ADAM MC Plus

Most accurate fluorescence cell counter

User Manual





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ADAM MC Plus Instruction Manual

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Introduction

General Description The ADAMTM MC Plus is a new standard of highly accurate automated cell counter equipped with bright field and two fluorescence channels (AO/DAPI).





Introduction

Technology

Measuring number of cells and their viability is an essential part of biological experiments.

Traditionally, hemocytometer has been used to quantify number of cells and Trypan Blue exclusion method to quantify cellular viability. While this manual method has been widely adopted as a standard method for cell counting, it has some drawbacks. One example is when there are non-cell debris such as dust or tissue residues, they can be counted as cells. Also, Trypan Blue exclusion method has been known to overestimate cellular viability. In addition to these limitations, manual counting can be user-dependent. To address these problems, NanoEntek has developed ADAM[™] MC Plus. ADAM[™] MC Plus is an image-based fluorescence cell counter. It takes bright field image and two color fluorescence images. ADAM[™] MC Plus uses bright field images to quantify cell sizes and two fluorescence images to quantify number of total cells and dead cells. ADAM[™] MC Plus is accurate, simple and reliable.

Introduction

Basic principle of counting

ADAM[™] MC Plus uses Acridine Orange (AO) and 4',6-diamidino-2-phenylindole (DAPI) to count total number of cells and number of dead cells, respectively. AO is a cell-membrane permeable dye that stains nucleus of every cells regardless of the cell's condition. Therefore, it is used to count total number of cells. DAPI is a cellmembrane impermeable dye that only stains nucleus of cells with damaged membranes or cells with inactive metabolism. Therefore, it is used to count number of dead cells. Schematics of counting principal is shown below. From total cell counts and dead cell counts, viability of cells is calculated as below;



Principle (Total cell count)

Product contents

ADAM[™] MC Plus

ADAM[™] MC Plus is shipped in a carton box containing followings;

Item	Quantity
Main device	1
User manual	1
USB hub	1
Wifi dongle	1
Power cord	1
Adapter	1
Printer (optional)	1

AccuPlus Slide

AccuPlus Slide has following components:

Item	AccuPlus Slide (Cat. No: AP4S-100)	Cell viability reagent (Cat. No: APAD-400)
Disposable Slice	100 pcs (4 channel)	N/A
Reagent	20 mL x 1 bottle	20 mL x 1 bottle
Available test Q'ty	400 test	

Upon	 Examine the instrument carefully for any damage incurred during transit. Ensure that all parts of the instrument including
the	accessories listed above are included with the product.
instrument	 Any damage claims must be filed with the carrier.
	 The warranty does not cover in-transit damage.

- Upon receipt, store AccuPlus Slide at room temperature.
- Cell viability reagent should be stored at 2~8°C

Product Description

Front view of ADAM[™] MC Plus The front view showing various parts of the ADAM^{\rm TM} MC Plus is shown below:





Co	ntrol buttons	Description
1	Door	Slide holder is inserted and ejected.
2	Power	Power on / off.
3	LCD	Display processes and results.
4	Auto Focus	Turn on/off the auto focus function. (If the auto focus function is turned off, the autofocus is only activated for the first measurement.)
5	START	Performs all procedures of automatic counting.
6	LOCK	Protects the alignment of stage from external shock when ADAM [™] MC Plus is being moved. Lock ADAM [™] MC Plus before turning it off or moving it.
1	EJECT	Ejects the slide holder from ADAM [™] MC Plus. Functions as unload.
8	Sample	Check the sample to be measured and enter the name. Also enter the dilution factor.
9	Mode	Select the measurement mode. The default mode is 13 frames for fluorescence and the Fast mode is 6 frames. Real cell size mode is a mode for measuring bright field images. Bead mode is for QC.

Product Description

Rear view of ADAM[™] MC Plus The rear view showing various parts of the ADAM[™] MC Plus.:



Port	Description
① USB Port	Port for software update and save the data.
② PC port	Connects with PC.
③ Power Plug	Connects ADAM [™] MC Plus power cord to wall outlet.



