contains the following fields and controls:

- Method ID:** A text box containing the value "14".
- Method abbreviation:** A text box containing "ENT16".
- Method name:** A text box containing "ENTEROtest 16".
- Method description:** A large, empty text area.
- Method used:** A checkbox that is checked.
- Type of method:** A dropdown menu showing "Automatically evaluated identification method".
- Identification matrix:** A dropdown menu showing "G- fermenting rods (Enterobacteriaceae)".
- Plate strains count:** A spinner box showing the value "6".
- List order:** A text box containing "99".

On the right side of the window, there is a vertical toolbar with icons for navigation (back, forward, search), printing, and other functions.

Method used – unknown isolates can be identified using this identification method.

Plate strains count – only for automated reading, the item determines the maximum number of strips per plate.

List order – indicates the order of the method statement in the method selection steps in all forms where methods can be selected (e.g. isolate receipt).

7.8.12 Susceptibility methods

The register contains the identification methods (sets, kits) used to determine the MIC / inhibition zones of unknown isolates. For predefined kits delivered with the system, records can be edited only. For disc diffusion methods, the MIC methods built from MIC single strips, and other MIC assay, methods can be added and deleted.

The register is accessible when susceptibility determination is part of the set processes.

Method used – allows the determination of the MIC / ATB inhibition zone for unknown isolates.

Plate strains count – allows you to determine the maximum number of strains on the plate for SENSILatest methods and MIC methods built from MIC single strips. In order to specify multiple strains per plate for the MIC single strip method, don't mark the method as configurable.

Configurable method – allows you to interactively modify the method when it is assigned to an individual isolate.

List order – indicates the order of the method statement in the method selection steps in all forms where methods can be selected (e.g. isolate receipt).

EUCAST RAST method – checkbox indicates that the method will be evaluated in accordance with the EUCAST RAST methodology (rapid readings of discs from blood bottle cultures after 4, 6 and 8 hours).

Diagnostic tests tab – allows you to predefine the set of tests for the configurable method. Use the > (add test), < (Remove test), and << (Remove All) buttons to prepare a test set of the method according to the needs of the laboratory.

Tests marked as used in the Diagnostic Tests form are available for definition.

Susceptibility methods

Disc diffusion method

Added test

Abbreviation	Test name
MOX	moxalactam (30 ug)
MUP	mupirocin (200 ug)
MOXF	moxifloxacin (5 ug)
NAL	nalidixic acid (30 ug)
NET	netilmicin (10 ug)
NET	netilmicin (30 ug)
NFT	nitrofurantoin (100 ug)
NFT	nitrofurantoin (300 ug)
NOR	norfloxacin (10 ug)
NOX	nitroxoline (30 ug)
OFX	ofloxacin (5 ug)
OXA	oxacillin (1 ug)
PEF	pefloxacilin (5 ug)
PEN	benzylpenicillin (1 unit ug)
PIP	piperacillin (100 ug)
PIT	piperacillin-tazobactam (100-10 ug)
PIT	piperacillin-tazobactam (30-6 ug)

Basic tests set

Order	Abbreviation	Test name
1	AMK	amikacin (30 ug)
2	BPR	ceftiofur (5 ug)
3	CEC	cefazolin (30 ug)
4	PEN	benzylpenicillin (10 unit ug)
5	PIP	piperacillin (30 ug)

7.8.13 Diagnostic tests

The register contains a list of diagnostic tests used in diagnostic methods registered by the system. The system allows adding, deleting, and editing records only for disc diffusion test methods and other MIC methods.

Used – accessible only for disc diffusion tests and other MIC methods. Allows to determine the susceptibility.

7.8.14 Other methods

Other diagnostic methods used to obtain additional information about tested isolates are listed. For pre-defined kits provided by Erba Lachema, only records can be edited; otherwise it is possible to add and cancel any methods.

The Other diagnostic methods record in the System customization is accessible only if the user allows reading of other diagnostic methods.

Method used – allows to use the method for tested isolates.

Diagnostic tests – allows to pre-define tests in used methods. By pressing the > (add test), < (remove test), << (remove all tests) buttons, users can define the basic tests set in used methods (in the same manner as in configurable AST tests).

