

TECAM PRO SOFTWARE HISTORY

02. Aug. 2022:

Tecam V7.08.11

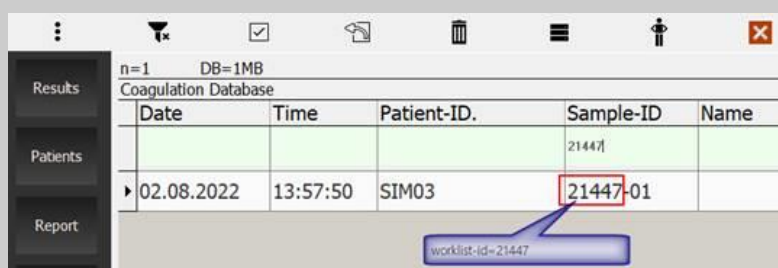
supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- **Coatron A4 V1.07.05a (261)**
- **Coatron A6: V1.03.05a (106)**
- **Coatron A6 Plus: V1.03.06a (53)**

List of modifications:

- Major fix : Missing results
Coatron performs a complete worklist, but TECAM reports only the first patient result. The bug is since Tecam V7.04 (2018) and becomes active after several years of use, when of more than 21447 worklists are performed on instrument.



Date	Time	Patient-ID	Sample-ID	Name
02.08.2022	13:57:50	SIM03	21447-01	

08. Mar. 2022:

Tecam V7.08.10

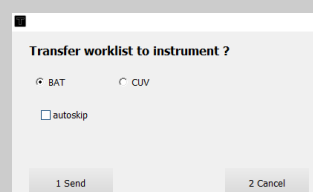
supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- **Coatron A4 V1.07.05a (261)**
- **Coatron A6: V1.03.05a (106)**
- **Coatron A6 Plus: V1.03.06a (53)**

List of modifications:

- Only Coatron A4: Worklist mode “ECO” is now always on and not selectable anymore. Orders can be run test-wise (mode BAT + ECO) or patient-wise (mode CUV + ECO). The new combi-mode (ensures highest performance and lowest consumption (reagent, clean, rinse) at minimal lower sample throughput).



No modifications for Coatron A6 / A6 Plus. Users can still select between ECO (best performance, consumption) or BAT (+30% sample throughput).

26. Jul. 2021:

Tecam V7.08.9

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.05a (261)***
- ***Coatron A6: V1.03.05a (106)***
- ***Coatron A6 Plus: V1.03.06a (53)***

List of modifications:

- Sometimes all not all patient-ID were transmitted to TECAM after scanning of patient racks on instrument side. The problem is removed.
- Support of two instruments optimized. (start app twice and use splitscreen function of Windows).
- Results were reported falsely as zero “0” with some regional Windows settings for text, date and numbers. This interoperability problem is removed now.

30. Jul. 2020:

Tecam V7.08.8

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.05a (261)***
- ***Coatron A6: V1.03.05a (106)***
- ***Coatron A6 Plus: V1.03.06a (53)***

List of modifications:

- A new feature “USB Barcode Scanner” can be activated within option menu. It allows to input Patient-ID by a handheld scanner and request to LIS very easily.
- Results received from instrument are now displayed with all available units in one screen (e.g. s, %, INR)
- Minor fixes

26. May. 2020:

Tecam V7.08.7

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.05a (260)***
- ***Coatron A6: V1.03.05a (105)***
- ***Coatron A6 Plus: V1.03.06a (52)***

List of modifications:

- Fix for invalid license problems.

16. Dec. 2019:

Tecam V7.08.6

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.04d (259)***
- ***Coatron A6: V1.03.04d (104)***
- ***Coatron A6 Plus: V1.03.05d (51)***

List of modifications:

- A new use function PRFL” is added and will save a lot of mouse clicks. It allows to set a default test profile for all new patient orders with a single click
- LIS communication was limited to max. 6 tests per order. The limitation is removed now.
- Tecam startup time is accelerated
- Minor fix with mirror print function. Now the textbox is locked and will not clear without your intention

27. May. 2019:

Tecam V7.08.5

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.04d (258)***
- ***Coatron A6: V1.03.04d (103)***
- ***Coatron A6 Plus: V1.03.05d (50)***

List of modifications:

- Coatron results are displayed now with 3 columns for all units (sec, % , INR) within the single result table

22 Feb 2019:

Tecam V7.08.4

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.04c (257)***
- ***Coatron A6: V1.03.04c (101)***
- ***Coatron A6 Plus: V1.03.05c (49)***

Bug since 7.08.3.

