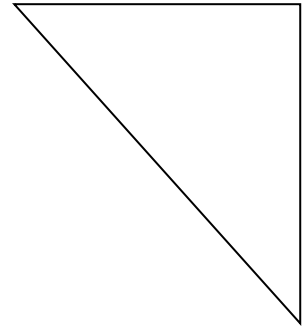


INSTRUCTIONS FOR USE



aokin *FP analyzer*

Order No.: A-FP-A-25

aokin Fluorescence Polarization analyzer



DESCRIPTION

The **aokin FP analyzer** is a portable instrument used for diagnostic tests known as fluorescence polarization assays. This instrument has been designed to provide an easy and accurate method for performing tests on site as well as in a laboratory setting.

Specification	Single well, fluorescence polarization instrument
Light Source	Light Emitting Diode
Detector	Photomultiplier Tube
Operating Temperature	5 to 40°C
User Interface	PC via USB
Service Interface	Membrane Keypad, Graphic LCD Display (128 x 64 dots) Internal Storage 4 MB
Power Requirements	9-12V DC, 250 mA
Dimensions	107 mm x 203 mm x 99 mm
Weight	1100 g
Filters	Excitation: 485 nm, Emission: 535 nm
Tube Format	10 mm 75 mm, borosilicate glass
Precision	< 0.5 mP standard deviation at 1 nM fluorescein
Measurement time	Minimum setting 7 seconds

USING THIS MANUAL

This Operation Manual provides detailed instructions for performing specific functions. Become familiar with the instrument's operation by initially following these step by step instructions.

aokinmycontrol protocols are run by an external software on a laptop or tablet computer. The LCD display is for servicing the instrument by personnel of **aokin** and for qualitative assays only.

DO NOT OPEN THE INSTRUMENT HOUSING OR REMOVE ANY PARTS.

Opening the instrument housing may void the warranty. Do not attempt to disassemble or modify the instrument. There are no user serviceable parts inside the instrument. This machine contains high voltage components. Never attempt any maintenance procedure not described in this manual.

Incorrect maintenance procedures may damage instrument or cause electrical shock. Please allow **aokin** to perform all maintenance, repairs and servicing.

ELECTRICAL POWER

The **aokin FP analyzer** may be powered by plugging the power adapter into a wall outlet (100-240 volts, 50-60Hz). The instrument may also be powered by a battery or by the car cigarette lighter adapter.

OPERATING ENVIRONMENT

The **aokin FP analyzer** has been designed as a portable instrument appropriate for both on site and laboratory use. Designed for field conditions, it should perform in all reasonable environments, provided that the internal optics remains **clean and dry**.

The instrument will function under environmental temperatures between (10° C and 40°C). It is neither water resistant nor waterproof. It should not be submerged in any liquids. The exterior of the instrument housing may be cleaned with a soft, damp cloth.

PREPARING SAMPLES

Always prepare a sample before inserting it into the instrument. Never pipette into a tube when it is inside the cuvette holder.

Never transport with a test sample tube inside it. When finished running samples always remove the test tube and close the top of the cuvette chamber to prevent the accumulation of dust.

Always use clean high-quality glass 10 mm by 75 mm borosilicate test tubes. Spilling liquid or breaking glass inside the instrument's cuvette chamber will damage the instrument and likely require repair.

On/Off Key: When plugged into an appropriate power source the instrument may be turned on or off by depressing the power key on the keyboard. The power key is identified by the international symbol for power.

SOFTWARE INSTALLATION

Installation of Assay Tool Program on a Personal Computer:

1. Download the software from the Internet. Please contact *aokin* at info@aokin.com for link or use provided USB Stick to access files.
2. Open the folder on the hard drive where you downloaded software.
3. Double click on '**SentryTools_2.3.26**'.
4. The 'Welcome to Sentry Tools Setup Wizard' dialogue box will be displayed. Click '**Next**'.
5. The 'Choose a file location' dialogue box will be displayed. Enter appropriate folder name. Click '**Next**'.
6. The 'Begin installation of Sentry Tools' dialogue box will be displayed. Click '**Next**'.
7. During the installation of software, you will see 'Installation progress' screen with explanation of each step that installation program is performing.
8. The 'Sentry Tools has been successfully installed' dialogue box will be displayed. Click on '**Close**'.
9. Unzip the provided Version of "aokinControl" to desired folder location.
10. Open the Aokin MYS software by double-clicking on the "Aokin"-Excel File.

USING THE SENTRY COMMANDER ADDIN FOR MICROSOFT EXCEL

It gives you ability to configure connection to your *aokin FP analyzer* and perform measurement.

When you start the Microsoft Excel application, you should see the message saying 'SentryCommander: **Press F3** to perform reading or **<CTRL+F3>** for configuration.' in your status bar.

If you don't see this message, please install software Sentry Tools.

PLEASE NOTE: All Sentry Tools applications use the same configuration parameters, which are recorded in Microsoft Windows Registry database. Every parameter that you change in one application is going to be changed for all applications.

PERFORMING MEASUREMENT

After Sentry Commander AddIn installation, you are able to start measurement from Microsoft Excel by selecting desired cell and pressing '**F3**' key.

To perform measurement on *aokin FP analyzer* instrument perform following steps:

1. Insert the sample in the chamber and close the top of the chamber.
2. Press the '**F3**' key. The screen on *aokin FP analyzer* instrument will display message saying 'Please Wait' for a few seconds while the instrument performs a measurement.

