

A New Standard of Automated Cell Counter

Instruction Manual





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ADAM-CellT Instruction Manual

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The information in this manual is described as accurately as possible. Firmware and software changes and updates may change without prior consent or notification.

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General Description

The ADAM-CellT is a benchtop automated cell counter designed to perform cell counting and viability measurements using AccuStain Solution.





Technology

Until now, cell counting and viability measurement for many types of cells have been performed manually using hemocytometer with Trypan Blue exclusion method, which is to distinguish viable cells from non-viable cells. One drawback of this method, however, is the propensity for the staining of artifacts; another drawback is that the naked eye can only differentiate between cells in a limited concentration range in the hemocytometer chamber. This combined with the potential problem of cell aggregation and limited sample volume leads to the common variation of counts normally associated with this method.

To address these problems, NanoEntek has developed the ADAM-CellT, which is based on a fluorescent microscopy technique for counting cells. The ADAM-CellT utilizes sensitive fluorescence dye staining, LED optics and CMOS detection technologies to make the cell analysis more accurate and reliable.

To count cells using ADAM-CellT, the cells are mixed with Propidium lodide (PI) stain/ Acridine Orange (AO) and directly pipetted on to a disposable plastic chip. The chip is then loaded onto a precision stage. An ADAM-CellT system is automatically focused onto the chip and cells that have been stained are recorded by a sensitive CMOS camera. The image results are automatically processed generating the cell count which is displayed on the front of the instrument. Simple. Fast. Accurate. Reliable.



Basic principle of counting

ADAM-CellT is an instrument which counts mammalian cell DNA by staining with a fluorescent dye, Propidium Iodide (PI) or Acridine Orange (AO). PI does not enter cells with intact membranes or active metabolism. In contrast, cells with damaged membranes or cells with inactive metabolism are unable to prevent PI entering the cell. As a result, the nuclei of cell membrane-damaged normal cells or non-viable cells will be stained. Solution T_{p_i} is composed of the PI and cell membrane lysis buffer. Since lysis buffer in Solution T_{p_i} changes intact cell membrane to damaged cell membrane condition, both viable cells and non-viable cells can be stained. AO included in Solution T_{AO} is permeable dye which permeates cell membrane and stains DNA. Regardless of the condition of the cell membrane or active metabolism, AO can stain both viable cells and non-viable cells. The ADAM-CellT provides two kinds of staining solutions: AccuStain Solution

T for the total cell counting and AccuStain Solution N for the non-viable cell counting. AccuStain Solution T is categorized into Solution T_{Pl} and Solution T_{AO}. AccuStain Solution N for the non-viable cell counting is composed of the Pl alone. After staining samples, the prepared cells will be loaded into the chip. The viability will be automatically calculated in the ADAM-CellT software after each measurement of the total cells and the non-viable cells.



ADAM-CellT

The contents of the ADAM-CellT are listed below:

Item	Quantity
Main device	1
Power cord	1
USB hub	1
Adapter	1
User's manual	1
Support for 21 CFR Part 11 Compliance	1
AccuChip Kit	1
USB Wifi dongle	1
External Hard disk	1
Calibration Bead	1
Labeling	1
Inspection Sheet	1
Printer (optional)	1
QC slide (optional)	1
PC (only PC Mode)	1

AccuChip kit

The contents of the ADAM-CellT's AccuChip Kit are listed below:

Item	AccuChip2x Kit (Cat. No: AD2K-200)	AccuChip4x Kit (Cat. No: AD4K-200)	AccuStain Solution (Cat. No: ADR-1000)
Disposable Chip	200pcs (2 channel)	200pcs (4 channel)	N/A
Solution T	12.5 mL x 2ea	12.5 mL x 2ea	12.5 mL x 4ea
Solution N	12.5 mL x 1ea	12.5 mL x 1ea	12.5 mL x 2ea
Available	Min. 200 test/kit	Min. 400 test/kit	
test Q'ty	Max. 400 test/kit (Only total cell count)	Max. 800 test/kit (Only total cell count)	

Upon receiving the instrument

- Examine the instrument carefully for any damage incurred during transit.
- Ensure that all parts of the instrument including accessories listed above are included with the product.
- Any damage claims must be filed with the carrier.
- The warranty does not cover in-transit damage.
- Upon receipt, store AccuChip at room temperature. AccuStain Solution should be stored at $2{\sim}8^\circ\text{C}$

Front view of ADAM-CellT

The front view of ADAM-CellT is shown below:



3 LCD



Control buttons	Description
① Door	Slide holder is inserted and ejected.
2 Power	Power on / off.
3 LCD	Display processes and results.
④ START	Performs all procedures of automatic counting.
S LOCK Protects the alignment of stage from external shock with a stage from external shock	
	Lock ADAM-CellT before turning it off or moving it.
6 EJECT	Ejects the slide holder from ADAM-CellT. Functions as unload.
⑦ Auto Focus	Turn on/off the auto focus function. (If the auto focus func- tion is turned off, the autofocus is only activated for the first measurement.)

Rear view of ADAM-CellT

The rear view of ADAM-CellT is shown below:



Port	Description	
① USB Port	Port for software update and save the data.	
② PC port	Connects with PC (Only PC mode).	
③ Power Plug	Connects ADAM-CellT power cord to wall outlet.	

Do not use the *QPC* port. This port does not recognize USB.

Environmental requirements

At low temperature (≤ 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-CellT in a location which meets the following conditions:

- Use at room temperature between 20 and 35 °C

 Not recommended for cold room use (≤ 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.
- 8. 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-CellT and power cord.
- 2. Press the power button for 2~3 seconds. (PC Mode: Double click the "ADAM CellT icon" to execute the software)

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.



- •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 ADAM-CellT even without power on the device, it will go through self diagnostic tests.

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

Count setting

Set the conditions in the 'Setting' tap before counting.

[AccuChip]

Set the AccuChip according to you are using.





[Cell size]

Set the minimum and maximum size of cell.

Cell size Min 5 Max 80	
------------------------	--

[Dilution factor]

When diluting sample, set the Dilution factor.

CAUTION

Factor values for the AccuStain Solution is already applied.



[Solution type]

Set the AccuStain Solution type (Propidium iodide (PI) or Acridine orange (AO))

T _{PI} /N	T _{AO} /N

Introduction

Instruction is provided in this section for preparing the sample with AccuStain Solution for use with disposable AccuChip for automated cell count using the ADAM-CellT.

Please check the procedure of sample preparation and testing below. For more detailed information, please refer to the next page.





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

- 2 channel: 23µL 4 channel: 13µL
- T channel: Total cell
- N channel: Non-viable cell



3. Insert AccuChip. Get the result.





Sample preparation 1. Cultivate the required number of cells. 2. Add an appropriate volume of growth media or PBS to dilute to a final concentration of 5 x 10⁴ cells/mL to 4 x 10⁶ cells/mL (T_p/N solution). When using T_{AO}/N solution, prepare to a final concentration of 5 x 10⁴ cells/mL to 2 x 10⁷ cells/mL. Intersection of the standard standard

z

Total Cell	Non-viable Cell
1) Add 50 μL of your sample to 50 μL	1) Add 50 μL of your sample to 50 μL
supplied AccuStain Solution T .	supplied AccuStain Solution N .
2) Vortex the tube vigorously.	2) Vortex the tube vigorously.
 Load 23 μL sample mixture to the	 Load 23 μL sample mixture to the
AccuChip on T channel. Then, wait 1 minute for the sample settling.	AccuChip on N channel. Then, wait 1 minute for the sample settling.