Orders defined only by PID entry are not sent with message “No worklist defined”. This is fixed now.

15 Feb 2019:

Tecam V7.08.3

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.04c (257)***
- ***Coatron A6: V1.03.04c (101)***
- ***Coatron A6 Plus: V1.03.05c (49)***

List of modifications:

- ASTM communication to LIS update
 - LIS Method ID can be input with 6 digits (before it were just 3 digits)
 - LIS Sender ID can be input with 8 digits (before it were just 2 digits)
- Database size is limited to 110.000 results and self-maintaining to ensure high performance.
If data exceeds size, then the oldest 10.000 results are deleted automatically.
- Enter PID (manually or by handheld barcode) will automatically set the default test profile
- Minor fix: Transmission of calibration data to instrument is improved

14 Dec 2018:

Tecam V7.08.2

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.04c (255)***
- ***Coatron A6: V1.03.04c (99)***
- ***Coatron A6 Plus: V1.03.05c (47)***

List of modifications:

- Critical fix: Orders from P01b to P45b were transmit with wrong rack position
- Major fix: Results were sometimes not received. This is fixed now.
- Minor fix: Transmission of worklist took a long time and failed sometimes. This is fixed now.

26 July 2018:

Tecam V7.07

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.04b***
- ***Coatron A6: V1.03.04b***
- ***Coatron A6 Plus: V1.03.05b***

List of modifications:

Communication with LIS over RS232 can now preset for Coatron-A4/A6 or A6Plus within the options menu. This allows some Chinese LIS version to communicate with TECO.

8. June 2018:

Tecam V7.06

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.04b***
- ***Coatron A6: V1.03.04b***
- ***Coatron A6 Plus: V1.03.05b***

List of modifications:

- Minor fix. Tecam did not transmit DD orders , if worklist contained a full sample profile with PT+aPTT+FIB+TT+AT+DD

24. April 2018:

Tecam V7.05

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.04b***
- ***Coatron A6: V1.03.04b***
- ***Coatron A6 Plus: V1.03.05a***

List of modifications:

- LA Ratio calculation added. This allow to run LA-Screen and Confirm at two different worklist
- QR code library was not correct registered into Windows. Fix now.

13. Mar. 2018:

Tecam V7.04

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.04b***
- ***Coatron A6: V1.03.04b***
- ***Coatron A6 Plus: V1.03.05a***

List of modifications:

- New style of Icons
- New TECO ticket system is supported. The ticket systems allows to creates tickets for cuvettes, rinse or service reset
- Rack position CP1/CP2/CP3 is removed and can't be ordered by TECAM anymore
- Easier entry of orders with touchscreen or mouse. The PID is automatically added, if it empty.
- Two worklist can now be managed with TECAM. Goto menu "orklsit" and enable "P01b – P90b"
- T-Corr setting is now received from Coatron and reaction curves are displayed accordingly
- Mirror Print: Receive print data from Coatron like system report or test calibration

10. Nov. 2017:

Tecam V7.03

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.03b***
- ***Coatron A6: V1.03.03b***
- ***Coatron A6 Plus: V1.03.04c***

List of modifications:

- Windows10 flat design
- Click on reaction curve to zoom
- Minor Fix: results like 12.0s were shown without decimal point. This is fixed now.

4. Aug. 2017:

Tecam V7.02

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.03a***

- **Coatron A6: V1.03.03a**
- **Coatron A6 Plus: V1.03.04a**

List of modifications:

- Patient-Id and test orders can be set now directly in the main screen. Simply select the rack position, then enter any ID number by keyboard or barcode and mouse click the required tests.
- A click on table header (PT, aPTT,...) will (re)set the test for all samples.
- New icon "LIS" is available, if TECAM is connected to LIS (ASTM). The icon allows quick access to request the test orders from LIS.
- Standard tests after startup of TECAM can be setup. Click on icon "EDIT" and set profile-4 (standard view)
- Swipe left/right or up/down to scroll orders
- Mark a sample as "HiSense" to measure it in a very high sensitivity. Helpful for critical samples like lipemic, high diluted or all "+++" results.
(not available for Coatron A4)
- New menu Help\Barcode Activation. Allows manual input of special system code like activate cuvettes or change serial number)
- New menu Worklist\View Graph. Click on results with right mouse and select "view graph". Tecam will show then the reaction curve of is graph

New features allows new workflows like,

- Repeat one result during worklist = Mouse-click on result and send
- Enter new samples by USB-Handheld barcode scanner. Select new free rack position and scan barcode
- Much easier procedure to define new orders during worklist (=continues loading).

