



# Quick Start Guide T8-ISO DESKTOP SOFTWARE

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## 1 Introduction

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This document describes setup, configuration and operation of the Desktop software used to operate the T8-ISO Isothermal Test Instrument with a connected PC.

Axxin's advanced T8-ISO isothermal instrument provides next generation molecular testing in a compact, stand alone, high sensitivity instrument suitable for both laboratory and field-based applications.

The T8-ISO Instrument is a portable instrument that provides measurement of two fluorophores: FAM and ROX or other fluorophores with similar spectra.

This instrument is intended for research and development use only and is not intended for in vitro diagnostic (IVD) medical use without further assay and application specific, testing and certification. The T8-ISO instrument forms part of a larger test system including the chemistry assay under test and risks for the overall system should be considered.

If the intended use carries risks of loss or injury, additional tests or indicators must be considered to mitigate these risks.

It is the user's responsibility to follow all diagnostic test kit instructions for use with T8-ISO Instrument. Any improper use leading to test failure such as contamination, lot expiry or incorrect sample handling is the responsibility of the user and falls outside the scope of Axxin.

This document is a quick guide to assist with instrument setup and use.

Refer to the following full user manuals for detailed instructions and warnings:

D005566 User Manual, T8-ISO Instrument, Axxin T8-ISO.pdf

D005842 User Manual, T8 Desktop Application, Axxin T8-ISO.pdf

### 1.1 Operating Modes

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The T8-ISO instrument is designed to operate either in standalone mode or connected to the T8 Desktop Software application. The method of use depends on the end user's requirements and preferred setup. The Desktop Software provides the user the tools to configure test types for deployment to the T8 Instrument. This includes creating customised test result calling decision algorithms. Additionally, the user has the option to connect to Desktop Software to observe tests and assay development in real time on the pc screen. Note that all Tests are still initiated through the instrument and not from the Desktop Software. Test type algorithms can also be run with previously acquired test data for optimising results.

## 2 Desktop Software Installation

Obtain a copy of the installation files for the desk top software. This is obtained by USB key copy from the supplier or downloaded from the Axxin Download Centre.

[www.axxin.com](http://www.axxin.com)

Select < support option>

Then <download centre>

It is required to register and receive approval to get access to the downloads.

This registration will give you access to all of the software modules and support documents required.



### 2.1 Desktop Application Installer

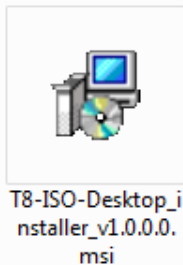
#### Desktop Application Computer

The Desktop software can be installed on a PC running:

Windows 7, Windows 8, or windows 10

The software will run under 32 bit or 64 bit operation systems.