Non-viable



Total Cell	Non-viable Cell
1) Add 50 μL of your sample to 50 μL supplied AccuStain Solution T .	1) Add 50 μL of your sample to 50 μL supplied AccuStain Solution N .
2) Vortex the tube vigorously.	2) Vortex the tube vigorously.
 Load 13 μL sample mixture to the AccuChip on T1 or T2 channel. Then, wait 1 minute for the sample settling. 	 Load 13 μL sample mixture to the AccuChip on N1 or N2 channel. Then, wait 1 minute for the sample settling.

• NOTE When you load of the sample mixture to the AccuChip, please be careful not to make bubbles.

Counting cell

WARNING

[Sample loading error]

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

Correct volume



Low volume



Avoid bubbles which may negatively affect the result.



Counting cell

WARNING

[AccuChip insert error]

Completely insert AccuChip 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.



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

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.

ADAM CellT	■ Measure	© 0C ∷≣ Dat	a :≅ Approval	@ Setting 온 User
Beading 4th	AME 03			
				to Focus
				•
				• •
88				• • •
				•
				•
△ T1 N1 △				•
•				•
Hesuit				° (
NO HUE				•
T/N 2				•
T/N 1				•
•				•
e				•
•				T
¢	o o o	o o o		
V. 1.4.4.6	L	Iser Name: admin		2023-07-19 11:36:32

Result Analysis

The result will be displayed after being automatically calculated by ADAM-CellT software.



^{* 1.10}E6 = 1.10 X 10⁶ cells/mL

Title	Number of Total cell	Number of Non-Viable cell	Viability
Viability 01	T1 (1.10E6)	N1 (5.50E5)	50%
Viability 02	T2 (2.20E6)	N2 (5.50E5)	75%

- The viability will be automatically calculated by the ADAM-CellT software after each measurement of the total cells and the non-viable cells.
- First, the total cell number and second, non-viable cell number were measured and then the cell viability is calculated as subtracting non-viable cell counting numbers from total cell counting.
- Image Note 'PRINT' button will be automatically activated when portable printer (optional) is connected.

Result Analysis - Error code



[Solution T_{PI}/N]

Error code	Cause		
E	Frames with errors are over 50% of total counting		
	frame.		
0	Cells are more than 4X10 ⁶ cells/mL.		
н	Cells are more than 2X10 ⁶ cells/mL.		
L	Cells are less than $4X10^5$ cells/mL.		
U	Cells are less than 5X10 ⁴ cells/mL.		
Error frame [#]	Frame with error that contains cells whose diameter is larger than $100 \mu m.$		
	When this error shown in result window, please check the image.		

 \bullet Please use the solution $T_{_{A\!C}}\!/N$ when the cell concentration is above the range of $4x10^{\circ}$ cells/ml.

[Solution T_{AO}/N]

Error code	Cause				
E	Frames with errors are over 50% of total counting				
	frame.				
0	Cells are more than 2X10 ⁷ cells/mL.				
н	Cells are more than 1X10 ⁷ cells/mL.				
L	Cells are less than 4X10 ⁵ cells/mL.				
U	Cells are less than 5X10 ⁴ cells/mL.				
	Frame with error that contains cells whose diameter				
Error frame [#]	is larger than 100µm.				
Enor name [#]	When this error shown in result window, please check				
	the image.				

QC Mode

The QC Mode uses QC Slide (optional) to check equipment QC status by date at a glance.

[Activation of QC mode]

To activate 'QC' mode, an activation code must be entered.

- 1. Select 'QC' tab from top menu.
- Enter lot no. and activation code. Then, click 'APPLY' button.
 Slide lot no. and activation code can be found on the plastic package label. See below for details.

ADAM CellT	≣Measure	⊘QC	i≡ Data	:≣ Approval	Setting	음User

• NOTE A unique activation code is given for each instrument, and its authenticity can be checked by registering activation code.



Control buttons	Description				
1) Data Type	QC result graph unit (Years, Months, Days, No.[Index])				
(2) Show Data	Displays the date of QC progress on the graph				
3 QC Result Graph	Graph left/right (QC date, number) movement button				
④ Arrow Button	Graph left/right (QC date, number) movement button				
© OC Slide	QC Slide Lot. information and editing (create, edit,				
3 QC Slide	delete) functions				
	QC result information and editing (whether or not				
	graph is displayed, deleted) function				
⑦ SAVE	Saves the QC Result Report to USB				
® MAIL	Sends the QC Result Report to e-mail				

WARNING

QC Mode must use the QC Slide (optional), and the result without using the QC Slide is unreliable.

QC Slide Edit

The QC Mode uses QC Slide (optional) to check equipment QC status by date at a glance.

All	Date Time	2Lot No.	Acceptance Range (Cells/mL)	
	2018/08/23 10:04:58	001	2019-03-15-14-12-03/t1/003_mark.jpg	1
	2018/08/23 10:04:58	002	2019-03-15-14-12-03/t1/003_mark.jpg	
	2018/08/23 10:04:58	003	2019-03-15-14-12-03/t1/003_mark.jpg	
	2018/08/23 10:04:58	004	2019-03-15-14-12-03/t1/003_mark.jpg	
	2018/08/23 10:04:58	005	2019-03-15-14-12-03/t1/003_mark.jpg	
	2018/08/23 10:04:58	006	2019-03-15-14-12-03/t1/003_mark.jpg	
	2018/08/23 10:04:58	007	2019-03-15-14-12-03/t1/003_mark.jpg	
	2018/08/23 10:04:58	008	2019-03-15-14-12-03/t1/003_mark.jpg	NEW
	2018/08/23 10:04:58	009	2019-03-15-14-12-03/t1/003_mark.jpg	
	2018/08/23 10:04:58	010	2019-03-15-14-12-03/t1/003_mark.jpg	[<u>∧</u> EDIT
	2018/08/23 10:04:58	011	2019-03-15-14-12-03/t1/003_mark.jpg	× DELETE
	2018/08/23 10:04:58	012	2019-03-15-14-12-03/t1/003_mark.jpg	CLOSE
-				



Control buttons	Description
1 41	Selects all QC Slide lot to delete from the QC Slide
	lot List
2 QC Slide List	Provides registered QC Slide lot information list
3 New	Registers new QC Slide lot
④ Edit	Edits selected QC Slide lot
(5) Delete	Deletes selected QC Slide lot
6 Apply/Close	Applies function or closes selected QC Slide lot
() Lat No. (Now/Edit)	QC Slide Lot No. input field to create new or edit lot
(VECTINO: (New/Edit)	number
(8) Acceptance	QC Slide acceptance range input field to enter new or
Range (New/Edit)	edit range values

● <u>NOTE</u> • The QC Slide lot and Acceptance Range can be found at the top of the QC Slide.

• Expired QC Slide cannot be selected.