06. Apr. 2017:

Tecam V6.07

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- **Coatron A4 V1.07.02d**
- **Coatron A6: V1.03.02d**
- **Coatron A6 Plus: V1.03.03**

List of modifications:

- Test Calibration will not received from Coatron, if LOT is empty or DATA (all zero) is empty. This avoid to delete valid test calibration with empty data.
- Mathematics (LIN, LOGXY, 1/X) is not transmitted to Coatron anymore. Change of MATH can only be done on Coatron. This avoid, to run test with invalid math.
- Connections problems with Coatron M-System are solved.

22. Feb. 2017:

Tecam V6.06

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.02c***
- ***Coatron A6: V1.03.02c***
- ***Coatron A6 Plus: V1.03.02***

List of modifications:

- Calibration Lot Management. TECAM receives or transmit test calibration data from or to Coatron automatically. On instrument side the barcode of reagent vial must be scanned.
- Unknown patients can be queried from LIS
- System Barcode can be sent to instrument
- Interface for new Coatron X family
- Automatic port setting
- Tecmoni software updated for Coatron X Family

Major Fix

- Table "Patient" and "Method" showed wrong captions, if Unicode (Chiense, Russia,..) is used.
- No result received from Coatron M1.
- Input of patient information (Name, Sex,..) completely revised including LIS query
- Just 5 calibration points were transmitted instead of 6 points.

24. Mar. 2016:

Tecam V6.05

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyzer firmware:

- ***Coatron A4 V1.07.02a***
- ***Coatron A6: V1.03.02a***
- ***Coatron A6 Plus: V1.03.02a***

List of modifications:

- Minor Fixes
 - Repeat just one test of last worklist is now possible.
 - Size of database is monitored to keep TECAM performant

2. Nov. 2015:

Tecam V6.04

supported Windows versions: Windows 7/8/10 32+64Bit version

Recommended analyser firmware:

- ***Coatron A4 V1.07.02a***
- ***Coatron A6: V1.03.02a***
- ***Coatron A6 Plus: V1.03.02a***

List of modifications:

- Support of Windows-10
- All screens , dialogues or informations are displayed with larger font.
- Result report with new layout. Each patient result is now separated with underline. Result date+time information is now displayed in the footer line. Results from different worklists or date are printed with a new page.
- Function DATABASE/VIEW RECORDS IN DETAIL VIEW with autofilter. If no filter is set or no record is selected, then recent worklist is reloaded and shown together with reaction curve.
- Creating new worklist supports now to display only profile tests. The profile tests can be defined within DATABASE/METHOD field "Profile". Set "1" to display or "0" to hide

Minor Fixes:

- In mode "Autoprint" , the results are printed again with each new worklist. This is fixed now ! Results are removed from list after printing.

6. Jul. 2015:

Tecam V6.03

tested for Windows 7 or higher (32 + 64 Bit versions)

Recommended analyser firmware:

- ***Coatron A4 V1.07.01 SW5***
- ***Coatron A6: V1.03.01 SW5***
- ***Coatron A6 Plus: V1.02.01***

List of modifications:

- New worklist mode "CUV", which allows to run the patients cuvette wise (first 4 PT, then 4 aPTT , then next 4 PT..). This feature is enabled only for Coatron A6 or A6 Plus
- Samples can now be identified as micro volume (microtube). This feature is enabled only for Coatron A6 Plus.
- Control of two instruments is now supported. Start TECAM twice and control two Coatron. This feature requires PRO license !
- Minor fixes

25. Feb. 2015:

Tecam V6.02

tested for Windows 7 or higher (32 + 64 Bit versions)

Recommended analyser firmware:

- ***Coatron A4 V1.07.01 SW5***
- ***Coatron A6: V1.03.01 SW5***
- ***Coatron A6 Plus: V1.02.01***

List of modifications:

- Complete new design and user interface. TECAM is now much easier and userfriendly and faster.
- Works with mouse+keyboard as well as with touchscreen.
- Helpfile updated
- Test methods can be synchronized with instrument.