#### To install the software:

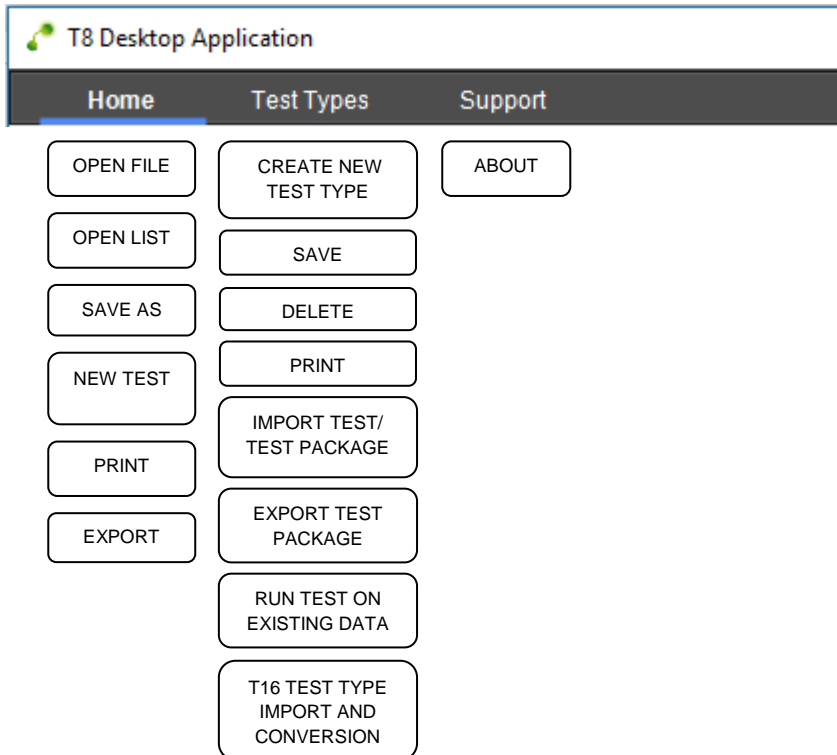


- Run the install file; *T8-ISO-Desktop\_installer\_vX.X.X.exe* on the target computer (where X.X.X is the version number of the software to be installed).
- If required, give permission for application to Run.
- Follow prompts in the Setup Wizard
- Select Installation folder location (default location: *C:\Program Files\Axxin\Axxin T8 ISO Desktop\*)
- Axxin suggests the application be made available for all users on the computer.
- Confirm installation process.
- Read and accept License Agreement
- Once installed the T8-ISO Desktop application will be found in the Start Menu > All Programs > Axxin > T8-ISO Desktop.

### 3 Starting the Desktop Software

To start the T8-ISO software select the desktop start icon or the .exe file in the T8-ISO program folder.

#### 3.1 Software Menu Structure

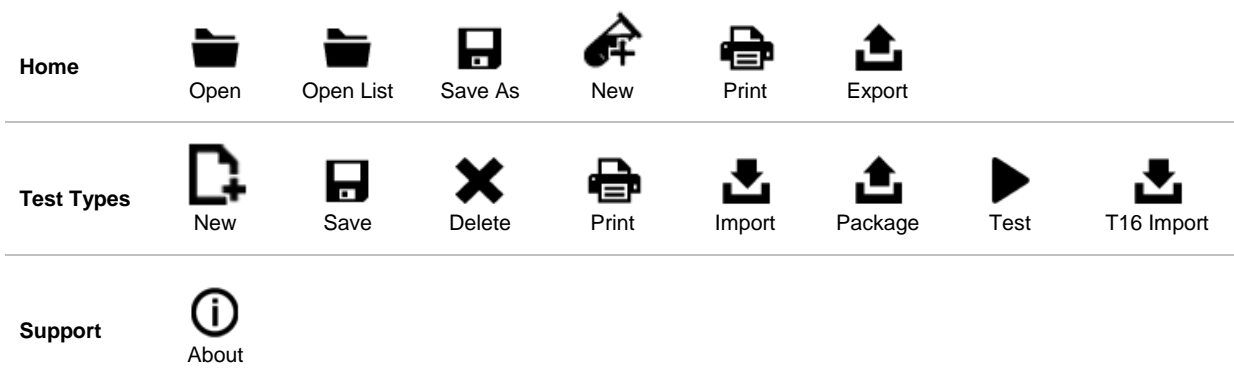


The application user interface to provide a means of navigating between available functions. It also provides a means of navigating between tabbed pages.

Navigating between pages does not reset or change the content of each page, e.g. data received for test in progress updates the corresponding results page, regardless of whether the user is viewing the page. A blue highlight line indicates which tab is currently displayed. Click a tab to display the associated page.

#### 3.2 Icons

The following icons are provided on each page:



## 4 Connect Desktop Application to Instrument

### Setup Instrument



Mini USB PC Cable



T8-ISO Instrument and Power Supply

Place the T8-ISO instrument on a stable, level bench, in a clean office or lab type environment.

*NOTE 1. Configure the power supply for your region. Connect the 12V power supply to the unit.*

*NOTE 2. Refer to the stand alone operation user manual for the T8-ISO for specific setup and configuration instructions: D005566*

Connect power supply to the instrument then press the front power button to start up the instrument.

- A USB key is used for export and import functions on the instrument.