QC Slide Result Edit

$\overline{\mathbb{1}}$		(2)				(3)		
All	Date Time	Result (Cells/mL)	Lot No.	EXP. Date	Acceptance Range (Cells/mL)	Visible 🗌		- 1
	2018/08/23 10:04:58	9.91 x 10ES	001	31 Dec 2022	2019-03-15-14-12-03/t1		Î.	
M	2018/08/23 10:04:58	9.91 x 10ES	002	31 Dec 2022	2019-03-15-14-12-03/t1	\mathbf{V}		
	2018/08/23 10:04:58	9.91 x 10ES	003	31 Dec 2022	2019-03-15-14-12-03/t1			
	2018/08/23 10:04:58	9.91 x 10ES	004	31 Dec 2022	2019-03-15-14-12-03/t1			
	2018/08/23 10:04:58	9.91 x 10ES	005	31 Dec 2022	2019-03-15-14-12-03/t1			
	2018/08/23 10:04:58	9.91 x 10ES	006	31 Dec 2022	2019-03-15-14-12-03/t1			
	2018/08/23 10:04:58	9.91 x 10ES	007	31 Dec 2022	2019-03-15-14-12-03/t1			
	2018/08/23 10:04:58	9.91 x 10ES	008	31 Dec 2022	2019-03-15-14-12-03/t1			
	2018/08/23 10:04:58	9.91 x 10ES	009	31 Dec 2022	2019-03-15-14-12-03/t1			
	2018/08/23 10:04:58	9.91 x 10ES	010	31 Dec 2022	2019-03-15-14-12-03/t1			
	2018/08/23 10:04:58	9.91 x 10ES	011	31 Dec 2022	2019-03-15-14-12-03/t1		× DELETI	.
	2018/08/23 10:04:58	9.91 x 10ES	012	31 Dec 2022	2019-03-15-14-12-03/t1		CLOSE	.
-	2010/00/22 10:04:50	0.01 v 1050	012	21 Dec 2022	2010 02 15 14 12 02/#1	_		

Control buttons	Description
1) All	Selects all QC result to delete from the QC result List
2 QC Result List	QC result information list
3 Visible	Selects all QC result to display graph from the QC result List.
④ Delete	Deletes selected QC result
(5) Apply/Close	Applies visible function or closes QC result

QC Slide Result

QC result acceptance criteria:

1.00E+006-	
	1 2 3
Experiment Date Time :	2022-07-05, 03:36 PM
Slide Lot :	13000000
Exp date :	2022-07-06, 03:30 PM
Acceptance Range :	9.00 x 10ES ~ 1.10 x 10E6 Cells/mL
Acceptance Slide Peak Size :	13~16 um
Concentration :	8.45 x 10ES Cells/mL
Slide Peak Size :	15 um
Result :	Fail

•The QC Slide result acceptance criteria include the acceptance range (different for each QC Slide lot) and the acceptance slide peak size (13~16 um).

•The acceptance range of the selected QC slide lot is displayed on the graph as a purple area.

•Acceptance slide peak size results can be found in the ADAM-CellT Test report.

WARNING

Contact sales@nanoentek.com or your local distributor if the QC result does not come within the acceptance criteria.

Data list

A	DA	M	cell	T	≣ Measure	⊘ QC	i≣ D	ata	:≅ Approval	Set	ting 🖄 User
Dat	a Lis	t									
- All	No	СН	S/N	Sample	Exp.Name	DateTime	Total	Viability	Nonviable	Viable	Start Date
M	0014	CH4	ы	013 23/07/20 09:13:29	admin	2023-07-20 09:13:29	1.01x10E6	0.00%	1.02x10E6	0.00x10E0	2023 / 07 / 14
	0013	CH4	Ы	012 23/07/20 09:13:29	admin	2023-07-20 09:13:29	1.01x10E6	2.72%	9.84x10E5	2.75x10E4	2023 / 07 / 20
	0012	СН4	Р	011 23/07/19 14:41:39	admin	2023-07-19 14:41:39	1.02x10E6	1.37%	1.01x10E6	1.40x10E4	SEARCH
	0011	CH4	ы	010 23/07/19 14:41:39	admin	2023-07-19 14:41:39	1.01x10E6	2.73%	9.81x10E5	2.75x10E4	
	0010	СН4	Р	009 23/07/19 13:22:00	admin	2023-07-19 13:22:00	1.00x10E6	0.45%	1.00x10E6	4.49x10E3	L∕ EDIT
	0009	CH4	ы	008 23/07/19 13:22:00	admin	2023-07-19 13:22:00	1.04x10E6	6.02%	9.82x10E5	6.29x10E4	🖾 IMAGE
	6008	СН4	Р	007 23/07/19 13:19:36	admin	2023-07-19 13:19:36	1.00x10E6	0.00%	1.02x10E6	0.00x10E0	
	0007	CH4	ы	005 23/07/19 13:19:36	admin	2023-07-19 13:19:36	1.05x10E6	6.18%	9.81x10E5	6.46x10E4	U SAVE
	0006	СН4	Р	005 23/07/19 11:36:06	admin	2023-07-19 11:36:06	1.01x10E6	0.00%	1.02x10E6	0.00x10E0	PRINT
	0005	СН4	ы	004 23/07/19 11:36:06	admin	2023-07-19 11:36:06	1.03x10E6	4.32%	9.81x10E5	4.43x10E4	MAIL MAIL
	0004	CH4	Ы	003 23/07/18 17:47:53	admin	2023-07-18 17:47:53	1.01x10E6	2.99%	9.82x10E5	3.03x10E4	× DELETE
٢						•				>	

Control buttons	Description
1 All	Select all data in Data List.
② SEARCH	Display the data of the selected date.
3 EDIT	Allows to view and edit the data (Multiple data can be edited with the same settings)
④ IMAGE	Allows to check the cell images of each channel
(5) SAVE	Saves the selected data to USB
6 PRINT(optional)	Prints the selected data
① MAIL	Sends the selected data to e-mail
® DELETE	Deletes the selected data

'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 each channel (T/N)
③ Cell size table	Allows to view the number of cells in each cell size
④ Channel	Select a channel(T/N).
⁽⁵⁾ Cell size setting	Set the min/max size of the cell.
6 Dilution Factor	Set the dilution factor of sample. (Factor values for the AccuStain Solution is already applied.)
⑦ Frame graph	Allows to view the counted cell number of each frame

IMAGE



Control buttons	Description
① Channel	Select a channel.
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.

Data

SAVE

	Select Path(1)				
ata List 2018/08/23 ~ 2018/08/3	Total Size	Free Space	Volume Label		
All No CH S/M Sa	nt D: 3.77 Gb	1.55 Gb	Master	proval	Start Date
500 CH4 AO San	1P E: 3.77 Gb	1.55 Gb	Master	×	2018 / 08 / 23
- 499 CH4 AO San	1p D: 4.00 Gb	1.55 Gb	Master		End Date 2018 / 08 / 23
498 CH4 AO San	D: 4.00 Gb	1.55 Gb	Master	0	SEARCH
497 CH4 AO San	D: 4.00 Gb	1.55 Gb	Master	x	
496 CH4 AO San	E: 4.00 Gb	1.55 Gb	Master	×	L스 EDIT
495 CH4 AO San	P Data Type - 2	1.55 Gb	Maetar	×	🖾 IMAGE
🗌 494 CH4 AO San		V Evcal	M Images	×	SAVE
493 CH4 AO San	1p	LAGEI	111ages		
- 492 CH4 AO San	np ⊻ Consolidated	PDF 🗌 Con	solidated Excel	0	M MAIL
491 CH4 AO San	γp	_			V DELETE
- 400 OUA AO Cor	CANCEL	(3)	APPLY	0	X DELETE

Control buttons	Description
① Select Path	Selects a 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.