After the instrument finishes measurement, data is transferred to personal computer:

- If the selected cells are empty, measured parallel intensity is written to selected cell and perpendicular intensity is written to next row or column.
- If the selected cells contain data, parallel and perpendicular intensity is written to clipboard and message saying 'Data read and saved in Clipboard. Select field and press **CTRL+V** to paste.' is shown in Microsoft Excel status bar.
- Data is displayed in cells according to selected 'Data position' field in configuration.

Sentry Commander AddIn is providing raw data from **aokin FP analyzer** instrument. It is users responsibility to write functions that are going to calculate polarization value from this data.

aokin is going to provide sample Microsoft Excel worksheet to users for reference. Please [contact us at info@aokin.com](mailto:info@aokin.com) for more informations.

aokin will provide a calculation sheet for its commercial **aokinmycontrol** assays. If you don't have a calculation sheet for the **aokinmycontrol** assay [contact us at info@aokin.com](mailto:info@aokin.com).

There are several built in functions in Sentry Commander AddIn available to user:

1. SendCmdGetGfactor - Read G-factor from device, and write it to cell
2. SendCmdSetGfactor - Read data from cell and set G-factor on device
3. SendCmdGetSerial - Read serial number from device, and write it to cell
4. SendCmdSetDateTime - Set date and time according to date and time on personal computer
5. TestSentryConnection - Test connection to device

Mentioned functions should be called from Microsoft Visual Basic for Applications in the following way:

Application.Run ('SentryCommander.xla!SendCmdGetSerial', 'C1')

Where 'SendCmdGetSerial' represents called function and 'C1' represents the field where data is to be written.

All assay specific additional information necessary to operate the **aokinmycontrol** assay will be provided in the worksheet provided with the assays.

All **aokin FP analyzer** devices are factory calibrated before they are shipped. The factory calibration sheet is supplied with the instrument.

ADDITIONAL SERVICING INFORMATION

Additional servicing parameters are accessible by internal memory, keyboard and screen. Information available upon request.

SETUP OF THE AOKIN FP ANALYZER

The setup process is used to input or adjust basic information (such as time and date, LCD display settings).

The Setup process includes the following steps:

1. Make certain the **aokin FP analyzer** is connected to an appropriate power source. Turn on the **aokin FP analyzer** by depressing the power key on the keyboard. The power key is identified by the international symbol for power.
2. The **aokin FP analyzer** will sequence through a series of diagnostic self-checks.
3. After the bootup sequence is complete, the main screen will be displayed. 'Sentry' appears at the top of the main screen, followed by four lines of text displaying the 'Run Assay', 'Data Manager', 'Calibrate', and 'Setup' selections.

GENERAL TROUBLESHOOTING

Intermittent or no power

- Check the power adapter plug connection to the wall outlet as well as the power adapter cable connection to the instrument. Be certain power is provided to the wall outlet. If you are using the battery pack, make certain all batteries are properly and firmly inserted and that the battery pack cable is connected to the instrument.

Sudden, dramatic change in expected values

- Memory full or corrupted. Check available memory, if less than 80000 or cannot view data, erase data from device. Data should be downloaded as often as possible and after that the device memory should be erased.
- The sample may have become contaminated or the sample tube scratched.
- Be certain the top of the optics chamber is completely closed. Wait 5 seconds after top is closed before measuring. Check the G factor (calibration screen), power surges can cause it to change to 0.001.
- Recalibrate the instrument and retest.

Blank Intensity 0

Assay Time set to 0. Go to 'Setup' menu and set 'Assay Time'.

PMT voltage set to value less than 80. Go to 'Setup' menu and set the 'PMT value'.

Lamp out, PMT not working, Main board error. Flip open the lid and press Read. Check to see if the lamp turns on and off. If the intensity is still zero, the unit needs servicing.

Sample Intensity 0 or mP 0

Blank not read. Prepare blank measurement as described in the kit instructions and read blank intensity then add tracer (conjugate) and read the sample intensity.

No tracer (conjugate) added. Prepare new blank measurement and read blank intensity then add tracer (conjugate) and read the sample intensity.

If the housing of the instrument has been removed and the optics compromised, stray light may have found its way into the chamber. Such actions VOID the WARRANTY.

If after identifying the problem and trying the suggested solution, the problem persists, call **aokin** or [e-mail to: info@aokin.com](mailto:info@aokin.com).

WARRANTY

aokin warrants to the original purchaser that **aokin** instruments will be of high standards of workmanship and materials and will be free of defects when shipped for a period of one year.

The foregoing is **aokin**'s sole warranty with respect to the instrument. THIS WARRANTY IS EXPRESSLY IN LIEU OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES.

The warranties will not apply if it is determined by **aokin** that the instrument became defective due to accident or because the purchaser failed to exercise due responsibility, abused, misused, misapplied or permitted alterations of the instrument, power surge, unusual voltage conditions, tampering, or damage during repair work or attempted repair work made by anyone other than personnel expressly authorized by seller. Removing the cover of the instrument voids this warranty.

THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY AGAINST **aokin** shall be for the repair or replacement of defective original parts after it is determined by **aokin** that the parts are indeed defective. In addition, the above warranty does not cover any costs connected with removing or replacing any defective part or the costs to transport the defective part or instrument back to the manufacturer.

CONTACTS

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