10. Oct. 2014:

Tecam V5.31

tested for Windows XP / VISTA / 7 / 8 (32 + 64 Bit versions)

Including analyser firmware:

- ***Coatron A4 V1.07.01 SW4***
- ***Coatron A6: V1.03.01 SW4***

List of modifications:

- Support of new analyser Coatron A6 Plus
- Minor Fixes
 - ASTM TimeOut behaviour improved. This is helpful for LIS with more than 10sec delay time.
 - ASTM Logfile modified for better analysis of communication problems
 - Error 401 Non Modal Forms is fixed. .

3. Mar. 2014:

Tecam V5.29

tested for Windows XP / VISTA / 7 / 8 (32 + 64 Bit versions)

Including analyser firmware:

- **Coatron A4 V1.06.08** SW4
- **Coatron A6: V1.02.08** SW4

List of modifications:

- Minor Fixes
 - Estimated finished time of worklist was false calculated
 - Manual override of order during ASTM communication is now possible
 - Test DFIB and PT are now send separated.
 - Result error flags (F or S) are now displayed within order screen.

3. Dec. 2013:

Tecam V5.28

tested for Windows XP / VISTA / 7 / 8 (32 + 64 Bit versions)

Including analyser firmware:

- **Coatron A4 V1.06.08** SW2
- **Coatron A6: V1.02.08** SW2

List of modifications:

- Support of Sample-ID.
 - The sample-id is an autonumber given by the instrument containing information about worklist and rack like "1000-1" which means Worklist-id=1000 Rack position P01.
 - The results can be reported page wise by sample-id or patient-id. This is very helpful, if you repeat same sample but need two result reports .
 - Database reports are updated with sample-id information and optimized for different font sizes.
- Communication with instrument and LIS is now always logged. The log-files can be opened in menu "Help" . This is helpful if communication problems occur.
- Change of normal test range is now possible in database menu. A manual switch to options menu is not required anymore.
- Bugfix: Database filterbar cursor jumped to first column,if recordset was empty. This is fixed now

4. Sep. 2013:

Tecam V5.27

tested for Windows XP / VISTA / 7 / 8 (32 + 64 Bit versions)

Including analyser firmware:

- ***Coatron A4 V1.06.08***
- ***Coatron A6: V1.02.08***

List of modifications:

- Touchscreen Support
- Not used tests are blended out in order screen. This ensures visibility of all used tests within one screen.
- Input of QC range improved. With older fimware , the field must be separated with TAB. If customer replace the TAB with blanks, then database error can happen. Now TECAM accepts also blanks as dilimiter.
- The font size can be setup for patient and database reports.
- Autoserie numbers can be prefix with date information. This is very helpful, if no barcode or unique patient-id number is used.
- Bugfix: False order for test LA SCREEN or higher

18. Feb. 2013:

Tecam V5.25

tested for Windows 2000 / XP / VISTA / 7 / 8 (32 + 64 Bit versions)

Including analyser firmware:

- ***Coatron A4 V1.06.06***
- ***Coatron A6: V1.02.06***

List of modifications:

- New function of database includes now import, export, edit and print of test calibration data
- Tecam Setup is fixed for Windows 8 operation system
- Support of Windows 64 Bit.

5. Dec. 2012:

Tecam V5.24

tested for Windows 32Bit 2000 / XP / VISTA / 7

Including analyser firmware:

- ***Coatron A4 V1.06.05 SW6***
- ***Coatron A6: V1.02.05 SW2***

List of modifications:

- Bugfix: ASTM protocol. Results were not send to LIS. This is now solved.
- Bugfix: result flag "A" was false set, when unit second was not activated. This is now solved.

15. Oct. 2012:

Tecam V5.23

tested for Windows 32Bit 2000 / XP / VISTA / 7

Including analyser firmware:

- ***Coatron A4 V1.06.05 SW4***
- ***Coatron A6: V1.02.04***

List of modifications:

- Support of new analyser Coatron A6
- STAT orders (PRP or PROLIS license required)
 - can be send to Coatron A6
 - STAT orders can be received from LIS/ASTM
- Main Screen is now the worklist order
 - New orders can be defined as usually
 - New tests are marked with the testname (PT, APTT,.....)
 - Sent tests are marked as "o"
 - Returned tests are marked with the test result (eg. PT =1.00 INR)
 - Finished orders are marked with green color
 - Abnormal results are marked with red color
 - New orders can be attached anytime and send to analyser during operation (Continuous Loading)
 - New tests can be attached to active orders
 - Returned test can be easily repeated
- Autoconnect after program start
- Autoprint option. If activated, then all incoming results are automaticvally save, send to host and printed.
- New menu "HELP/Check analyser": System information can be received from analyer (only Coatron A6)
- TECAM protocol with CRC syntax. False data were were transmitted to or from analyser under very rare circumstances. The data transmission is now secured with an additional checksum. TECAM detect automatically, if analyser sends data with old syntax or new syntax to ensure backward compability.