### 4.1 Connect Instrument to the Computer via a Mini USB Cable

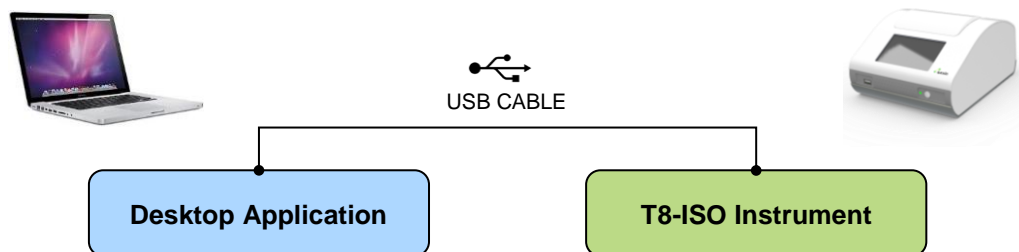


Figure 1 USB Setup Configuration

### 4.2 Connection Status Control

This is a specific User Interface (UI) control that is located to the right of the page menus. Due to its importance across the application, it is always displayed. Its status options are 'Connected' and 'Disconnected'.

- Displays current connection status.
- Provides a list of detected COM ports.



Figure 2 Instrument not connected

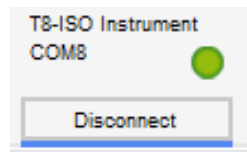


Figure 3 Instrument is connected

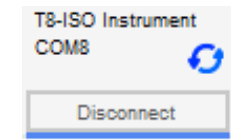


Figure 4 Instrument is running test

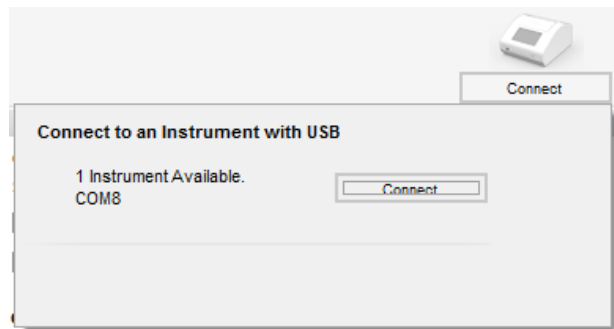


Figure 5 Connection Menu

### 4.3 Menu Bar Icons

The following menu bar icons are displayed on the home tab:

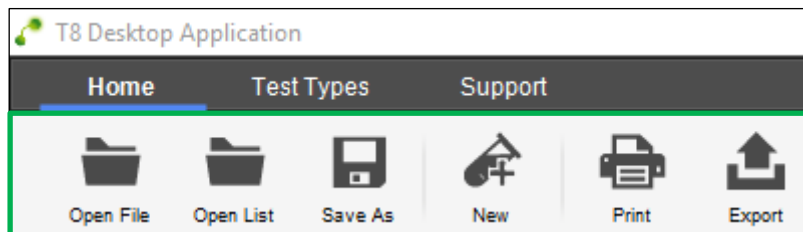
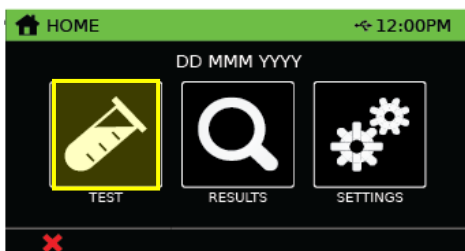


Figure 6 Menu bar icons

### 4.4 Running a Test on a Connected Instrument

To run a test on a connected T8-ISO instrument first ensure the instrument is connected to the desktop software. Then select the home tab on the desktop software.

Then run the test on the T8-ISO instrument.



The connected desktop will display the results of the test including graphs as the test runs and allow the test to be saved at the completion of the test.

Note: The test result file is also saved on the T8-ISO instrument.



## 4.5 Test Result Display

There are a variety of options for viewing test result information in the T8 Desktop Software. The following sections detail those options. The user toggles the left hand panel selection to alter the view.