Do not use the 2 PC port. This port does not recognize USB.

Getting started

Environmenta I requirements

At low temperature (\leq 10 °C), allow the device to warm up for 10 minutes at ambient temperature before use.

To ensure correct operation and stable performance,

install the ADAM^{\rm TM} MC Plus in a location which meets the following conditions:

- 1. Use at room temperature between 20 and 35 °C
- Not recommended for cold room use (\leq 4 °C).
- 2. Do not expose the device to direct sunlight.
- 3. Do not subject the device to direct or continuous vibration.
- 4. Do not subject the device to intense magnetic or electromagnetic fields.
- 5. Do not install the device in high-humidity environment.
- 6. Location of device should be free from corrosive gases or other corrosive substances.
- 7. Ensure minimal contact with dust or other airborne particles.
- Allow a 10 cm (4 inches) minimum space around the device for proper airflow.
- 9. Do not place any objects on the device.

Power on and Initial Display

- 1. Check the connection of ADAM[™] MC Plus and power cord.
- 2. Press the power button for 2~3 seconds.

If you get an error message, please contact your local distributor or sales @nanoentek.com.

If booting is successful and no errors are detected, the home screens will be displayed as below.

ADAM	
------	--

- Do not tilt the device too much in the forward when connecting the power cord.
- Do not move the device after connecting power cord.

When you connect the power cord to ADAMTM MC Plus even without power on the device, it will go through self diagnostic tests.

Getting started

Error messages during booting

[System State]



It appears when booting is not working properly. Turn off main power and restart device.

If this message still appears after restarting, contact your local distributor or sales@nanoentek.com.

Error code	Cause
0x00000C00	Failure of X-axis sensor
0x00007000	Failure of Y-axis sensor
0x00008000	Failure of Z-axis sensor
0x06000000	Failure of Locking module sensor

Getting started

Count setting

[Cell size]

Set the minimum and maximum size of cell.

Min

Cell size

Max 80

[Dilution factor]

When diluting sample, set the Dilution factor.

1.0

Factor values for the Cell viability reagent is already applied.

3

Dilution factor

Instruction

Instruction is provided in this section for preparing the sample with Cell viability reagent for use with disposable AccuPlus Slide for automated cell count using the ADAM[™] MC Plus. Please check the procedure of sample preparation and testing below. For more detailed information, please refer to the next page.

1. Mix the sample with Cell viability reagent.



2. Load 15 μL of mixed sample. Then, wait 1 minute for the sample settling.



3. Insert AccuPlus Slide. Get the result.



Sample preparation

1. Cultivate the required number of cells.

<u>NOTE</u> Concentration out of this range will result in errors. Refer to page 20 for more information about errors.

- 2. Thoroughly mix the cell pellet by vortexing or pipetting.
- 3. Check visually if any cell clumps or agglomerates remain.

Cell counting

	9 NanoEntek	\triangleleft
U		0
60		\$
\Box		\triangleleft

[AccuPlus Slide 4 ch]

Counting cell

1) Add 50 µL of your sample to 50 µL supplied Cell viability reagent.

- 2) Vortex the tube vigorously.
- Load 15 μL sample mixture to the AccuPlus Slide A,B,C or D channel. Then, wait 1 minute for the sample settling.

<u>INOTE</u> When you load of the sample mixture to the AccuPlus

Slide, please be careful not to make bubbles.

Cell counting

WARNING

[Sample loading error]

Be cautious of loading the correct volume of the sample into AccuPlus Slide. The instrument will not detect low or high sample volumes.

Correct volume



Low volume



CAUTION

Avoid bubbles which may negatively affect the result.



Cell counting

WARNING

[AccuPlus Slide insert error]

Completely insert AccuPlus Slide face up, in the direction of the arrow on the slide. The instrument will not detect if slides are inserted incorrectly. See pictures below for proper insertion.