Data

MAIL

	No History (1)		roval 🛞	Setting 🖂 Us
Data List 2018/08/23 - 2018/08/30	이 Isj@nanoentek.com	×		
All No CH S/M Sample	02 Isj@nanoentek.com	×	Approval	Start Date
500 CH4 AO SampleA	3 Isj@nanoentek.com	×	×	2018 / 08 / 23
499 CH4 AO SampleA	₀₄ lsj@nanoentek.com	×	Δ	2018 / 08 / 23
498 CH4 AO SampleA	05 Isi@nanoentek.com	×	0	SEARCH
497 CH4 AO SampleA	05 Iri@nanoentek.com	~	x	
496 CH4 AO SampleA	tajgananoemek.com	^	x	EDIT 신
495 CH4 AO SampleA	Mail Address - (2) Isj@nanoentek.com	×	x	🖾 IMAGE
A94 CH4 AO SampleA	Data Type		x	SAVE
493 CH4 AO SampleA	V PDF	V Excel		
492 CH4 AO SampleA	Consolidated PDF	Consolidated Excel	0	MAIL
491 CH4 AO SampleA	E consolidated PDI			
	CLOSE	4 SEND		~ DELETE

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 a selected e-mail address. Files can be sent to only one e-mail at a time.

Requestable:



Control buttons	Description
(1) Approval Status	Settings tab related to data approval such as Requestable, Requesting, Approvable, and Approved.
2 Data List	List of data that can check status information related to approval.
3 All	Select all data in Data List
④ Search	Display the data of the selected date.
⑤ Request	Request approval of selected data.
6 Preview	Select Preview to check the results before approval or requesting approval. (Providing preview in a PDF format)
 Select approval 	Select an approval to request approval.

NOTE

- Approval can only be done by an approver who has been granted Approval authority in the Privilege setting.
- Approved data displays approval status on Data Tab
- (Approval: \bigcirc / Approval in progress: \triangle / Not approved X).
- Data in the process of approval cannot be edited or deleted.
- Approved data cannot be edited.

Requesting:

D	ata	Lis	st 2023/07/15 ~ 2023/07	/31						Approval Status
	All	No	Sample	Exp.Name	DateTime	Requester	Approver	Request DateTime	Approval DateTime	Requesting
t	V	011	033 23/07/25 14:02:27	admin	2023-07-25 14:02:27	admin	admin	2023-07-31 16:21:48	1	Start Date
[010	032 23/07/25 14:01:09	admin	2023-07-25 14:01:09	admin	admin	2023-07-31 16:21:48	8	End Date
[009	031 23/07/25 13:57:10	admin	2023-07-25 13:57:10	admin	admin	2023-07-31 16:21:48	6	2023 / 07 / 31
[008	030 23/07/25 13:57:10	admin	2023-07-25 13:57:10	admin	admin	2023-07-31 16:21:48	\$	SEARCH
1		007	029 23/07/21 10:55:45	admin	2023-07-21 10:55:45	admin	admin	2023-07-31 16:21:48	F	CANCEL
[006	028 23/07/21 10:55:45	admin	2023-07-21 10:55:45	admin	admin	2023-07-31 16:21:48	F.	APPROVAL
1		005	027 23/07/21 10.05:40	admin	2023-07-21 10:05:40	admin	admin	2023-07-31 16:21:48		
[004	026 23/07/21 10:05:40	admin	2023-07-21 10:05:40	admin	admin	2023-07-31 16:21:48	F	PREVIEW
[003	025 23/07/21 10:03:07	admin	2023-07-21 10:03:07	admin	admin	2023-07-31 16:21:48	6	
		002	024 23/07/21 10:03:07	admin	2023-07-21 10:03:07	admin	admin	2023-07-31 16:21:48		

Control buttons	Description
(1) Approval Status	Settings tab related to data approval such as Requestable, Requesting, Approvable, and Approved.
2 Data List	List of data that can check status information related to approval.
3 All	Select all data in Data List
④ Search	Display the data of the selected date.
⑤ Cancel	Cancel approval of selected data in the process of approval
6 Approval	Direct approval by only entering the approver's password without approver login.
⑦ Preview	Select Preview to check the requesting approval results. (Providing preview in a PDF format)

Approvable:

.Da	ta I	List 2023/07/15~2023/07	/31						Approval Status
- Al	I N	io Sample	Exp.Name	DateTime	Requester	Approver	Request DateTime	Approval DateTime	 Approvable
] 01	1 033 23/07/25 14:02:27	admin	2023-07-25 14:02:27	admin	admin	2023-07-31 16:21:48	I	Start Date
] 01	0 032 23/07/25 14:01:09	admin	2023-07-25 14:01:09	admin	admin	2023-07-31 16:21:48	ī	2023 / 07 / 15 End Date
] 00	0 031 23/07/25 13:57:10	admin	2023-07-25 13:57:10	admin	admin	2023-07-31 16:21:48	r	2023 / 07 / 31
] 00	030 23/07/25 13:57:10	admin	2023-07-25 13:57:10	admin	admin	2023-07-31 16:21:48	F	SEARCH
] 00	029 23/07/21 10:55:45	admin	2023-07-21 10:55:45	admin	admin	2023-07-31 16:21:48	F	REJECT
] 00	6 028 23/07/21 10:55:45	admin	2023-07-21 10:55:45	admin	admin	2023-07-31 16:21:48	F	APPROVAL
] 00	15 027 23/07/21 10:05:40	admin	2023-07-21 10:05:40	admin	admin	2023-07-31 16:21:48	F	_
] 00	4 026 23/07/21 10:05:40	admin	2023-07-21 10:05:40	admin	admin	2023-07-31 16:21:48	F	PREVIEW
] 00	025 23/07/21 10:03:07	admin	2023-07-21 10.03.07	admin	admin	2023-07-31 16:21:48	F	
	00	2 024 23/07/21 10:03:07	admin	2023-07-21 10:03:07	admin	admin	2023-07-31 16:21:48	F	

Control buttons	Description
(1) Approval Status	Settings tab related to data approval such as Requestable, Requesting, Approvable, and Approved.
② Data List	List of data that can check status information related to approval.
3 All	Select all data in Data List
④ Search	Display the data of the selected date.
⑤ Reject	Reject approval of selected data in the process of approval.
6 Approval	Approval of the data selected during the approval process.
(7) Preview	Select Preview to check the approvable approval results. (Providing preview in a PDF format)

Approved:

- Dat	a Li	st 2023/07/15 ~ 2023/07	/31						Approval Status
All	No	Sample	Exp.Name	DateTime	Requester	Approver	Request DateTime	Approval DateTime	Approved
V	012	033 23/07/25 14:02:27	admin	2023-07-25 14:02:27	admin	admin	2023-07-31 16:21:48	2023-07-31 16:25:17	Start Date
	011	032 23/07/25 14:01:09	admin	2023-07-25 14:01:09	admin	admin	2023-07-31 16:21:48	2023-07-31 16:25:17	2023 / 07 / End Date
	010	031 23/07/25 13:57:10	admin	2023-07-25 13:57:10	admin	admin	2023-07-31 16:21:48	2023-07-31 16:25:17	2023 / 07 /
	009	030 23/07/25 13:57:10	admin	2023-07-25 13:57:10	admin	admin	2023-07-31 16:21:48	2023-07-31 16:25:17	SEARCH
	008	029 23/07/21 10:55:45	admin	2023-07-21 10:55:45	admin	admin	2023-07-31 16:21:48	2023-07-31 16:25:17	
	007	028 23/07/21 10:55:45	admin	2023-07-21 10:55:45	admin	admin	2023-07-31 16:21:48	2023-07-31 16:25:17	
	006	027 23/07/21 10:05:40	admin	2023-07-21 10:05:40	admin	admin	2023-07-31 16:21:48	2023-07-31 16:25:17	
	005	026 23/07/21 10:05:40	admin	2023-07-21 10:05:40	admin	admin	2023-07-31 16:21:48	2023-07-31 16:25:17	PREVIEW
	004	025 23/07/21 10:03:07	admin	2023-07-21 10:03:07	admin	admin	2023-07-31 16:21:48	2023-07-31 16:25:17	
									🗍 SAVE

Control buttons	Description
(1) Approval Status	Settings tab related to data approval such as Requestable, Requesting, Approvable, and Approved.
2 Data List	List of data that can check status information related to approval.
3 All	Select all data in Data List
④ Search	Display the data of the selected date.
(5) Preview	Select Preview to check the approved approval results. (Providing preview in a PDF format)
6 Save	Save the selected approval data to USB.
 Mail 	Send the selected approval data to e-mail.