7.8.15 Other diagnostic tests

The record includes a list of diagnostic tests used in the diagnostic methods other than identification or antibiotic susceptibility testing methods. The system enables to add, edit or delete tests. The record is accessible to all modes of the system, except for the parallel and add-hoc identifications mode.

Used – enables to use the test in **Other methods**.

Type of test – defines the type of the result. If Another diagnostic test – numeric result is selected, user must define the Unit of measure.

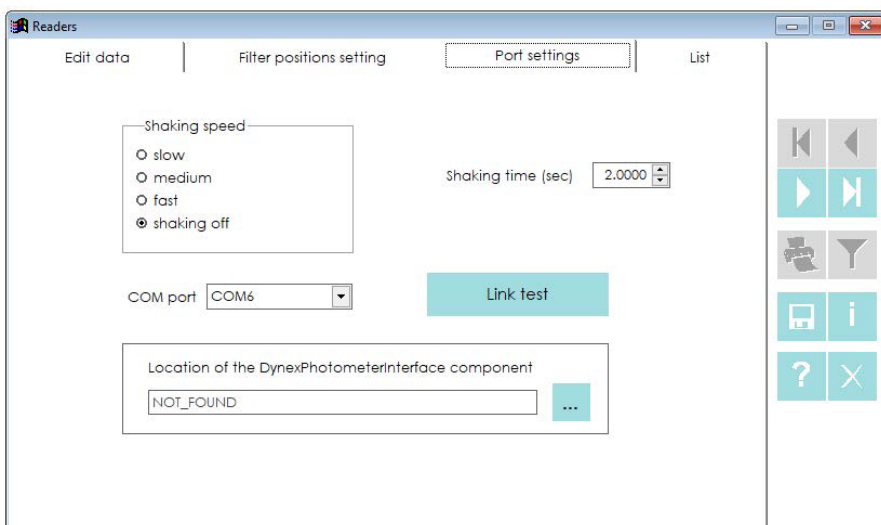
7.8.16 Readers

This register contains readers used with the system for automatic reading.

The register is accessible if Reader evaluation is enabled (see Other Settings).

Filter positions setting – read only; provides an overview of the installed reader filters and their position in the device.

Port settings tab – for readers using a physical or virtual COM port, allows to edit the port properties and set the shake parameters of the plate.



In the Comm port field, user sets the port that was defined during the installation of the system (see ErbaScan Reader Installation).

DynexPhotometerInterface component location – specifies the location of the component if it is run from a location other than the preinstalled location.

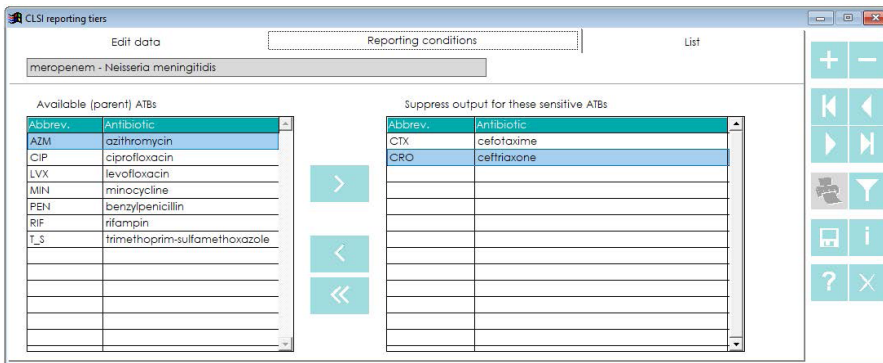
Link test – press the button to test the reader connection with the selected setting.

7.8.17 ATB cascade reporting

ATB - taxon pairs (or ATB group - taxonomic group pairs) and their inclusion in the reporting tier (values 1 to 4) are listed in the records.

On the *Report conditions* tab, it is possible to define when it is possible - in the case of ATB sensitivity on the same or higher layer - to skip the reporting of a given ATB for a given taxon.

More detailed information on cascade reporting can be found in the CLSI M100 ED33 2023 standard (or newer).