WARNING

- Please insert or remove the AccuPlus Slide when the slide holder is fully ejected.
- When the test is finished, please remove the AccuPlus Slide from the slide holder.

Measure

Run sample

Start counting process by pressing 'START'.

It may take about 2 minutes longer for auto focus at the initial test.



While the test is in progress, you can check the cell images of each channel.



Measure

Result analysis

The result will be displayed after being automatically calculated by ADAM^{\rm TM} MC Plus software.



Title	Number of Total cell	Number of Non-Viable cell	Viability
Viability 01	1.10E6	5.50E5	50%
Viability 02	2.20E6	5.50E5	75%

- The viability will be automatically calculated by the ADAM[™] MC Plus software after each measurement of the total cells and the non-viable cells.
- First, the total cell number and second, non-viable cell number are measured and then the cell viability is calculated as subtracting non-viable cell counting numbers from total cell counting.

Measure

Result Analysis -Error code

Read	ng 4ch						Adjust Auto Focu	us
Δ]	в с \land 🗹 В		Dilution	MC		Dilution		
	E	NTER TITLE	1.0	EN	TER TITLE	1.0		
	MA		Dilution	⊠ D		Dilution	 STADT	
	E	NTER TITLE	1.0	EN	TER TITLE	1.0	START	
Resul	A DA 🗆 Fa	ist Mode	🗌 Rea	al Cell Size	⊠ B	ead Mode	-	
Resul	A D A D Fa	ist Mode Total cell	☐ Rea	al Cell Size Live cell	⊠ Be Avg. size	ead Mode	LOCK	
Resul No	A D A D Fa	Total cell	Viability 100.00 %	al Cell Size Live cell 1.23x10E5	∑ Be Avg. size 10.36 µm	ead Mode Aggregation 0.00 %	LOCK	
Resul No	t Title 23/07/10 09:48:01 A 23/07/10 09:48:01 B	Total cell 1.23x10E5 (L) 1.15x10E5 (L)	Rea Viability 100.00 %	Live cell 1.23x10E5 1.15x10E5	✓ Be Avg. size 10.36 µm 10.01 µm	ead Mode Aggregation 0.00 %	LOCK	
Resul No	A D A Fa	Total cell 1.23x10E5 (L) 1.15x10E5 (L) 1.22x10E5 (L)	Real Viability 100.00 % 100.00 %	Live cell 1.23x10E5 1.22x10E5	 ✓ Bo Avg. size 10.36 µm 10.01 µm 10.84 µm 	ead Mode Aggregation 0.00 % 0.00 %	Lock	

Error code	Cause
н	Frames with errors are over 50% of total counting
-	frame.
0	Cells are more than 2×10^7 cells/mL.
Н	Cells are more than 1×10^7 cells/mL.
L	Cells are less than 4 × 10 ⁵ cells/mL.
U	Cells are less than 5 × 10 ⁴ cells/mL.
	Frame with error that contains cells whose diameter is
F man from a [#]	larger than 100μm.
Error frame [#]	When this error shown in result window, please check
	the image.