Setting

ADAM CellT	≡M	easure 👳 🤄	DC	i≣ Data i≅ Approval @ Setting ≗User
1 Count Setting				Software Version Firmware Version
AccuChip	4Ch	2Ch		V.1.0.0.28 H 0.02 F 0.27-181101 OPDATE (
Cell size	Min 5	Max 80		Auto Logout
Dilution factor	1.0			Serial number CRALD2181001-005
Solution type	Tpi/N	Tao/N]	Date&Time 2018 / 11 / 23 PM 10 : 10
(2) Wifi	SETTING	REMOTE	(3)	Capacity 50% (10.00 Gb)
			Ŭ	
4 ··· Mail	SETTING			Data Backup 50% (3,726 Gb) (
5 ··· Number	00	RESET		Path E:/Adam data Sync Auto
	▼ File Count			BACKUP RECOVERY
W 1.0.0.2				1) (2)

Control buttons	Description
① Count setting	Set the conditions in the setting tap before counting. Refer to page 14 for more information.
2 Wifi	Sets the wifi to use the e-mail or remote support function
	(PC Mode: Use internet (Windows) to use the e-mail or remote support function)
3 Remote support	Connects to remote support software
④ Mail	DO NOT change the setting in mail.
(5) Number	Selects auto-numbering
⑥ Update	Updates firmware or software through USB
 Auto Logout 	Sets auto logout time
[®] Date&Time	Sets current date and time
⑨ Capacity	Checks remaining capacity
10 Data Backup	Allows to view the storage path of additional data backup
(1) Backup	Sets backup (automatic, manual) function
12 Recovery	Runs recovery (automatic, manual) function
⁽³⁾ Auto Backup Information	Allows to view the working automatic backup information. (Sync=O, SDMS=-, Sync+SDMS=©)

Wifi

ADAM CellT		≣Measure	© QC	:≡ Data	:≅ Appro\	val @Setting 옾User
Count Setting		SSID	Signal	Security	Encryption	re Version
AccuChip	41	SampleA	L-U	WPA2PSK	AES	12 F 0.27-181101 UPDATE
		SampleA	L-U	WPA2PSK	AES	
Cell size	Min	SampleA	L-U	WPA2PSK	AES	SETTING
	_	SampleA	L-U	WPA2PSK	AES	
Dilution factor	1.0	SampleA	L-U	WPA2PSK	AES	
		SampleA	L-U	WPA2PSK	AES	
Solution type		Campiak	1.0	WDADDCK	AEC	PM 10 : 10
Wifi	SET	Password		R	EFRESH	
Mail	SET	Security	~			3b)
Number	00	Encryption	~		CLOSE	Auto 💿
	☑ File (IP Status			APPLY	RECOVERY
						2018-06-23 14 58

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

CAUTION

If connection error occurs, please contact a laboratory facility manager.

NOTE

In PC Mode, please use internet (Windows).

ADAM CellT	≣Mea	sure 👳	QC	i≣ Data	:⊕ Approval	Setting	옾User
Count Setting AccuChip	4Ch	2Ch		Software V V.1.0.0.2 Auto Logo	Version Firmware 28 H 0.02 I	Version F 0.27-181101	UPDATE
Cell size	Your ID 789 744 3	46	_			TTING	
Dilution factor	Password	łi					
Solution type	Status Beady to o	connect (sec	ure con	nection)		10 : 10	
Wifi			, ci	CLOSE			
Mail	<u>.</u>			ann		Autole	
Number	00 ☑ File Count	RESET			BACKUP	RECOVERY	/

1. Connect to wifi.

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

NOTE 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 you see them.

Remote support

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.
- ADAM-CellT can be updated only when the firmware or software file exists in the 'AdamUpdate' folder. The 'ADAM CellT.exe' file should be in the 'AdamUpdate' folder.
- Do not rename the 'AdamUpdate' folder. The folder name should be 'AdamUpdate'.

Auto logout

The auto logout time can be set to 5, 15, 30, 45, or 60 minutes.

Backup



Control buttons	Description
① Auto-Sync	Real-time automatic backup of counted data required for automatic recovery
2 Auto-SDMS	Real-time automatic backup of counted data required for SDMS (Scientific Data Management System) interworking
③ Manual	To manually back up the counted data required for manual recovery
(4) Apply/Close	Apply the selected backup types or close backup.

Auto-SDMS backup is available only for approved data.

CAUTION

Please be cautious as data may be lost when Auto Backup (Sync) is turned off.

WARNING

• DO NOT remove an external hard drive for backup at any time as it may cause data loss.

 If you change backup data path, auto backup function becomes inactive. DO NOT change data path as it may cause backed up data loss.

We are NOT responsible for such error or problem mentioned above.

Recovery



- Restore counted data to the point of the last automatic backup (Sync).
- Manual recovery restores manually backup counted data.

The automatic backup function is turned off after recovery, please reenable the automatic backup function.

Please be careful with manual recovery, because counted data that is not manually backed up will be lost.

User



Control buttons	Description
1 Logout	To logout
② User manage	To register user
③ Log manage	Tracks user access records
④ Document manage	Tracks management document records
(5) Deleted list	Tracks deleted data records

• ADAM-CellT provides a comprehensive solution to comply with the requirements of the 21 CFR Part 11 rule.

• Please see the appendix for more information on these features.

User manage

admin	Admin	æ	
b	Supervisior	æ	User Name
	User	æ	Password
ood	User	⋳	Confirm Password
	User	⋳	Digital Signature PRIVILEGE(4)
a	User	æ	
it	User	⋳	
as	Supervisior	æ	
			□ Supervisor Permission (5) Clear ×
SAVE	I	P/W OP	····6
CLOSE			BEGISTER

Control buttons	Description
① User Name	To view the registered user list
2 Permission	To view the user access authority
③ New Registration	To register new user
④ Privilege	Option for permission setting
(5) Supervisor Permission	To register as a supervisor
6 Password Option	To set password
⑦ Privilege Default	Option for default permission setting (Supervi- sor, User)

Privilege

The Admin can grant or release access to functions when creating or editing new users (Supervisor, User)

	User Type 1	DEFAULT	r
_	Admin	V DEFAULI	
2	 MEASURE QC	DATA APPROVAL SETTING USER MANAGE LOG MA	NAGE DOCUMENT DELETED LIST
3	 User Manage	Access I New I Edit	1
	User Manage	New I Edit	⊻ Access (4)
	User Manage	Access I New I Edit	☑ Delete
	User Manage	Access I New I Edit	
	User Manage	Access	☑ Excel
	User Manage	Access I New I Edit	D PDF
	User Manage	Access I New	
	User Manage	Access I New I Edit	
	User Manage	Access I New I Edit	
	CLOSE		REGISTER

Control buttons	Description
1) User Type&Default	Selects account level and sets default permissions
2 Tab	Tab for permission Settings
③ Function list	Detailed functions for each permission setting tab
④ Detailed function	List of possible permission settings for each function

Granting basic access rights for each user (For the default access rights for each user, refer to the ADAM-CeIIT SW 21 CFR PART11 requirement support appendix).