7.9 Adaptation of Quality Control data

An important step in setting up the system is to adapt the QC data, too. Access to particular records is possible using the System Administration / Quality control option from the system dashboard.

7.9.1 Check (control) strains

The records show the control strains used in the quality control process. Records can only be viewed.

Records are accessible if quality control is part of the set processes.

Check strains

Strain ID	Collection number	Alternative strain	Strain description
2	ATCC 49619	CCM 4501	Streptococcus pneumoniae ATCC 49619
3	ATCC 25922	CCM 3954	Escherichia coli ATCC 25922
4	ATCC 27853	CCM 3955	Pseudomonas aeruginosa ATCC 27853
5	ATCC 35218	CCM 4225	Escherichia coli ATCC 35218
1	ATCC 29212	CCM 4224	Enterococcus faecalis ATCC 29212
7	ATCC 29213	CCM 4223	Staphylococcus aureus ATCC 29213
9	ATCC 13880	CCM 303	Serratia marcescens subsp. marcescens ATCC
10	CCM 1799		Proteus spp. CCM 1799
11	ATCC 15947	CCM 2238	Edwardsiella tarda ATCC 15947
12	CCM 2531		Klebsiella aerogenes CCM 2531
13	CCM 4043		Streptococcus constellatus subsp. constellatus
14	CCM 4617		Streptococcus uberis CCM 4617
15	ATCC 29503	CCM 1911	Aerococcus viridans ATCC 29503
16	ATCC 49331	CCM 4296	Staphylococcus cohnii subsp. urealyticum CC
17	ATCC 43198	CCM 3659	Enterococcus cecorum ATCC 43198
18	ATCC 49427	CCM 4216	Enterococcus raffinosus ATCC 49427
19	ATCC 10556	CCM 4047	Streptococcus sanguinis ATCC 10556

7.9.2 Standard test results

The records contain data on the permissible results of control strains when checking identification / ATB kits.

Edit data – the tab contains a table with a list of kit tests. Permissible test results / MIC values / diameters of inhibition zones are given for a given control strain.

Acceptable QC results

Edit data | List

Method: MIC G+ Check strain: Enterococcus faecalis ATCC 29212

☒ Use this strain

Diagnostic tests	Acceptable MIC (mg/L)
PEN - benzylpenicillin [0.06 - 8 mg/L]	1 - 4
AMP - ampicillin [0.12 - 16 mg/L]	0.5 - 2
ERY - erythromycin [0.06 - 8 mg/L]	1 - 4
CLI - clindamycin [0.12 - 16 mg/L]	4 - 16
LIZ - linezolid [0.12 - 16 mg/L]	1 - 4
CMP - chloramphenicol [0.25 - 32 mg/L]	4 - 16
TET - tetracycline [0.25 - 32 mg/L]	8 - 32
T _S - trimethoprim-sulfamethoxazole [0.03/0.6 - 4/76 mg/L]	<=0.5
GEN - gentamicin [0.25 - 128 mg/L]	4 - 16
VAN - vancomycin [0.12 - 16 mg/L]	1 - 4
TEC - teicoplanin [0.12 - 16 mg/L]	0.25 - 1
NFT - nitrofurantoin [2 - 128 mg/L]	4 - 16

For the Erba kits shipped with the system, read-only values are allowed. Permissible values can be changed for user-defined sets; however, this is not recommended - the values are taken from the EUCAST, resp. CLSI standards.

Use this strain – allows you to enable / disable the use of this strain when checking the quality of the kit.

7.10 Users and user roles setting

ErbaExpert system allows you to control access to the system using user roles assigned to registered users.

7.10.1 Users management

The register contains data on all users who have access to the system. Register records can be added and edited; as all other system settings options, user records are only accessible to users with administrator rights.

When a new user is added to the system, a blank password is set by default. We recommend the immediately modification of the password by the administrator (see below); in the next step he/she should recommend to change the password for the first time the user logs on to the system.

The register is accessible when system access control is set (see General Properties, Password Logging). The important data of the record are:

User role – allows to assign a user role to the user.