20. Oct. 2011:

Tecam V5.01

for Windows 32Bit 2000 / XP / VISTA / 7

- Complete new layout of order (worklist) screen.
 - Patient information, test order, QC ranges can be entered in one screen just by keyboard entry. With "OK" the next order can be entered immediately.
 - 9 profiles can be defined
 - New patient field "AGE" (can be entered directly or is derived from date of birth)
 - Department , Sex are now organized in a list
- Continuous Loading implemented (Coatron Firmware 1.06.04 required !)
- Database can now be accessed during online communication with instrument
- Receive of mean values
- Modified results reports
- Instrument Firmware Update supported
- Database
 - Field "Patient Name" extended from 32 to 40 characters. Family and forename are still divided by "," . To ensure ASTM compability just the first 12|16 characters of fore|familyname are transmitted to LIS.
 - Field "Sex" extended from 1 to 4 characters . To ensure ASTM compability just the first character is transmitted to LIS.
 - Field "Department" extended from 4 to 10 characters. To ensure ASTM compability just the first 4 characters are transmitted to LIS.
 - New time filters for more variable dates and periods
 - New filter for "New results". This filter is activated automatically, when open the data base. New results will loose the status "New", when they were printed first time.
- Bugfixes
 - Unicode problems resolved.
 - Input Cursor is now blinking within filterbar of datagrid
 - QC-ranges were false calculated , if TECAM is installed on unicode Systems like turkey, china, greek.
 - ASTM communication reactivated for TECAM SMART license
 - communication protocol extended with second checksum and improved handshaking to ensure correct data transmission (FW 1.06.04 required)
 - Reflexed tests were received with false reaction curve
 - Sometime instrument did not changed into "SCAN MODE"

4. Nov. 2010:

Tecam V4.92

for Windows 2000 / XP / VISTA / 7

- Report print in format "Din A5"
- Minor bugfixes
 - QC-Autofilter (function key F6) did not work correctly for large database
 - QC-ranges of test "FIB" was confused with test "DFIB".

12. May. 2010:

Tecam V4.91

for Windows 2000 / XP / VISTA / 7

- Icon " New Order (F5)" allows now the functions new,request,continue or repeat worklist.

Removing of minor bugs

- menu options/methods was sometimes not loaded - fixed.
- APCR & LA were false listed in system database - fixed
- Last result was not displayed in the result database - fixed.
- Entry of Date and Time Filters caused SQL errors - fixed

1. Feb. 2010:

Tecam V4.90

for Windows 2000 / XP / VISTA / 7

- TECAM licence type "LITE". This license allows to print a cumulative report and send results via RS232 to a LIS system. Any database functions are deactivated.
- Cumulative report included. New results from analyser are sorted by patient, saved to database, sent to host, printed and removed from screen with one click.
- HOST interface support now additionally RS232 communication (with and without handshake)
- Progress state of worklist is displayed now. (eg 50% done 15min left). This feature requires coatron A4 firmware 1.05.03.
- Host connection will be established automatically with program start and forced to stay online. Close TECAM is the only way to disconnect.
- User interface optimized to mouseless operation. New shortcuts were introduced for the most important functions. Especially define a new worklist is now much easier without a mouse.
- Data report improved
 - New line per unit (sec, %, ...)
 - Selectable units: The units are selected with the range definition of test method or QC file.
Example: If you just want to report D-Dimer with ng/mL then goto menu "OPTIONS\Method" and input the normal range of DD only in unit ng/mL.
For QC control ranges it is similar. Instead of menu "Options\method" goto database\qc-patient and set specific unit to 0 for blending out.
 - Data report is always sorted automatically to Patient, Test, Date, Time
 - Report Headlines can be blend out by setting "Title" to blank. Same with picture.
- Report options are available now also in main menu "Options".
- (QC) autofilter improved: By new filter menu or Double click on specific results within data management. Example: you would like to create a statistic of current QC results. -> Goto database, set cursor to recent QC result and press key "F6".
- Default files of TEControl A,N are updated
- Entry of new patient information (name, birth, ...) is now always within own dialogue frame.
- The Patient information dialogue will open, if unknown patient are received from analyser. This feature can be suppressed by checking "use patient information from host" within options menu "Communication".
- Worklist can now be printed
- Start of worklist can now be forced. No more key press at instrument side is required.
- Improved stability of communication to Host and instrument
- Database shows always last entry on first row
- Change records/results must be explicitly allowed within options menu even for the administrator.
- Factory default for system CDX is included