Password Option

ADAM CellT	≣Measure	© QC	i≣ Data	:≅ Approval	Setting	≗User
	Password n 1 Change	nanagement rules cycles lock	90 Days	T.		
	3 Minimur 4 Reuse	n length	≤3 ≤30 Days			
	5 ···· Special of 6 ···· Upperca	characters se and lowcase	Enable			
¥1802	CLOS	SE	APPLY	1		

Control buttons	Description
1 Change cycles	Set password change interval (30, 90, 180 days).
2 Account lock	Number of incorrect passwords in account lockout (≤ 3, 5, 10, 15).
3 Minimum length	Minimum length of password (≤3, 5, 10, 15).
④ Reuse	Prohibition of using the same password for a certain period of time (\leq 30, 90, 180, >180 days).
(5) Special characters	Use at least one special character.
© Uppercase and lowercase	Use at least one uppercase letter.

Log manage

Date Time	Device Type	User Name	Log	2023 / 07 / 18
2023-08-18 10:40:31	CellT	edmin	[LOG MANAGE] Users check the log.	
2023-08-18 10:40:00	CellT	admin	[APPROVAL] The User enters Approval mode.	End Date
2023-08-18 10 39 12	CellT	admin	[SETTIN0] The user cancels the remote control service.	2023 / 08 / 14
2023-08-18 10:39:10	CellT	admin	[SETTING] The Remote service information has been updated.]- /-]	
2023-08-18 10 38 45	CellT	admin	[SETTIN0] The user starts the remote control service.	
2023-08-18 10:38:26	CellT	admin	[SETTING] User tries to connect to wiff[LSRDteam].	SEARCH
2023-08-18 10 36:03	CellT	admin	LOG MMMAGE Users check the log	
2023-08-18 10:34:18	CellT	admin	LOB MANAGE Users check the log.	
2023-08-18 10:34:11	CellT	admin	APPROVAL The User enters Approval mode.	
2023-08-18 10:34:07	CellT	admin	USER] The user #admin# logged in.	8
2023-08-18 10 34 07	CellT	admin	USER #admin# try to login.	U SAVE
2023-08-18 10:33:16	CellT	System	[MANAGE] All initialization is complete	-
2023-08-16 13 33 10	CellT	admin	[LOG MMMAGE] Users check the log	
2023-08-16 13:29:52	CellT	admin	[USER MANABE] The [MEASURE - LOCK] permissions of user[test1] have changed. [Access denied] -> [Access]	
2023-08-16 13 29:52	CellT	admin	[USER MAMAGE] The privilege rule of user [test1] is changed.	
2023-08-16 13:29:43	CellT	admin	USER MANAGE The privilege rule of user [test1] is changed.	
2023-08-16 13:29:34	CellT	admin	[USER MANAGE] The [SETTING - Count setting] permissions of user[test1] have changed. [None] -> [Dilution factor Cell S	
2023-08-16 13:29:34	CellT	admin	[USER MANABE] The [SETTING - Date&Time] permissions of user[test1] have changed. [Access] -> [Access denied]	
2023-08-16 13:29:34	CellT	admin	[USER MANAGE] The [MEASURE - LOCK] permissions of user[test1] have changed. [Access] -> [Access denied]	V DELETE
2023-08-16 13:29:34	CellT	admin	USER MANABE) The privilege rule of user [test1] is changed.	× DELETE
2023-08-16 13:29:17	CellT	admin	[USER MANAGE] The [SETTING - Date&Time] permissions of user[test1] have changed. [Access denied] -> [Access]	
2023-08-16 13:29:17	CellT	admin	[USER MANAGE] The privilege rule of user [test1] is changed.	
2023-08-16 11:39:37	CellT	admin	EXPORT PDF #hexport.pdf# file has been exported.	
2023-08-16 11:39:14	CellT	admin	[APPROVAL] The user #dj# changes the status of the data [23/08/08 16:10:22 T/N 1] to [APPROVAL].	
2023-08-16 11:38:40	CellT	admin	[APPROVAL] The user #admin# requests #dj# to approve the data [23/08/08 15:10:22 T/N 1].	
2023-08-16 11:38:21	CellT	admin	[APPROVAL] The User enters Approval mode.	
2023-08-16 11:38:08	CellT	admin	[USER MANAGE] Changes the locked useful account to the unlocked state.	

Control buttons	Description
1 All	Select all data in Data List.
② SEARCH	Display the data of the selected date.
3 SAVE	Save the selected data to USB.
④ DELETE	Delete the selected data. (DELETE is not activated in all user types.)
(5) CLOSE	Close the log manage.

NOTE(Except PC Mode)

The search period is limited to 90 days (Except PC Mode).

Document manage

	Device	User		A	Start Date
Date Time	Туре	Name	File Name	Doc No	2023 / 07 / 18
2023-08-16 11:39:37	CellT	System	C:\ADAM\Temp\export.pdf		C. 10
2023-08-08 15:52:46	CellT	test1	D:\/pprovai0608\2023-06-08\001 23-06-08 15-17-08 (2023-06-06-15-17-08)\/export.pdf	P-2181202-01-20230808-155133-1	End Date
2023-08-08 15:52:34	CellT	test1	D:\Approval0808\2023-06-08\001 23-06-08 15-17-08 (2023-06-08-15-17-08)\export xlsx	E-2181202-01-20230808-155133-1	2023 / 08 / 18
2023-08-08 15:52:29	CellT	test1	2023-08-06-15-17-06\Sample1\V/(020_mark.NET	IMAGE	
2023-08-08 15:52:29	CellT	test1	2023-08-06-15-17-06\Sample1\//\020.NET	IMAGE	
2023-08-08 15:52:28	CellT	test1	2023-08-06-15-17-06\Sample1\V/\019_mark.NET	IMAGE	SEARCH
2023-08-08 15:52:28	CellT	test1	2023-08-06-15-17-06\Sample1\//\019.NET	IMAGE	
2023-08-08 15:52:27	CellT	test1	2023-08-06-15-17-06\Sample1\V\018_mark.NET	IMAGE	
2023-08-08 15:52:26	CellT	test1	2023-08-06-15-17-06\Sample1\/h018.NET	IMAGE	
2023-08-08 15:52:26	CellT	test1	2023-08-06-15-17-06\Sample1\W\017_mark.NET	IMAGE	BOAVE
2023-08-08 15:52:25	CellT	test1	2023-08-06-15-17-00\Sample1\J/\017.NET	IMAGE	0 3446
2023-08-08 15:52:24	CellT	test1	2023-08-08-15-17-08\Sample1\W\016,mark.NET	IMAGE	
2023-08-08 15:52:24	CellT	test1	2023-08-08-15-17-08\Sample1\M\016.NET	IMAGE	
2023-08-08 15:52:23	CellT	test1	2023-08-08-15-17-06\Sample1\V\015_mark.NET	IMAGE	
2023-08-08 15:52:23	CellT	test1	2023-08-06-15-17-06\Sample1\V\.015.NET	IMAGE	
2023-08-08 15:52:22	CellT	test1	2023-08-06-15-17-06\Sample1\V\014_mark.NET	IMAGE	
2023-08-08 15:52:21	CellT	test1	2023-08-06-15-17-06\Sample1\V/\014.NET	IMAGE	
2023-08-08 15:52:21	CellT	test1	2023-08-06-15-17-06\Sample1\//\013_mark.NET	IMAGE	
2023-08-08 15:52:20	CellT	test1	2023-08-06-15-17-06\Sample1\W\013.NET	IMAGE	V DELETE
2023-08-08 15:52:20	CellT	test1	2023-08-08-15-17-06\Sample1\V/(012_mark.NET	IMAGE	A DELETE
2023-08-08 15:52:19	CellT	test1	2023-08-08-15-17-08\Sample1\W\012.NET	IMAGE	
2023-08-08 15:52:18	CellT	test1	2023-08-06-15-17-00\Sample1\V\011_mark.NET	IMAGE	
2023-06-08 15:52:18	CellT	test1	2023-08-08-15-17-08\Sample1\M\011.NET	IMAGE	
2023-08-08 15:52:17	CellT	test1	2023-08-00-15-17-00\Sample1\V\010_mark.NET	IMAGE	
2023-08-08 15:52:17	CellT	test1	2023-08-08-15-17-08\Sample1\M\010.NET	IMAGE	
2023-08-08 15:52:16	CellT	test1	2023-08-06-15-17-06\Sample1\W\009_mark.NET	IMAGE	
2023-08-08 15:52:15	CellT	test1	2023-08-08-15-17-08\Sample1\M\009.NET	IMAGE	
2023-08-08 15:52:15	CellT	test1	2023-08-08-15-17-08\Sample1\V\008_mark.NET	IMAGE	01.005