### 4.5.1 All Tubes

The display All the results from all 8 tubes

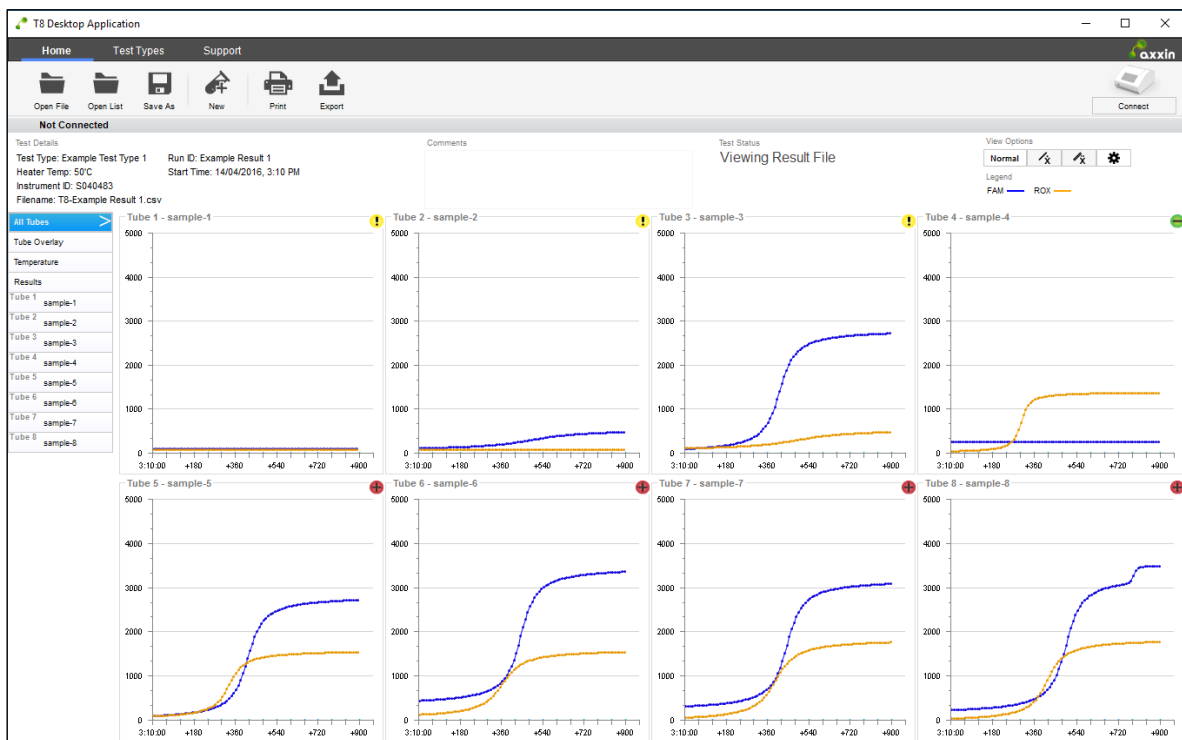


Figure 7 All Tubes graph summary

NOTE 3. Sample IDs are shown in the left hand navigation column.

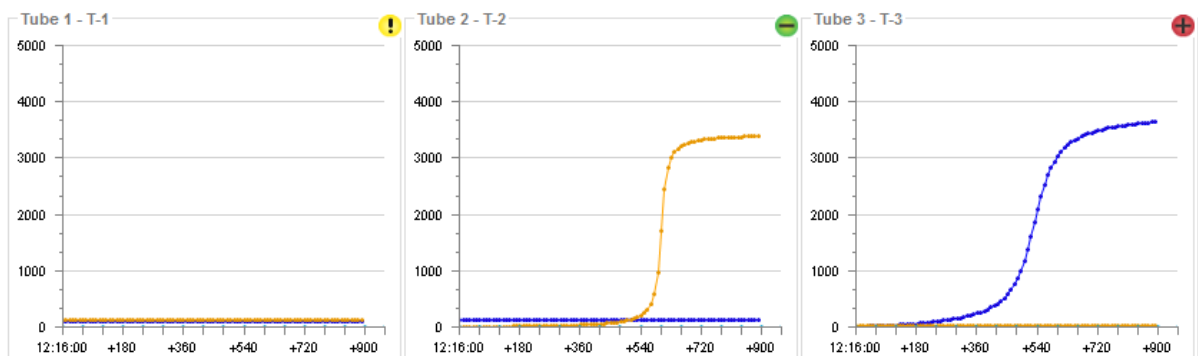


Figure 8 Example of Result Displayed on the graph

## 4.5.2 Alternative All Tube Views

To change the views of the All Tubes graph summary, the user can switch between normal, first and second tube derivatives and choose which of the channels to display.