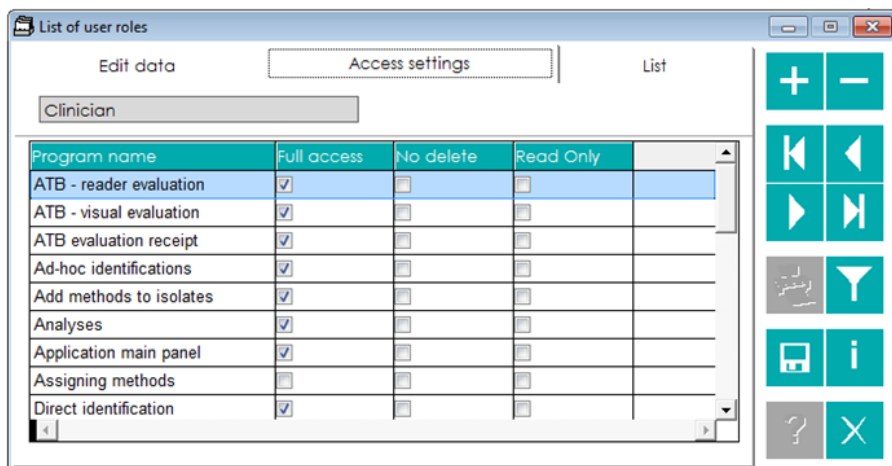
Account blocked – allows to block access to the system for the user. The system does not allow the user to be removed from the register. After the first login, the user is logged in and cannot be deleted; the account must always be blocked only.

Password change – allows the system administrator to change the user's password. The condition of the change is knowledge of the original password.

7.10.2 List of users roles

The register lists user roles defining access to the system. The system allows you to add and edit user roles records; only a role that has not yet been assigned to any user can be removed.

After adding a role to the system, the new role has implicitly set access to app panel items and password change but not to the system tasks. The access to the tasks is changed by the administrator in the **Access settings** tab.



For each task, the user chooses whether to allow the role to have full access to the task, access without deleting records (if the deleting is enabled) or read-only access.

Do not remove the item rights set by default - this will block access to basic system features.

The list of user roles is accessible in the case of system access control settings (see General Properties, Password Logging).

8. Program Modes

8.1 Registration of patients, samples, isolates and examinations mode

The data on received samples and patients are manually entered into the system. The sample primocultivations are determined automatically (based on the set rules). The individual isolates with required diagnostic methods are recorded in the primoculture reading step. The results of the diagnostic methods are read automatically by the reader or manually by the user. Finally, the results of all diagnostic methods for a given sample can be assessed by an expert system.

- User first registers the samples received using the *Sample Receipt* wizard
- If necessary, the user completes / repairs samples in the *Samples Corrections* wizard.
- Patients can be inserted: **a.** During sample intake; **b.** Separately using *Patient registration*.
- Isolates obtained from the primocultures are further analyzed:
 - o Identification of microorganisms is performed: **a.** Using the *ID - visual evaluation*; **b.** *ID - reader evaluation*.
 - o Identifications performed by other methods are entered by the *Direct identification* wizard.
 - o Determination of susceptibility to ATB is performed: **a.** Using *ATB - visual evaluation*; **b.** *ATB - reader evaluation*.
- If necessary to perform further tests, the methods can be added in the *Add methods to isolates* wizard
- Finally, samples are evaluated in the Expert system wizard.
- Samples, isolates, and examinations can be controlled in the *Statistics and reports* form.
- Trial, non-binding identification of microorganisms without impact on stored data of the system is supported by the *Ad-hoc identification* wizard.

8.2 Registration of isolates and assigned examinations mode

Data on accepted isolates with the required diagnostic methods are entered manually. The results of the diagnostic methods are read automatically by the reader or manually by the user. Finally, the results of all diagnostic methods for a particular sample can be assessed by an expert system.

- User first registers the received isolates using the *Isolates receipt* wizard
- If necessary, user completes / repairs samples in the *Isolates corrections* wizard.
- Received isolates are further analyzed:
 - o Identification of microorganisms is performed: **a.** Using the *ID - visual evaluation*; **b.** *ID - reader evaluation*.
 - o Identifications performed by other methods are entered by the *Direct identification* wizard.
 - o Determination of susceptibility to ATB is done: **a.** Using *ATB - visual evaluation*; **b.** *ATB - reader evaluation*.
- If necessary to perform further tests, the methods can be added in the *Add methods to isolates* wizard
- Finally, samples are evaluated in the *Expert system* wizard.
- Samples, isolates, and examinations can be controlled in the *Statistics and reports* form.
- Trial, non-binding identification of micro-organisms without impact on stored data of the system is supported by the *Ad-hoc identification* wizard.