Control buttons	Description
1) All	Select all data in Data List.
② SEARCH	Display the data of the selected date.
3 SAVE	Save the selected data to USB.
④ DELETE	Delete the selected data. (DELETE is not activated in all user types.)
S CLOSE	Close the document manage.

NOTE(Except PC Mode)

The search period is limited to 90 days (Except PC Mode).

Deleted list

1	Time	Reason	Name	Sample Index	Test Date Time	Total	Dead	Live	Viability	Chip Type	Userf	2023 / 07 / 18
2	2023-08-18 11:06:03		041 23/08/08 14:03:55	2	2023-08-08 14:03:55	1.02x10E6	1.00x10E6	2.25x10E4	2.19%	CH4	nancer	End Date
2	2023-08-18 11:06:02		040 23/08/08 14:03:55	1	2023-08-08 14:03:55	1.00x10E6	9.83x10E5	1.46x10E4	1.46%	CH4	nancer	2023 / 08 / 18
2	2023-08-18 11:06:02		23/08/08 14:30:43 T/N 1	1	2023-08-08 14:30:43	1.01x10E6	9.83x10E5	2.81x10E4	2.78%	CH4	nancer	
2	2023-08-18 11:06:01		23/08/08 14:30:43 T/N 2	2	2023-08-08 14:30:43	1.00x10E6	1.00x10E6	0.00x10E0	0.00%	CH4	nancer	
2	2023-08-18 11:06:01		23/08/08 14:35:45 T/N 1	1	2023-08-08 14:35:45	9.84x10E5	9.76x10E5	7.86x10E3	0.00%	CH4	test1	SEARCH
2	2023-08-18 11:06:00		23/08/08 14:35:45 T/N 2	2	2023-08-08 14:35:45	1.00x10E6	1.02x10E6	0.00x10E0	0.00%	CH4	test1	
2	2023-08-18 11:05:59		23/08/08 14:55:37 T/N	1	2023-08-08 14:55:37	8.77x10E5	8.97x10E5	0.00x10E0	0.00%	CH2	nancer	
2	2023-08-18 11:05:58		23/08/08 15:05:09 T/N	1	2023-08-08 15:06:09	8.73x10E5	8.89x10E5	0.00x10E0	0.00 %	CH2	nancer	
2	2023-08-18 11:05:57		23/08/08 15:08:13 T/N 1	1	2023-08-08 15:08:13	9.41x10E5	9.79x10E5	0.00x10E0	0.00%	CH4	nancer	A and
2	2023-08-18 11:05:57		23/08/08 15:08:13 T/N 2	2	2023-06-08 15:08:13	9.73x10E5	1.02x10E6	0.00x10E0	0.00%	CH4	nancer	U SAVE
2	2023-08-18 11:05:56		002 23/08/08 16:54:32	1	2023-08-08 16:54:32	9.90x10E5	9.76x10E5	1.40x10E4	1.42.%	CH4	nancer	
2	2023-08-18 11:05:56		003 23/08/08 16:54:32	2	2023-08-08 16:54:32	1.01x10E6	9.94x10E5	2.02x10E4	1.99%	CH4	nanoer	
2	2023-08-18 11:05:55		004 23/08/08 17:01:20	1	2023-08-08 17:01:20	1.02x10E8	9.77x10E7	4.72x10E6	4.60%	CH4	nancer	
2	2023-08-18 11:05:55		005 23/08/08 17:01:20	2	2023-08-08 17:01:20	1.00x10E8	1.02x10E8	0.00x10E0	0.00%	CH4	nanoer	
2	2023-08-18 11:05:54		005 23/08/09 13:07:47	1	2023-08-09 13:07:47	9.95x10E5	9.80x10E5	1.46x10E4	1.47%	CH4	nancer	
2	2023-08-18 11:05:53		007 23/08/09 13:07:47	2	2023-08-09 13:07:47	1.00x10E6	9.93x10E5	9.54x10E3	0.95%	CH4	nanoer	
2	2023-08-18 11:05:53		008 23/08/09 13:12:54	1	2023-08-09 13:12:54	9.91x10E5	9.84x10E5	7.30x10E3	0.74%	CH4	nancer	
2	2023-08-18 11:05:52		009 23/08/09 13:12:54	2	2023-08-09 13:12:54	1.04x10E6	1.02x10E6	2.30x10E4	2.22%	CH4	nanoer	14 0.01 0.000
2	2023-08-18 11:01:52		23/08/08 14:34:19 T/N 1	1	2023-08-08 14:34:19	9.83x10E5	9.85x10E5	0.00x10E0	0.00%	CH4	test1	× DELETE
2	2023-08-18 11:01:51		23/08/08 14:34:19 T/N 2	2	2023-08-08 14:34:19	1.02x10E6	1.01x10E6	1.35x10E4	1.32 %	CH4	test1	
2	2023-08-18 11:01:51		23/08/08 15:10:22 T/N 1	1	2023-08-08 15:10:22	9.58x10E5	9.80x10E5	0.00x10E0	0.00%	CH4	test1	

Control buttons	Description
1 All	Select all data in Data List.
② SEARCH	Display the data of the selected date.
3 SAVE	Save the selected data to USB.
④ DELETE	Delete the selected data. (DELETE is not activated in all user types.)
(5) CLOSE	Close the deleted list.

NOTE(Except PC Mode)

The search period is limited to 90 days (Except PC Mode).

Lock

Press LOCK before turning off the device.

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

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

ADAM CellT	■ Measure	© QC	≔Data	:≅ Approval	Setting	은 User
Reading 4ch					Adjust Auto F	ocus
	TITLE				START	
Result No Title	Total Nonvia	ible Viat	ole Viability		LOCK	
T/R11					EJECT	
V. 1.4.4.6	User	Name: admin			2023-07	-14 16:30:07

Power off

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



NOTE

In PC mode, press the "X button (quit)" to turn off the power.