- Removing of minor bugs
 - Repeat worklist was not performed correctly
 - Define new method within menu "Options\Menu" had corrupted TECAM program start
 - Admin login with false password was not switching to user login
 - Deleting of results in database was not working with key "DEL" , but only with menu "Delete Records".

12. Mar. 2009:

Tecam V4.75

for Windows 2000/XP/VISTA

- New color design and autoscale for wide screen monitors.
- Language portuguese included
- QC/Statistic AutoFilter is set (PID,Name,Test and last 30 periods) when double click on specific result within datagrid.
- The Westgard Analysis switch automatically to correct unit if required (eg. Unit is set "INR" , but current data do not obtain INR results, but only seconds)

15. Sep. 2008:

Tecam V4.73

for Windows 2000/XP/VISTA

- Definition of laboratory name for instrument method within the options menu. If any name is changed, then you need also to update the database. For this goto menu DataBase\DB menu and select "update DB"

Example: Instrument method F5 can be named as "Factor V".

Warning/ Update information:

The update will reset all methods to default. After update goto to options menu and check for correct "host-id" if using ASTM interface.

22. Aug. 2008:

Tecam V4.72

for Windows 2000/XP/VIST

- Extended QC management for lot.-specific control plasma analysis:

The database allows now to define unlimited QC samples including the control-ranges for any tests. If the QC rule is set, then the qc-ranges are displayed in the Levey-Jenning diagram as red lines. The QC analysis returns the status 'failed' in case that the mean value of QC serie is out of range.

- Improved handling with reference ranges:

A test specific reference range can be defined within the options menu for every method. If incoming results are out of this range, then they are marked with the flag 'A'. The range can be defined for 3 units (eg. sec , % and INR) individually.

- Auto Flagging of result:

Every incoming result is checked for QC or normal ranges and flagged as followed.

- 'C' result is from control plasma.
- 'Q' control is out of range. The result is also marked with red color.
- 'A' result is from patient and abnormal. The result is also marked with blue color.

- Save and send result automatically (ASTM Autosend):

If this option is set in the options menu, then every incoming result is automatically and immediately forward to the host and database.

- Easy Zoom:

Simply click on the +/- at the chart's axis. In the context menu the "Autozoom" can be (un)set.

A press on keys cause following action:

- key "1/2": Zoom Y
- key "3/4": Zoom X
- key "5": Autozoom

- TECMONI V2.90 included: (requires analyser firmware 1.04.02 or higher)

Tecmoni is a nice addin for extended curve analysis. It allows to see all 4 channels simultaneously and in realtime.

- ASTM communication changed

- Reference ranges include to Result record (10.1.6: new "lower^upper" - old: not used)
- Universal Test ID changed in Result record (10.1.3 new "^testname^^testcode" - old "^^^testcode")
- Patient-ID No.3 changed in Patient record (8.1.5 : new "name1^name2^room^department" - old "name1^name2^birth^sex")
- Specimen ID changed in Test Order record (9.4.3 new "PID" - old: "PID^PACK^POS^LOT")
- New Comment Curve Record for transmission of reaction curve (sending this record can be deactivated in the options menu)

The ASTM modifications are backward compatible. Further information can be read in the TECAM helpfile.

- Language Modul Update for English, Italian , Spanish, Chinese, Greek and Russian.

28. Jan 2008:

Tecam V4.61

for Windows 2000/XP/VIST

- Language option. Goto to Options and select the language file. If your language is not included, simply copy "english.ini" as eg. spanish.ini and translate the entries to spanish. Please send a copy to tecam@log10.de .
- A picture can be included into the data-report.
- New icons and xp-look

28. Nov 2007:

Tecam V4.50

for Windows 2000/XP/VIST

Major change:

Statistical analyse supports now quality control ranges for 3 levels (Normal , Abnormal-1 & Abnormal-2).