Data list

Dat	ata List											
All	No	CH	Slide	Sample	Total	DateTime	Viability	Live	Dead	Ang. size 🔒	Start Date	
	0020	ои	o	23/06/22 16:05:35 D	1.47x10E6	2023-06-22 16:05:35	0.148	1 20x10E6	2 78x10E5 (L)	16 Sijum	2023 / 06 / 16	
	0019	CH4	с	23/06/22 16:05:35 C	1.17x10E6	2023-06-22 16:05:35	83.57%	9.43x10E5	2.27x10E5 (L)	17.25µm	2023 / 06 / 22	
	0018	ОН4	в	23/06/22 16:05:35 8	9.33x10E5	2023-06-22 16:06:35	93.59%	8.76x10E5	6.71x10E4 (L)	17.82µm	SEARCH	
	0017	СН4	A	23/06/22 16:05:35 A	1.34x10E6	2023 06 22 16 06 35	95.86%	1.28x10E6	5.54x10E4 (L)	17.12µm		
	0016	CH4	A	23/06/2216.02:06 A	1.11x10E6	2023-06-22 16:02:06	77.64%	8.65x10E5	2.49x10E5 (L)	16.91µm	LA EDIT	
	0015	CH4	с	23/06/22 16:00:46 C	1.20x10E6	2023-06-22 16:00.46	81.19%	9.73x10E5	2.25x10E5 (L)	16.09µm	C3 IMAGE	
	0014	ОН	8	23/06/221559:508	1.01x1086	2023-06-22 15 59 50	91,725	9.26x1085	8 35x1054 (L)	16.91µm		
	0013	014	A	23/06/22 15:58:22 A	1.12x10E6	2023-06-22 15:58:22	78.21%	8.73x10E5	2.42x10E5 (L)	17.16µm	SAVE	
	0012	014	c	23/06/2215.56:52 C	1.11x1066	2023-06-22 16:56:52	es.cen.	9.60x10E5	1.47x10E5 (L)	21.65µm	🖶 PRINT	
	0011	ÖH4	D	23/06/2215:32:04B	1.25x10E6	2029-06-22 15:32:04	89.66%	1.12x10E6	1.30x10E5 (L)	16.44µm	MAIL MAIL	
	0010	014	A	23/06/22 15:32:04 A	1.85x10E6	2023-06-22 15:32:04	94.79%	1.75x10E6	9.62x10E4 (L)	19.04µm		

Control buttons	Description
1 All	Select all data in Data List.
2 SEARCH	Display the data of the selected date.
③ EDIT	View and edit the data. Multiple data can be edited with the same settings.
④ IMAGE	Check the cell images of each channel.
(5) SAVE	Save the selected data to USB(PDF, Excel, Image).
6 PRINT (optional)	Prints the selected data.
	Send the Excel, PDF, and Image files of selected data to
() MAIL	e-mail. Delete the selected data.
(8) DELETE	Delete the selected data.

● <u>NOTE</u>

'PRINT' button will be automatically activated when portable printer (optional) is connected

EDIT



Control buttons	Description
(1) Sample	Edit the sample name.
(2) Cell size graph	Allows to view the cell size graph for each channel.
③ Cell size table	Allows to view the number of cells in each cell size. T=Total cell (AO), D=Dead cell (DAPI), R=Real cell size(Bright)
④ Cell size setting	Set the min/max size of the cell.
(5) Dilution Factor	Set the dilution factor of sample. (Factor values for the Cell viability reagent is already applied.).
6 Frame graph	Allows to view the counted cell number of each frame.

IMAGE



Control buttons	Description
① Select images	Select images measured in bright field, AO or DAPI.
② Original	Check the original image.
③ Counted	Check the counted cell image.
④ Frame	Select a frame number of the channel.
5 Zoom-in/out	Zoom in and out to check the cell image.

SAVE

AD	DAI	N I	NC	Plus D	· Selec	t Path			:≣Dat	a © Setting
					_	Total Size	Free Space	Volume Label		
Dat	No No	t сн	Slide	Sam	D	14.34 Gb	13.74 Gb		d cell Conc./	Start Date
M	0020	014	D	23/02/24 15:45					7x10E4 (L)	End Date
	0019	CH4	с	23/02/2415:45					3x10E4 (L)	2023 / 02 / 27
	0018	CH4	8	23/02/2415:45					1x10E4 (L)	SEARCH
	0017	C114	^	99/03/3416:46					4x10E4 (L)	
	0016	CH4	D	23/02/2415:36					1x10E6 (H)	L스 EDIT
	0015	C144	c	23/02/2415:36					1x10E6 (H)	IMAGE
	0014	CH4	8	23/02/24 15:36		Data Type	0		4x10E6 (H)	SAVE
	0013	CH4	A	23/02/2415:36			2		3x10E6 (H)	📾 PRINT
	0012	C144	D	j.		M PDF	M Exci	el ⊡ Images	96x10E5	
	0011	CH4	с	1		☑ Consolida	ated PDF	Consolidated Excel	26x10E5	MAIL
-										× DELETE
						CANCEL		APPLY	···· 3	

Control buttons	Description
① Select Path	Selects save path from the list to send the selected data.
② Data Type	Selects which data type to save.
(3) Apply	Exports the files to a selected save path
	Files can be sent to only one save path at a time.