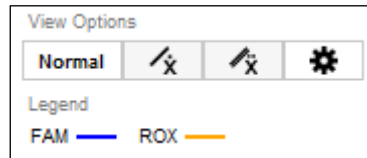
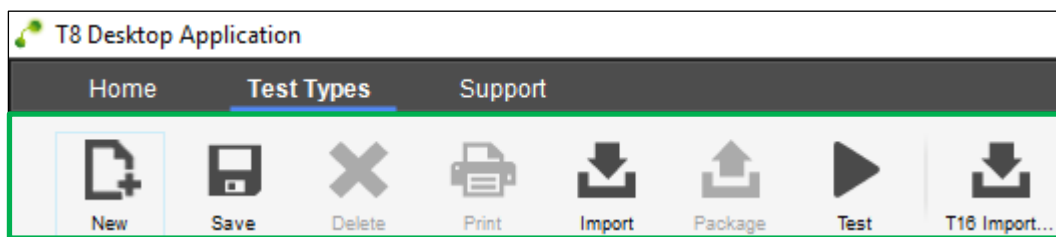


Figure 9 View options and Legend

## 4.6 Creating a Test Type



The characteristics of a specific test run on the T8 instrument is configured in a test type definition.

Test types are created and edited on the test type page.

A user can view and create a test profile. When the User creates a new profile they must enter a new unique name to identify the test on the instrument.

Once configured the test type must be imported in to the T8 instrument, for it to run.

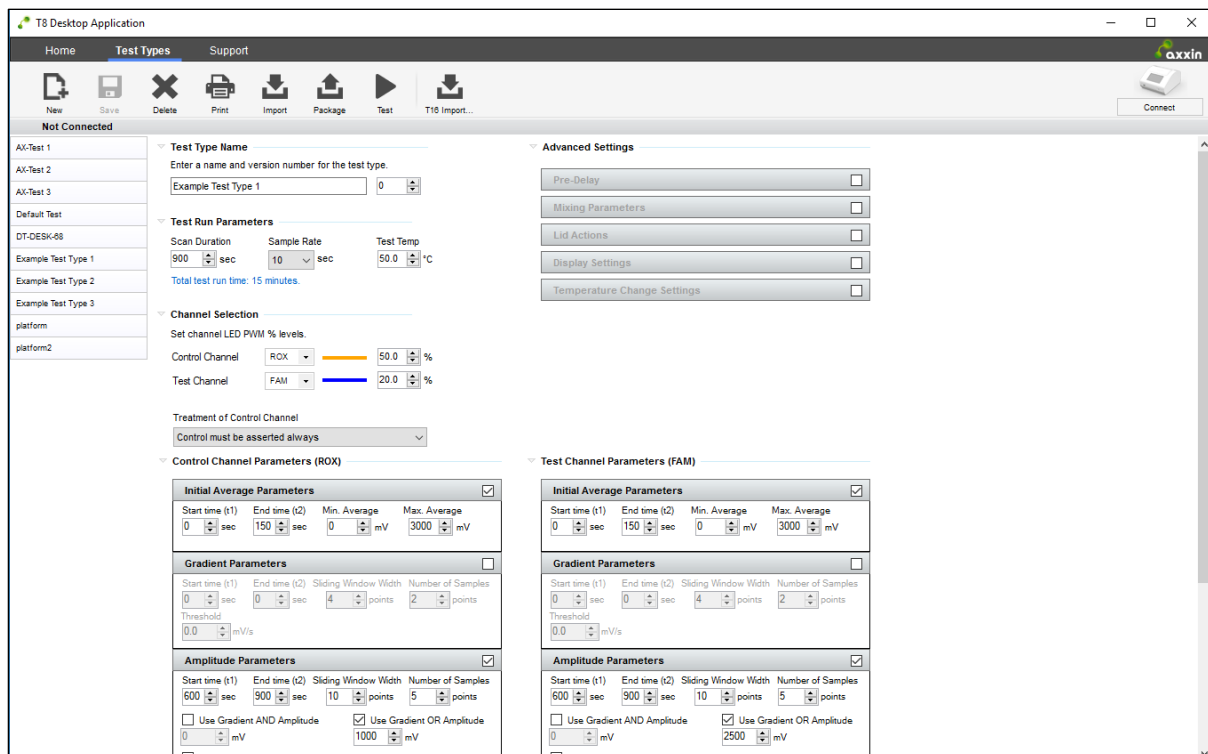


Figure 10 Test Types tab

Test Parameters include:

- Selecting channels to read (e.g. FAM, HEX and ROX)
- Selecting LED Settings
- Setting Channel LED levels (as a percent)
- Setting test duration
- Selecting a Decision algorithm, decision algorithms re-created in the "Algorithms" Tab.
- Setting test temperature
- Test Result Calculation
- Test Results Displays

Up to 10 test types can be exported to the instrument within a single file. This is referred to as a test package.