The QC modul can combine control ranges with Westgard rules.

Recommend practice of QC control:

(example for PRFL = PT+PTT+FIB with Control Normal & Control Abnormal)

1. Define a new worklist
2. Click on P01
3. set field CP with Lot. number of control-N (eg. 100N01). For new lot.-numbers enter name = "Control N" , sex="C" ,birth=expiry date.
4. set test PT+PTT+FIB
5. Repeat for P02 for control-A1
6. Define patients for P03,.....
7. Send worklist to analyser
8. When worklist is finished, save result to database and goto database.
9. Set filter to test=pt , warning=C or sex=C . Doubleclick on specific pid or name -> filter will be set appropriate for qc analysis.
10. Start statistics
11. Set qc-ranges if required and enable qc-rules. If qc-range rules can not be enabled, then the test filter is not set correct. Go back to datagrid and set test (eg. pt, aptt,fib,.....).
12. Start QC analysis. The Levey Jennings diagram shows (data , mean , 1s , 2s , 3s and control-range).

Minor changes:

- Video tutorial available (open within menu 'Help')
- The communication port to analyser can be set to "auto" or to a specific commport.
In mode "Auto", TECAM search on com1 to com16 for a device. This could cause trouble on some notebooks which bluetooth support. Here set comm to specific port.
- In the Order-Screen lot.-numbers for 6 different controls can be entered. If one of this IDs is received in a results, than this result will be flagged with "C" (=control) in the field warning. This will help you to find control results easily by simply set the filter Warning=C. Set additionally the the filter test (eg. "PT") and filter

PID (eg. Control Lot) and open Statistic. A complete QC report will be generated.

- Bugfix for autosize of grid-columns
- Bugfix for multifilter (AND , OR relation)

10. Jul 2007:

Tecam V4.03

for Windows 2000/XP/VISTA

- New datafield "Room" (6char) and "Department" (4char) for patient information. Older database are automatically reorganized.
 - data reports modified
 - import/export of patient information support now all fields. The new field delimiter character is '| '.
 - ASTM patient information records modified:
 - field
Info3:Familyname(16char),Forename(12),Room(6),Department(4)
- Bugfix for filterbar. Filter name=XYZ and test=PT|APTT was not working correctly.

25. May 2007:

Tecam V4.02

for Windows 2000/XP/VISTA

- Search record with &,| (and,or) delimiters within the filterbar.

Example: You would like to report all PT,APTT,FIB results of patient "1234" of the last 3 monthes

set filter as followed:

date = ">2/2007 & <6/2007" -> select march , april and may

name = "=1234" -> select all records equal to name ("1234" should search for simular names !)

test = "PT|AP|FI" -> all test beginning with PT or AP or FI

08. May 2007:

Tecam V4.01

for Windows 2000/XP/VISTA

- New PROLIS license

The PROLIS licence will activate the new ASTM modul fully functional.

In TryOut or PRO licence TECAM allows only limited ASTM communication for test purpose.

- ASTM modul integrated

TECAM can now communicate over TCP/IP with a LIS (laboratory information system).

The data are sent according to communication standard ASTM E1381 & E1394-97.

If the host supports already a Stago STA-R driver, it can be used without any modification.

The communication supports only

- Send request of worklist from TECAM to LIS
- Receive requested worklist from LIS to TECAM
- Send results from TECAM to LIS

The communication does not supports any requests from LIS !

14. FEB. 2007:

Tecam V3.60

- Worklist Entry improved:
 - worklist is shown on the complete screen. Just click on result list to results
or switch between worklist and resultlist screen with funtion key "F7"
 - supports now input patient-ID with any USB handheld barcode scanner device
 - The orders of the worklist can be (de)activated individually and allow for example a repeat of the worklist for only specific samples.
 - The worklist can be send to instrument in the mode "validate and send".
In this mode the samples need to be scanned on the instrument. A worklist will be accepted only, if position and PID is identically to the instrument's rack reading.