MAIL

AC	DAM	N 1	νс	Plus	No History ··· 1	Delet	•	sure :≡I	Data	@ Setting
Data	a Lis	at CH	Circle	Samola				· Dead cell Conc.		Start Date
							I.		^	2023 / 02 / 21
	0920	CH4	D	23/02/24 15:45:05 0				7.57x10E4 (L)		End Date
	0019	CH4	с	23/02/2415:45:05 C			I.	7.53x10E4 (L)		2023 / 02 / 27
	0018	CH4	8	23/02/24 15:45:05 8			l	8.31x10E4 (L)		SEARCH
	0017	CH4	A	23/02/24 15:45:05 A			l	8.24x10E4 (L)		
	0016	CH4	D	23/02/24 15:36:56 D			×	3.31x10E6(H)		년 EDIT
	0015	CH4	с	23/02/2415:36:56 C	Mail Address 2			3.41x10E6 (H)		IMAGE
	0014	CH4	8	23/02/24 15:36:56 8	sales@nanoertek.com			3.34x10E6 (H)		SAVE
	0013	C144		23/02/2415:36:56 A	Data Type (3)			3.23x10E6 (H)		🖶 PRINT
	0012	C144	D	J. Contraction of the second sec	✓ PDF	V Excel		7.96x10E5		MAIL MAIL
	0011	CH4	с	1	Consolidated PDF	V Consolidated Exce	el.	7.26x10E5		
e								,	¥	× DELETE
					CLOSE	SEND		4		

Control buttons	Description
1 History	Selects e-mail address from the list to send data. The e-mail address where data has been sent will be saved.
② Mail Address	To send files to new e-mail, enter the applicable e-mail address.
③ Data type	Selects which data type to send via e-mail.
④ Send	Send the files to selected e-mail address. Files can be sent to only one e-mail at a time.

Setting

Setting

ADAM MC Plus				≣ Measure	≔Data	@ Setting
Count Setting (1)						
Cell size	Min 5	Max 80		V. 1.4.3.13 H 0.01	F 0.02-221215	UPDATE
Dilution factor	1.0			Serial number CRELD221201-002		5
Wifi (2)	PETTINO	REMOTE	(3)	Date&Time		
0	SETTING	REMOTE	0	2023 / 02 / 27	AM 11:32	(6)
Mail (4)	SETTING			Capacity 91.6%		m (7)
V.1.4.3.13					1023-0	2 27 11 32 25

Control buttons	Description
Count setting	Set default values of cell size and dilution
© oouni setting	factor.
2 Wifi	Set the wifi to use the e-mail function.
③ Remote support	Connects to remote support software.
④ Mail	Do not change the setting in mail.
5 Update	Firmware or Software update through the USB.
6 Date&Time	Set the current date and time.
⑦ Capacity	Check remaining capacity.

Setting

Wifi

NOT WICFIG					a mea	ioui6	Data	etu
Count Setting		550	Signal	Security	Encryption			
		LSRDteam	100	WPA2PSK	AES	Î	areion	
Cell size	Min		100	WPA2PSK	AES	1EC	0.02 230516	UPDATE
		AT_402,AIR_910604,WW_ec08	85	WPA2PSK	AES			
		fake	72	WPA2PSK	AES			
Dilution factor	1.0	HD office	70	WPA2PSK	AES			
		THGLOBAL	68	WPA2PSK	AES			
Wifi		NANO-INST	62	WPA2PSK	AES			
Mail	SET	Password			REFRESH		PM 02 . 21	
		Encryption			CONNECT			
		IP Status 192.168.25.28			CLOSE	1		
V.1.42							2023-	07-07 14:27:95

- 1. Click the Refresh button.
- 2. Select the wifi.
- 3. Insert the password of selected wifi.
- 4. Click the Connect button.