8.3 Only registration of identifications mode

Only data about the performed identifications are manually entered into the system. The results of the diagnostic methods are read automatically by the reader or manually by the user.

- Identification of microorganisms is performed: **a.** Using the *ID - visual evaluation*; **b.** *ID - reader evaluation*.
- Samples, isolates, and examinations can be controlled in the *Statistics and reports* form.
- Trial, non-binding identification of micro-organisms without impact on stored data of the system is supported by the *Ad-hoc identification* wizard.

8.4 Only registration of susceptibility testing mode

Data about susceptibility measurements performed are manually entered into the system. The results of the diagnostic methods are read automatically by the reader or manually by the user.

- Determination is performed: **a.** Using *ATB - visual evaluation*; **b.** *ATB - reader evaluation*.
- Samples, isolates, and examinations can be controlled in the *Statistics and reports* form.
- Trial, non-binding identification of micro-organisms without impact on stored data of the system is supported by the *Ad-hoc identification* wizard.

8.5 Import data of isolates from LIS, assigning of respective examinations, export data to LIS mode

The system receives respective data from the LIS: **a.** only isolates data; **b.** isolates data with required diagnostic methods; **c.** isolates data with required diagnostic methods and direct identification results. System enables to add other diagnostic methods to the isolates.

- Reception of isolates is performed by starting the reception process by the user.
- Received isolates are further analysed:
 - o Identification of microorganisms is performed: **a.** Using the *ID - visual evaluation*; **b.** *ID - reader evaluation*.
 - o Identifications performed by other methods are entered by the *Direct identification* wizard.
 - o Determination of susceptibility to ATB is done: **a.** Using *ATB - visual evaluation*; **b.** *ATB - reader evaluation*.
- If necessary to perform further tests, the methods can be added in the *Add methods to isolates* wizard.
- Finally, samples are evaluated in the *Expert system* wizard.
- Samples, isolates, and examinations can be viewed using the *Statistics and reports* form.
- Trial, non-binding identification of microorganisms without impact on stored data of the system is supported by the *Ad-hoc identification* wizard.
- Sending isolates to the LIS is performed by running the export process by the user.

8.6 Import of examination requests from LIS, results export to LIS mode

The data of the required examinations are received from the laboratory information system. The results of the diagnostic methods are read automatically by the reader or manually by the user. Finally, the results are sent back to the LIS.

- Reception of requests is performed by starting the reception process by the user.
- Received requests are further analysed:
 - o Identification of microorganisms is performed: **a.** Using the *ID - visual evaluation*; **b.** *ID - reader evaluation*.
 - o Determination of susceptibility to ATB is performed: **a.** Using *ATB - visual evaluation*; **b.** *ATB - reader evaluation*.
- Samples, isolates, and examinations can be controlled in the *Statistics and reports* form.
- Trial, non-binding identification of micro-organisms without impact on stored data of the system is supported by the *Ad-hoc identification* wizard.
- Sending isolates to the LIS is performed by running the export process by the user.

8.7 Ad-hoc identifications only without data saving mode

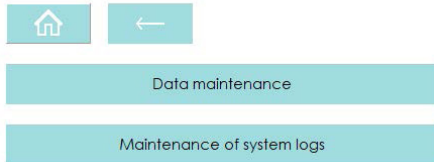
The system only allows manual ad-hoc reading of identifications or susceptibility testing. Resulting data are not stored in system.

- Trial, ad-hoc identification of micro-organisms without impact on stored data of the system is supported by the *Consulting tools / Ad-hoc Identification* wizard.
- Trial, ad-hoc susceptibility testing of micro-organisms without impact on stored data of the system is supported by the *Consulting tools / Ad-hoc Susceptibility testing* wizard.