Test types can be created, reviewed, edited and re-run on previously saved test data on a computer without a connected instrument.

#### 4.7 Exporting a Test Package

The export test package function is available under the support screen on the main menu.

This function allows up to ten test types to be incorporated within a single test package file and copied to a USB memory key.

The test package can then be imported and run on a T8-ISO instrument.

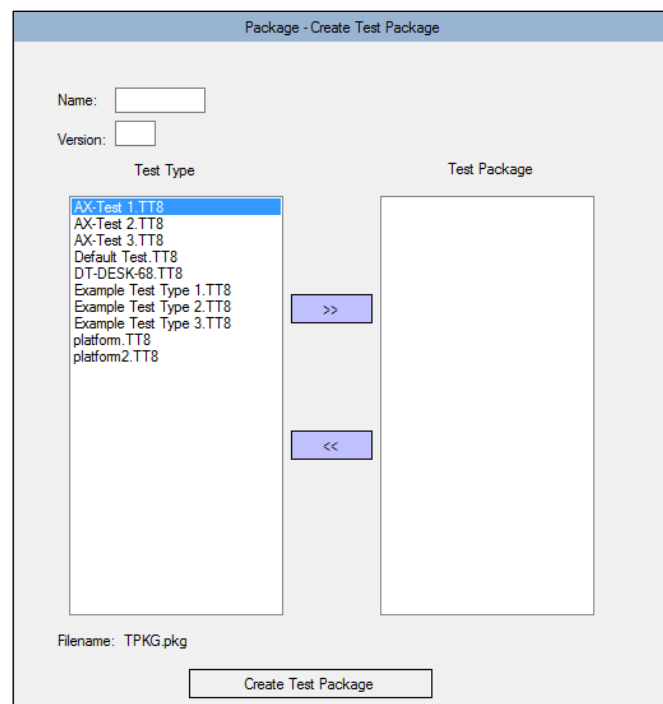


Figure 11 Export Results window

## 4.8 Run a Test Type on Existing Saved Data

The “Test” button allows an algorithm to be tested on an existing set of test data, previously acquired on T8 instruments.

This feature allows an assay developer to trial a new algorithm or revise an existing algorithm and immediately view its effect on an existing test result library. This avoids having to re-run a real world test every time the algorithm is revised.

For this feature to be used, a test result CSV file from the instrument should be available, with relevant test data content.

Only T8 Test Result CSV files are supported for analysis. It's not possible to test a T8 test type over a T16 result CSV file, for example.

First, click on a test type in the left panel, to test against.

Click on “Test”, and when prompted, choose the result CSV file, and press OK.

The test data will be evaluated and a separate window will be displayed, showing the result of the algorithm on the test data. Click on each tube for more information on each algorithm channel parameter.

A test type algorithm can be tested repeatedly in this way without having to save it. Once the desired algorithm parameters have been set, click on “Save” to commit the changes.