CAUTION

If connection error occurs, please contact a laboratory facility manager



- 1. Connect to wifi.
- 2. Click 'Remote support' button.
- 3. Share your ID and password to NanoEntek.

NOTE

The remote support feature is to be used for maintenance only by request of NanoEntek.

WARNING

If you do not see your Remote Support ID and Password, click the 'Close' and 'Remote Support' button again until they appear.

Remote support

Setting

Update

- 1. Prepare the USB with update file.
- 2. Insert the USB.
- 3. Click the UPDATE button.

CAUTION

• The 'AdamUpdate' folder must exist in the root path of the USB folder.

• ADAMTM MC Plus can be updated only when the firmware or software file Exists in the 'AdamUpdate' folder. The 'ADAMTM MC Plus.exe' file should be in the 'AdamUpdate' folder.

• Do not rename the 'AdamUpdate' folder. The folder name should be 'AdamUpdate'.

Power off

Lock

Press **LOCK** before turning off the device.

If there is no operation for 1 minute, the lock function will be activated automatically.

When the device is locked, the screen will be changed as shown below.



Power off

If you press the power button 2~3 seconds, then 'Slide to shut down your PC' message will appear. Slide down the screen to turn off the power.



Maintenance and cleaning

Result analysis

- 1. ADAM[™] MC Plus does not need regular maintenance.
- 2. ADAM[™] MC Plus has no replacement of consumable materials.
- Please clean the exposed surface of ADAM[™] MC Plus frequently or before testing, using a soft cloth and isopropyl alcohol or deionized water.

CAUTION

Dispose of wipes in an appropriately labeled solvent contaminated waste container.

Trouble shooting

Trouble shooting

Problem	Description	Solution
ADAM [™] MC Plus does not power up	No power from outletBad power cord.	Check power source.Replace.
Inaccurate result	 Cell number may be out of range. Cell viability reagent has expired. Too high clumped cells. 	 Adjust the number of cells to recommended concentration (refer to page 33). Discard Cell viability reagent that have expired. Purchase the Cell viability reagent (refer to page 33). Try again after vortexing
When error message is shown (For information on each error message, see page 20)	Whenframes with errors are over 50% of total counting frame. (Error message: E)	 the cells. Check the suspension of cells if all cells are fully dissociatedintosingle cells. If contaminants except cells are found, prepare sample again.
	 High concentration of cells (Error message: H) Over detection range (Error message: O) Low concentration of cells (Error message: L) Under detection range (Error message: U) 	 Check if concentration of cell is too high. Dilute the sample and count again. Check if concentration of cell is too low. Use concentrated sample and count again.

Warranty

Warranty

If any defects occur in the ADAM[™] MC Plus during one (1) year warranty period, NanoEntek will repair or replace the defective parts at its discretion without charge. The following defects, however, are specifically excluded:

- 1. Defects caused by improper operation.
- 2. Repair or modification done by anyone other than NanoEntek or an authorized agent.
- 3. Damage caused by substituting alternative parts.
- 4. Use of fittings or spare parts supplied by anyone other than NanoEntek.
- 5. Damage caused by accident or misuse.
- 6. Damage caused by disaster.
- 7. Corrosion caused by improper solvent or sample.

For your protection, items being returned must be insured against possible damage or loss. NanoEntek cannot be responsible for damage incurred during shipment of a repair instrument. It is recommend that you save the original packing material in which the instrument was shipped. This warranty should be limited to the replacement of defective products.

For any inquiry or request for repair service, Contact sales@nanoentek.com or your local distributor.