9. System management and maintenance

This chapter describes the tools IDAST provides for system management and maintenance. System maintenance forms can be accessed from the dashboard by clicking the **System Administration / Maintenance** button:

System administration / System maintenance



System maintenance consists of data management and maintenance tools and system log maintenance tools.

9.1 System log

The system log logs actions such as system startup and shutdown, user login, inserting, changing and deleting data, and so on. It provides the auditability of system activity.

The system log is started by the *System Log* button:

User ID	Date and time	Type of action	Table	field	Original value	New value	Key
	28/06/2017 18:12:32	System start					
	28/06/2017 18:12:37	Ordinary System shutdown					
	29/06/2017 11:09:01	System start					
	29/06/2017 11:09:11	Ordinary System shutdown					
	29/06/2017 20:38:06	System start					
	29/06/2017 20:38:10	Ordinary System shutdown					
	02/07/2017 11:28:42	System start					
	02/07/2017 11:29:03	Ordinary System shutdown					
	09/07/2017 10:58:53	System start					
AD	09/07/2017 11:39:22	Logout					
AD	09/07/2017 11:39:26	Login					

- The log can be sorted by user abbreviation or the timestamp.
- If the record contains data change record, click on the *Original value* column to display the original contents of the record; click the *New Value* column to see the changed data.

You can export the contents of the system log as XML data by clicking *System Log Export* button. Exported items are tagged, and only the newly added entries are exported during next export.

9.2 System error log

Errors (exceptions) are recorded in the error log. The error log serves as the basis for technical support of the system when a system error occurs.

The error log is started by the *System error log* button:

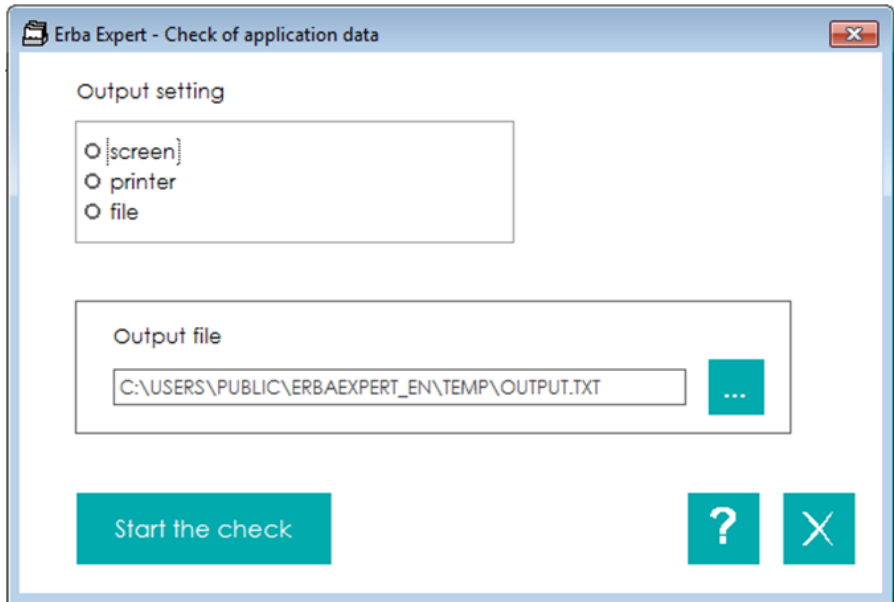
[illegible]

- The log can be sorted by the timestamp.
- You can see a complete listing of error information by clicking on the *Information log* column

You can export the error log content as XML data by clicking the *Error log export* button. Exported items are tagged, and only the newly added entries are exported during the next export.

9.4.1 Data management and maintenance

Click the *Data maintenance* button to run the data check form.