Maintenance and cleaning

- 1. ADAM-CellT does not need regular maintenance.
- 2. ADAM-CellT has no replacement of consumable materials.
- 3. Please clean the exposed surface of ADAM-CellT 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

Problem	Description	Solution
ADAM-CellT does not power up	No power from outlet Bad power cord.	Check power source. Beplace.
Inaccurate result	Cell number may be out of range. AccuStain Solution has	Adjust the number of cells to recommended concentration (refer to page 50).
	expired. • Too high clumped cells.	 Discard AccuStain that have expired. Purchase the AccuStain(ADR-1000).
		 Try again after vortexing the cells.
When error message is shown (For information on each error message, see page 21)	When frames with errors are over 50% of total counting frame.	Check the suspension of cells if all cells are fully dissociated into single cells.
	(Error message: E)	 If contaminants except cells are found, prepare sample again.
	When over 100µm diameter of cells are included. (Error message: Error frame [#])	Check fully dissociated into single cells.
	High concentration of cells (Error message: H)	Check if concentration of cell is too high.
	Over detection range (Error message: O)	• Dilute the sample and count again.
	Low concentration of cells (Error message: L)	Check if concentration of cell is too low.
	Under detection range (Error message: U)	 Use concentrated sample and count again.

If any defects occur in the ADAM-CellT during one(1) year warranty period, Warranty 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.

For extended warranty purchase, contact sales@nanoentek.com.

Technical **Specifications**



ADAM-CellT	
Measuring range	5x10 ⁴ ~ 4x10 ⁶ cells/mL (PI)
	$5x10^4 \sim 2x10^7$ cells/mL (AO/PI)
Optimal range	4x10 ⁵ ~ 2x10 ⁶ cells/mL (PI)
	4x10 ⁵ ~ 1x10 ⁷ cells/mL (AO/PI)
Analysis time	< 25~50 sec/test : For initial test, max 2 min/test
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)	$227 \times 276 \times 270 \text{ mm}$
Degree of protection	IPX0
Desktop Computer	CPU: Intel i5, 9 generation or over
	spec.
	OS: Windows [®] 10 Pro 64 bit
	RAM: 16 GB
	Hard drive: 2 TB

NOTE

Other PC which has similar specification can be used as an alternative.

Operating environment condition

Temperature	$5^{\circ}C \le Temperature \le 40^{\circ}C$
Humidity	$20\% \le Humidity \le 80\%$
Altitude	Altitude ≤ 2,000 m

Transportation & storage environment condition

Temperature	$5^{\circ}C \le Temperature \le 40^{\circ}C$
Humidity	20% ≤ Humidity ≤ 80%

AccuChip Kit

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		Acc	cuChip	2x		



AccuChip 4x

AccuChip		
Loading sample vol.	23 μL/test (AccuChip 2X)	
per test	13 μL/test (AccuChip 4X)	
Measuring sample vol.	8.6 μL/test (AccuChip 2X)	
per test	3.4 µL/test (AccuChip 4X)	

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Т	Ν
Y	${ }$

Solutions

AccuStain Solution

Total cells (T), non-viable cells (N)

12.5 mL

Storage temperature

AccuChip	0 – 30 °C
AccuStain Solution	2 – 8 °C
Shelf-life	
AccuChip	2 year
AccuStain Solution	1 vear

Product List

Cat. No.	Product	Contents	Quan- tity
		200 pcs AccuChip 2X	1
AD2K-200	AccuChip2X Kit*	12.5 mL AccuStain Solution T	2
		12.5 mL AccuStain Solution N	1
		200 pcs AccuChip 4X	1
AD4K-200	Accuchip 4x Kit (PI)	12.5 mL AccuStain Solution T (T _{PI})	2
		12.5 mL AccuStain Solution N	1
	Accuchip 4x Kit (AO/PI)	200 pcs AccuChip 4X	1
AD4K-200AO		12.5 mL AccuStain Solution T (T _{AO})	2
		12.5 mL AccuStain Solution N	1
ADD 4000	Accustain Solution	12.5 mL AccuStain Solution T (T _{PI})	4
ADR-1000	(PI solution)	12.5 mL AccuStain Solution N	2
ADR-1000AO	Accuchip 4x Kit	12.5 mL AccuStain Solution T (T_{AO})	4
	(AO/PI solution)	12.5 mL AccuStain Solution N	2
ADB-500	ADAM Calibration	5 mL Calibration Bead	1
ADD-300	Bead		

*AccuChip 2x: please consult your distributor or manufacture for availability.

● <u>NOTE</u>

AD4K-200: Total cell is counted by PI with lysis buffer. ADR-1000: Total cell is counted by PI with lysis buffer.

Accessories

Cat. No.	Product	Quan-
		tity
ADAM-CellT PC	PC (Only PC mode)	1
QCS-001	QC slide (optional)	1
ADAM-CellT printer	Portable printer (optional)	1

Safety Precautions

Review and follow the safety instructions below :

- Always ensure that the power supply input voltage matches the voltage available at your location.
- To avoid the danger of electric shock, install the instrument per the environmental specifications located in "Technical Specifications". If water or other material enters the instrument, the adaptor, or power inlet, disconnect the power cord and contact a service person.
- Do not touch the main plug or power cord with wet hands.
- This machine is air-cooled so its surfaces become hot during operation. During installation and use, leave more than 10 cm (4 inches) free around the device.
- Do not install the instrument on a slant or a place prone to vibrations or the risk of instrument malfunction or damage to the instrument will in crease.
- Never insert any objects (especially metallic) into the air vents of the instrument as this could result in electrical shock, personal injury, and equipment damage.
- Always set the main switch on the power supply unit to OFF before connecting the power cord to the wall outlet.
- To avoid a potential shock hazard, always connect the grounding terminal of the instrument and that of the wall outlet properly. The power cord should be connected to a grounded, 3-conductor power outlet.
- Position the device so that there is sufficient length for the cables and their respective connections.
- $\,$ Set the main switch to " O " (OFF), unplug the power cord, and lock the stage before moving.
- If the instrument is broken or dropped, disconnect the power cord and contact an authorized service person. Do not disassemble the instrument.
- Only use authorized accessories.
- Use this equipment only as specified in this manual and as specified in any documentation associated with its components. Use of the equipment in an unspecified manner may result in damage to the device or injury to the user.

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
\bigcirc	ON/OFF (Power)
(6	This instrument and consumables conforms to the EC Declaration of Conformity.
	Caution: BIOHAZARD
	Protective measures must be used in dealing with biologically hazardous materials such as carcinogenic reagents.
•	USB Connection
	LED
	Disposal of your old appliance
	 When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2012/19/EU.
X	 All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
	 The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
	4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or visit our web-site, www.nanoentek.com.
	This product conforms to UL 61010-1, CAN/CSA C22.2 No.61010-1 "Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements." Instruments bearing the TUV symbol are certi- fied by TUV SUD America Inc. to be in conformance with the applicable safety standard for the US and Canada.

Warnings

- 1. After using device, please turn off main power. If not, it may cause malfunction or may reduce product life.
- 2. When turn 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.

Item	Warning
Battery inside device	Risk of explosion if battery is replaced incorrectly.
	 This battery is not replaceable by user. Refer 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 AccuChip, appropriately dispose as bio-hazardous waste.
	• Do not reuse AccuChip.

Technical Support

Visit the 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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ADAM CellT

NESMU-ACT-001E (V.0.7)



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