Technical specifications

Technical Specifications



ADAM [™] MC Plus		
Measuring range	5x10 ⁴ ~ 2x10 ⁷ cells/mL	
Optimal range	4x10 ⁵ ~ 1x10 ⁷ cells/mL	
Analysis time*	Please refer to following table.	
Voltage	DC12V	
Current	5A	
Objective lens	4 X	
LED	4W Green LED	
Camera	CMOS camera	
Filter	Excitation filter, Dichroic filter, Emission filter	
Weight	7 kg	
Size (W×L×H)	277 × 276 × 270 mm	
Degree of protection	IPX0	

Analysis time*

Mode (channel)	Auto Focus (on)	Auto Focus (off)	Frame of capture
Bead mode (BF/AO/DP)	80 sec/test		13 frames
Accuracy mode (AO/DP, Default)	35 sec/test	17 sec/test	13 frames
Real + Accuracy (BF/AO/DP)	65 sec/test	35 sec/test	13 frames
Fast mode (AO/DP)	28 sec/test	10 sec/test	6 frames

Operating environment condition

Temperature	5 °C ≤ Temperature ≤ 40 °C
Humidity	20 % ≤ Humidity ≤ 80 %
Altitude	Altitude ≤ 2,000 m





AccuPlus Slide	
Loading sample vol.	15 µL/test
Measuring sample vol.	3.2 μL/test

Solutions

Cell viability	20 ml / hottlo
Reagent	20 ML / Doule

Storage temperature

toruge tomperature		
AccuPlus Slide	0 ~ 30 °C	
Cell viability reagent	2 ~ 8 °C	

Expiration date

AccuPlus Slide	2 years
Cell viability	1 year
reagent	2 months after opening

Product list

Product list	Cat. No.	Description	Contents
	ADAM-MC Plus	Fluorescence cell analyzer	Main device User manual
	APAD-400	Cell viability reagent	 20 mL x 1 bottle (400 Tests) Acridine orange (AO) & 4',6-diamidino- 2-phenylindole (DAPI) stain
	AP4S-100	AccuPlus Slide 4ch.	• 4ch. Slide 100ea

Safety precautions

Review and follow the safety instructions below:

- If water or other material enters the instrument, the adaptor, or power inlet, disconnect the power cord and contact a service person. For operating environment, refer to Product Specifications.
- Do not touch the main plug or power cord with wet hands.
- Always ensure that the power supply input voltage matches the voltage available at your location.
- This instrument is air-cooled and its surfaces may become hot during operation. When installing, leave a space of more than 10 cm (4 inches) around the instrument and do not place any objects between the instrument and walls.
- Do not install an instrument on a slant or a place prone to vibrations, which induces the risk of malfunction or damage of the instrument.
- Never insert any objects into the air vents of the instrument as this can result in electric shock, personal injury, and equipment damage.
- Plug the power cord firmly into the wall outlet and AC adapter.
- To avoid potential shock hazard, make sure that the power cord is properly grounded.
- Be sure to position the instrument such that it is easy to disconnect.
- Turn off an instrument before unplugging the power cord and/or moving the instrument.
- If an instrument is dropped or broken, disconnect the power cord and contact a service person. The warrant will be void in case of disassembly.
- Use only authorized accessories (adaptor, power cord, and USB drive).

\land WARNING

Class A equipment is intended for use in an industrial environment. In the documentation for the user, a statement shall be included drawing attention to the fact that there may be potential difficulties in ensuring electromagnetic compatibility in other environments, due to conducted as well as radiated disturbances.