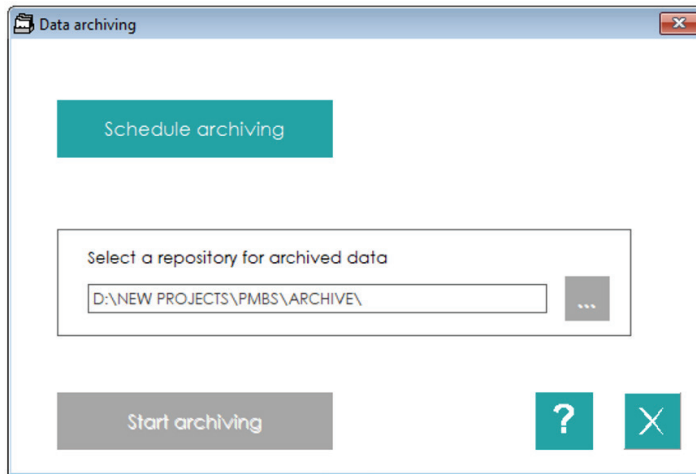


- In the *Output setting* switch, the user selects the output for the check report.
- With the *Start the check* button, the user initiates the action.
- The system performs the data consistency check and any discrepancies that cannot be automatically repaired will be stored in the message.
- If everything goes right, the system only reports success.
- If problems are found, the system outputs the message to the selected output.

The message serves as a basis for the technical support of the system, along with a System error log list.

9.4.2 Data archiving

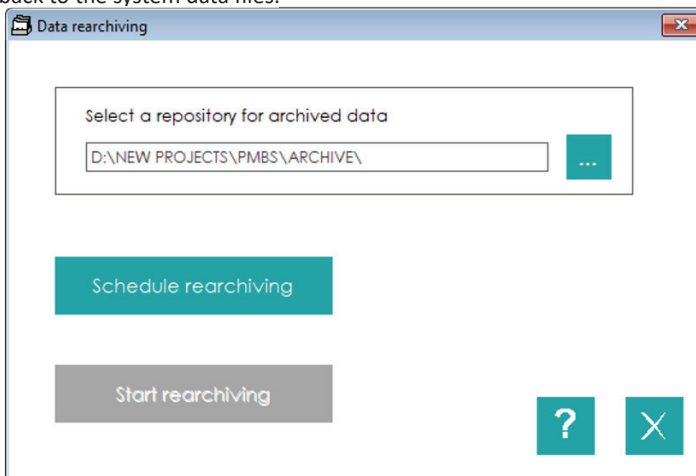
When data is archived, a part of the data is removed from the system data files and stored in the archive. We recommend archiving only historical data that you no longer need to come back to when creating reports.



Click the *Schedule archiving* button **to** select to which date the data will be archived, and then press the *Start archiving* button to archive the data.

9.4.3 Archive data recovery

When data is rearchived, part (or all) of data that has already been stored in the archive is added back to the system data files.



Use the *Schedule rearchiving* button to select **from** which date the data will be rearchived, and then press the *Start rearchiving* button to rearchive the data.

10. Terms and abbreviations used

10.1 Terms used

Data file – a file that stores the results of analyzes of individual samples and isolates. It changes during working with the program.

Diagnostic method, diagnostic kit – a user-defined or predefined set of diagnostic tests used to analyze isolates; also a commercially available set of diagnostic tests.

Diagnostic test – traceable property or taxa characteristics in the identification matrix; then also the procedure, used to detect the occurrence of given property in the studied strain.

Identification matrix – databases distributed along with the program that includes the occurrence frequencies of observed properties (diagnostic tests) in observed taxa. Identification matrix data are not changed during the analyses procedure.

Strain, isolate – specific microbial culture, with specific properties. Isolates are studied using defined diagnostics methods.

Data file field – unit of the data file structure, carrying information about the identified isolate or sample.

Taxon – taxonomic unit contained in an identification matrix. It can be a species, subspecies, biovar or pathovar. The properties of the taxa are defined in the identification matrix by the frequencies of the individual diagnostic tests.

Sample – material of biological (clinical) origin, analyzed for the presence of microorganisms.

Backup file – a security copy of the data file created on the backup media (other network hard drive, tape, etc.).

10.2 Abbreviations

ATB	Antibiotic
LIS	Laboratory Information system
MALDI	Matrix-Assisted Laser Desorption/Ionization
MIC	Minimal Inhibition Concentration



Erba Lachema s.r.o.

Karásek 2219/1d, 621 00 Brno, Czech Republic

Tel.: +420 517 077 111

E-mail: diagnostics@erba.com

www.erba.com