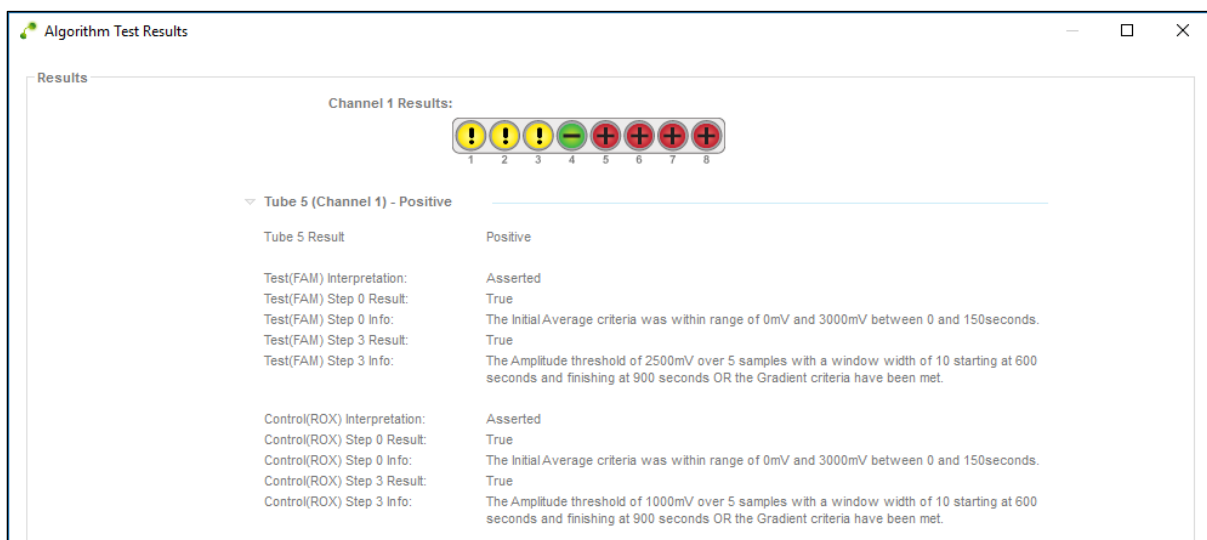


Figure 12 Algorithm Test Result Window

## 4.9 Test Result Export

The export function available for Test Results allows the user to export the test data to a .csv file. The .csv and image files are compatible and editable in most spreadsheet editors.

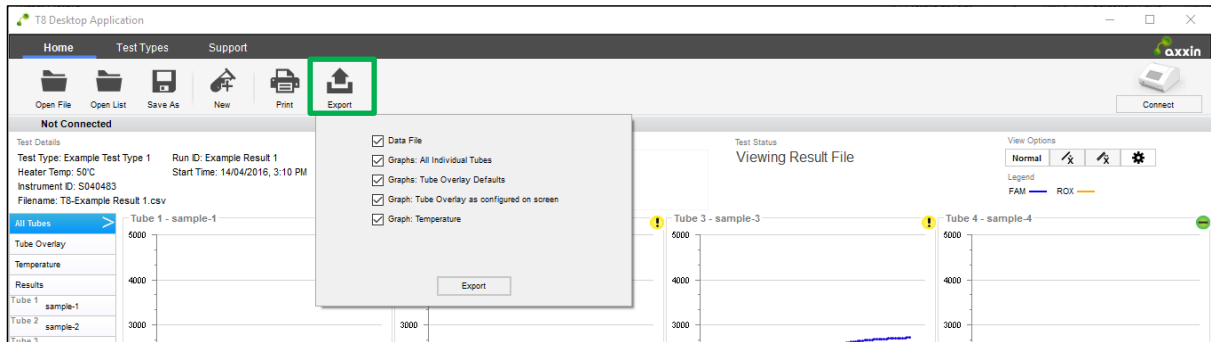


Figure 13 Export Results window

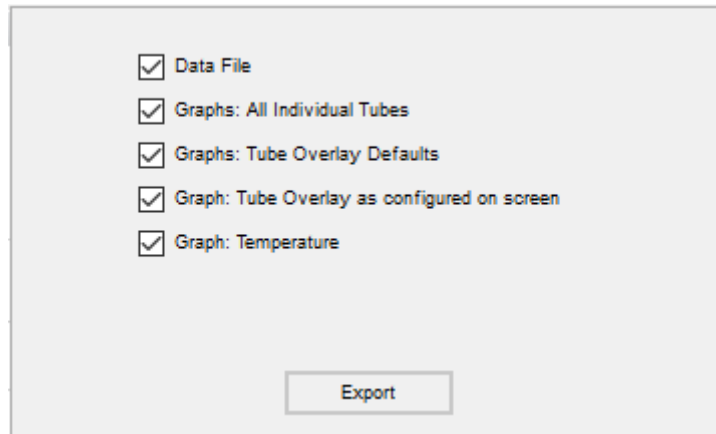


Figure 14 Export Options Panel

The structure of a .csv test result file is shown below.