Mesures de sécurité

Examiner et suivre les instructions en matière de sécurité ci-dessous:

- Si de l'eau ou d'autres matières entrent dans l'instrument, l'adaptateur, ou l'entrée de la prise, débrancher le cordon d'alimentation et contacter un technicien de service. Pour l'environnement d'exploitation, se reporter aux Spécifications du Produit.
- Ne pas toucher la prise principale ou le cordon d'alimentation avec les mains mouillées.
- S'assurer toujours que la tension d'alimentation correspond à la tension disponible à votre localisation.
- Cet instrument est refroidi à l'air et ses surfaces peuvent devenir chaudes pendant le fonctionnement. Lors de l'installation, laisser un espace de plus de 10 cm (4 pouces) autour de l'instrument et ne placer aucun objet entre l'instrument et les murs.
- Ne pas installer d'instrument sur une pente ou un endroit sujet aux vibrations, qui entraînent un risque de défaillance ou de détérioration de l'instrument.
- Ne jamais insérer d'objets dans les évents d'air de l'instrument, car cela peut causer des chocs électriques, des blessures corporelles et des dommages de l'instrument.
- Mettre le cordon d'alimentation fermement dans la prise murale et l'adaptateur courant alternatif.
- Pour éviter tout risque de choc, s'assurer que le cordon d'alimentation est correctement mis à la terre.
- S'assurer de positionner l'instrument de telle sorte qu'il soit facile à débrancher.
- Éteigner l'instrument avant de débrancher le cordon d'alimentation et/ou de le déplacer.
- En cas de chute ou de rupture d'un instrument, débrancher le cordon d'alimentation et contacter un technicien de service. La garantie sera annulée en cas de démontage.
- Utiliser uniquement les accessoires autorisés (adaptateur, cordon d'alimentation et clé USB).



L'équipement de classe A est destiné à être utilisé dans un environnement industriel. Dans la documentation pour l'utilisateur, une déclaration doit être incluse pour attirer l'attention sur le fait qu'il peut y avoir des difficultés à assurer la compatibilité électromagnétique dans d'autres environnements, en raison de perturbations aussi bien conduisées que radiées.

Safety symbols

Safety symbols

The following symbols are found on the instrument and this document.

Always use the equipment in the safest possible manner.

Symbol	Meaning
\triangle	Caution & Warning
	Protective earth (Ground)
\bigcirc	Power On/Off
	The moving parts symbol indicates areas of the medical device in which moving parts can cause injuries. Do not operate the medical device with the door open.
FC	This instrument has been tested and found to comply with the limits for a Class A digital medical device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the instrument is operated in a commercial environment. This instrument generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this instrument in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
Œ	This instrument and consumables conforms to the EC Declaration of Conformity.
EC REP	Authorized representative in the European community
•	USB Connection
c sob	This product conforms to UL 61010-1, CAN/CSA C22.2 No.61010- 1 "Safety Requirements for Electrical Instrument for Measurement, Control, and Laboratory Use, Part I: General Requirements." This instrument bearing the TÜV symbol are certified by TÜV Product Services to be in conformance with the applicable safety standard for the US and Canada.

Warnings

Warning

1. After using device, please turn off main power.

If not, it may cause malfunction or may reduce product life.

2. When turning off the device, be sure to lock the device with Lock button.

If not, it may cause mechanical problem or error message when device is booting.

ltem	Warning	
Battery inside device	Risk of explosion if battery is replaced incorrectly. This bettery is not replaced by buyer. Before to an	
	authorized service person.	
Cover	Do not remove cover or dissemble case. There are no adjustable components inside the instrument.	
	 If a malfunction is found, refer to an authorized service person. 	
Manual	Do not attempt to service the equipment.	
	This manual is only available in English.	
	 Failure to heed warnings may result in injury to service provider or operator. 	
Sample handling	 Wear personal protective equipment during sampling and testing. 	
	 Sample may contain infectious or bio- hazardous agents. 	
	 Use capped tubes and lint free wipes. Lint free wipes to be used one time and discarded. 	
Waste	 After using AccuPlus Slide, appropriately dispose as bio-hazardous waste. 	
	Do not reuse AccuPlus Slide.	

Technical support

Visit our Website at www.nanoentek.com for:



- Technical resources, including manuals, FAQs, etc.
- Technical support contact information
- Additional product information and special offers

For more information or technical assistance, please call or email.

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