7. Nov. 2006:

Tecam Pro V3.55

- New Report options:
 - 5 individual headlines + 2 Footline + Font + Alignment
 - New page per patient (single patient report)
 - New page per date (day reports)
- Result ranges for each test can be set manually or by analyser, if this option is set in the options-menu.
- DB-menu "Replace & Fill" supports now also filtered records
- New time filter preset "00:00-12:00" and "12:00-24:00"
- The lookout of worklist screen for defining test orders is optimized

20. Sep. 2006:

Tecam V3.53

This update requires instrument firmware version 1.03.02 or higher

- In the options menu the tests used for the orderlist can be defined.
- The statistic modul supports now Westgard Multirules Analysis
- Result ranges are added to patient reports
- The worklist screen support now multi order entry
- Additionally time filter presets for 60 and 90days and the last 30 periods.
- Doubleclick on a result record in the database will preset the filterbar automatically.
- Click to "NORMAL" in the statusbar until "comLOG" is displayed and go online. The communication between analyser and TECAM PRO is logged..

Recommended way for quality control:

- add Lot. and name of control plasma to the patients list and set sex to "C"
- Goto the result grid and set filter of column "SEX" to "C" to preselect all controls
- Double click on a record to preselect the requested control
- Goto statistical screen

5. May. 2006:

Tecam V3.14

This update requires instrument firmware version 1.03.00 or higher

Complete new registration module.

- After update a new registration is required. Expired licences will be upgraded free of charge.
- Doubleclick on database will start TECAM
- If unknown PID was entered for a job, you will asked for patient name automatically
- Three LOT. numbers for control plasma can be entered
- A filterbar was added to the patient management grid
- The size of the database is displayed in the grids headline.

15. Nov. 2005:

Tecam V3.13

This update requires instrument firmware version 1.02.18 or higher

Complete new registration module.

- Test table is adapted to Coatron A4 firmware 1.02.18

10. Okt. 2005:

Tecam V3.10

This update requires instrument firmware version 1.02.15 or higher

The online help file is updated.

Complete new registration module.

- The user can request a licence for one or more analysers. Only registrated analysers will be accepted. The licence can be installed on any workstation.
- The user can request an Admin licence. Any analyser will be accepted, but the licence can only be installed on one workstation. The Microsoft Windows CD Installation Key must be in conformity with TECAM Admin licence.

18. Jul. 2005:

Tecam Pro V3.04

This update requires instrument firmware version 1.02.14 or higher

- Bugfix for data export
- Shortcuts are added to the menu
- Import modul for patient ID , name , birth and sex
- account management to set different data access rights
- program preferences are set in one screen
- new PIDs during worklist entry will open a patient input form automatically
- every time intensive operation is indicated with a progressbar and can be canceled anytime
- worklist can be send in batch or selectiv mode to analyser
- size of database can be controlled and helps to protect the system from memory collapse.
- database supports now 3 units (sec + % + INR) and a notice field
- the reaction curve can be display in autoscale or fixed scale mode
- Multi Device Interface (more than one analyser can be linked to TECAM)

24. Jun. 2005:

Tecam V2.21

This update requires instrument firmware version 1.02.14 or higher.

- import of patient data from ASCI file is now possible
- upto three different profiles can be defined for the worklist

01. Feb. 2005:

Tecam V2.18

This update requires instrument firmware version 1.02.02 or higher.

- new service modul integrated. Tecam can now save or restore setup data from analyser.
- communication supports now serial port com1 upto com15.
- Remove of some minor bugs

19. Aug. 2004:

Tecam V2.13

This update requires instrument firmware version 1.01P14 or higher.

- Worklist can be defined and send to analyser. TECAM can switch the Coatron A4 automatically into patient ID scanning mode and read the barcodes. The received ID numbers can be connected with patient names and wanted testparameter and send back as an order to the analyser.
- Remove of some minor bugs

25. Jun. 2004:

Tecam V2.08

First release version.

Following Features are integrated:

- Bidirectional communication interface to automated analyser TECO COATRON A4. The results will be transferred including the optical reaction curve.
- ASTM Interface for LIMS connectivity
- STAT orders
- Continuous loading of patient samples
- Result management including reaction curves and comment field
- Patient management including a patient history file
- Powerful Worklist management (worklist can be prepared while instrument is operating)
- User account management (administrator or restricted user login)
- Support of external USB scanner
- Positive patient detection
- AutoBackup of database
- One click statistical analyse with westgard rules and Levey Jenning chart
- very flexible filter and sorting functions
- One click data reporting (ie. make report of patient xyz of all PT within the last 30 days)
- Export/Import data , grids , charts or report to PDF, XLS, TXT or HTML file
- Remote control of analyser
- Online update
- HTML Help
- Free Support