<pre>T8-5038504-2016-04-27-24-kj kj kj lotty Instrument Model T8-ISO Instrument S/N 5038504 Instrument SW Ver V2.4.20 - 271 Date 27-Apr-16 Time 12:15 PM Lot Number 12345679 Lot Expiry 27-Apr-16 Test Number T024 User ID N/A Test Type kj kj kj kj Test Type Version 0 Test Name (Run ID) lotty Test Duration (sec) 60 Block Set Temp. (C) 56 Block Temp. Start (C) 55.9 FAM Set Duty (%) 20 ROK Set Duty (%) 30 Tube 0 Start FAM (mV) 0 Tube 0 Start ROK (mV) 0 Sample IDs Tube 1 Sample ID lotty-1 Tube 2 Sample ID lotty-2 Tube 3 Sample ID lotty-3 Tube 4 Sample ID lotty-4 Tube 5 Sample ID lotty-5 Tube 6 Sample ID lotty-6 Tube 7 Sample ID lotty-7 Tube 8 Sample ID lotty-8 ##### Test Type Version 0 Test Duration (s) 60 Time to Second Temp (s) 10 Sampling Interval (s) 10 Test Temperature (C x10) 560 Second Temperature (C x10) 500 Channel Assignment 1 FAM LED Duty (% x10) 600 ROK LED Duty (% x10) 600 Control Curve 1 Display Graphs 1 Display Tube Results 0 Mixing Cycles 10 Mixing Speed 1 Custom Option 0 Time at Open Lid 30 Pre Delay 35 Initial Start Time 0 0 Initial End Time 30 30 Initial Average Min Limit 0 400 Initial Average Max Limit 6000 2000 Normalized Response Grap 0 1 Gradient Window Width 4 4 Gradient Window Points 2 2 Gradient Threshold (x10) 0 0 Gradient Start Time 0 30 Gradient End Time 0 40 Amplitude Window Width 4 4 Amplitude Window Points 2 2 Amplitude Threshold (A) 0 0 Amplitude Threshold (v) 0 200 Amplitude Start Time 0 40 Amplitude End Time 0 80 Test Type CRC 0 Headings Units Reading # T3-FAM T1-FAM T1-ROX T3-ROX T2-FAM T2-FAM T2-ROX T2-ROX T3-FAM T3-FAM T3-ROX T3-ROX T4-FAM T4-FAM T4-ROX ms mV ms ms mV mV ms mV ms mV ms mV ms mV ms @@@ &gt; 1 730 1 2810 1 1426 1 3510 1 2120 1 4210 1 2810 1 4910 &gt; 2 10620 1 12715 1 11315 1 13415 1 12015 1 14115 1 12715 1 14815 &gt; 3 20625 1 22725 1 21325 1 23425 1 22025 1 24126 1 22725 1 24820 &gt; 4 30600 1 32700 1 31300 1 33400 1 32000 1 34100 1 32700 1 34800 &gt; 5 40625 1 42725 1 41325 1 43425 1 42025 1 44125 1 42725 1 44825 &gt; 6 50625 1 52715 1 51325 1 53415 1 52021 1 54115 1 52715 1 54815 ##### Result Table: CONTROL TEST F1 R1 R2 R3 R4 R5 R6 R7 Initial:                 Gradient: X X X X X X X X X X X X X X AmplitudeAND: X X X X X X X X X X X X X X AmplitudeOR: X X X X X X X X X X X X X X Combined:                 Tube# T1 T2 T3 T4 T5 T6 T7 T8 Final Result:                 Decision Time 20625 20625 20625 20625 20625 20625 20625 20625 Tube 0 End FAM (mV) 0 Tube 0 End ROK (mV) 0 Lid close time offset (mS) 142286 Block Temp. End (C) 49.6 Check Home 0 Test Completed Tube Result 1 Indeterminate Tube Result 2 Indeterminate Tube Result 3 Indeterminate Tube Result 4 Indeterminate Tube Result 5 Indeterminate Tube Result 6 Indeterminate Tube Result 7 Indeterminate Tube Result 8 Indeterminate File Checksum 4C108D90</pre>	<p>File Name T8-ISO Instrument Information</p> <p>Test information</p> <p>Test Type Parameters</p> <p>Test data</p> <p>Intermediate results</p> <p>Final results</p> <p>File checksum</p>
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Figure 15 Example of a .csv file