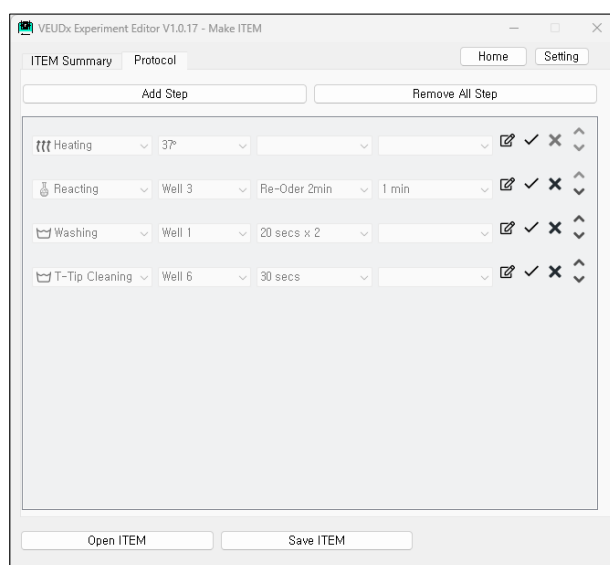
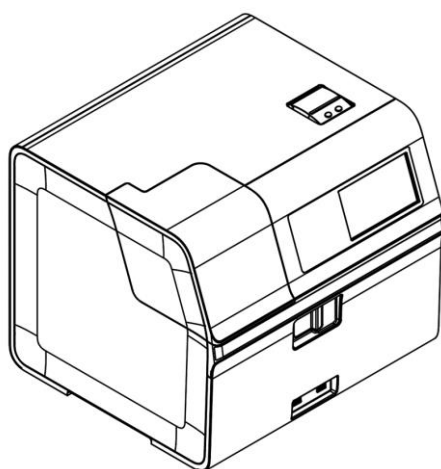


Operation Manual

VEUDx Experiment Editor



User Manual History

Rev. No.	Date	Major Change
1	2022.11.15	Initial Version
2	2022.12.06	Step editing UI change
3		
4		
5		
6		

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1. Installation

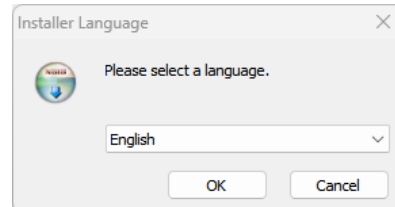
1.1 Installation

1.1.1 Execution

Execute VEUDx Experiment Editor Setup V1.x.x.exe on PC.

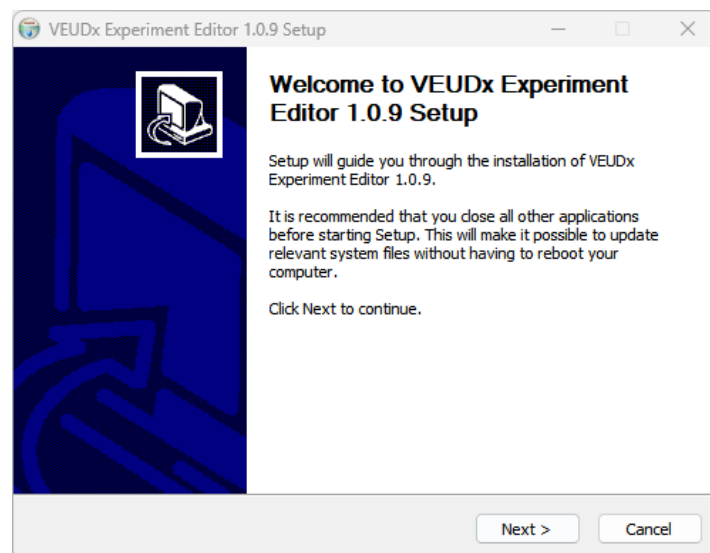
1.1.2 Language selection

Choose the language you want to use



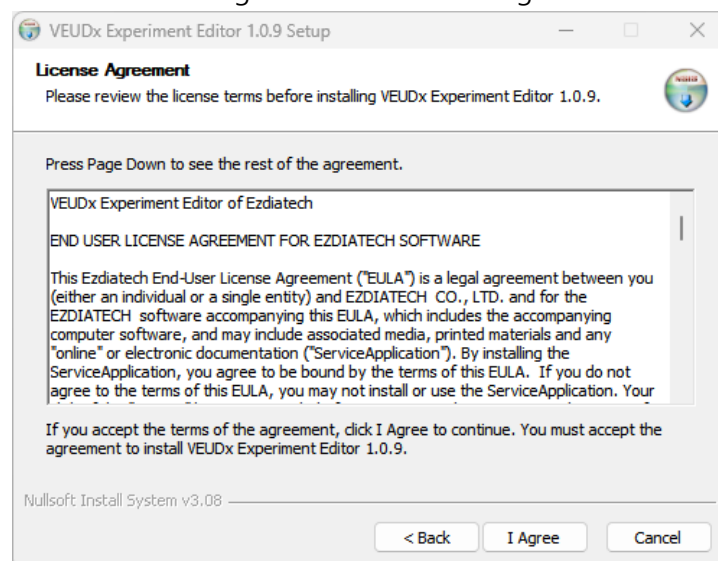
1.1.3 Start installation

Check the contents and click 'Next'.



1.1.4 Check License

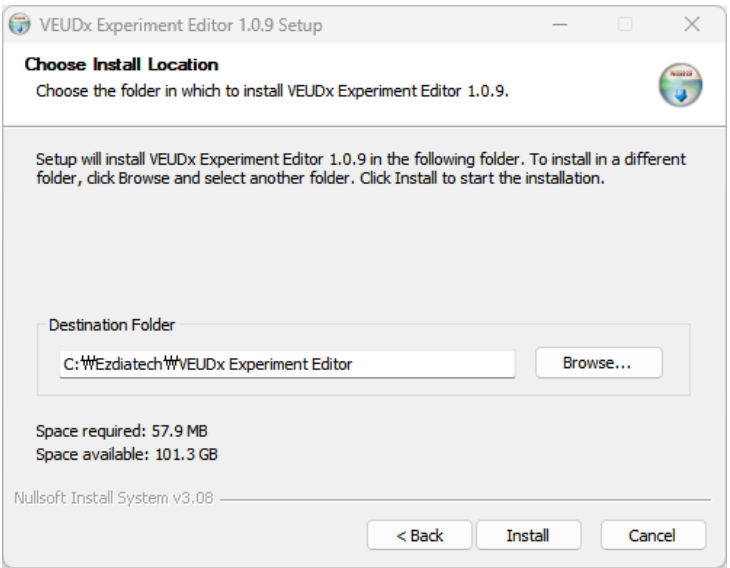
Read the license agreement and click 'I Agree'.



1.1.5 Installation

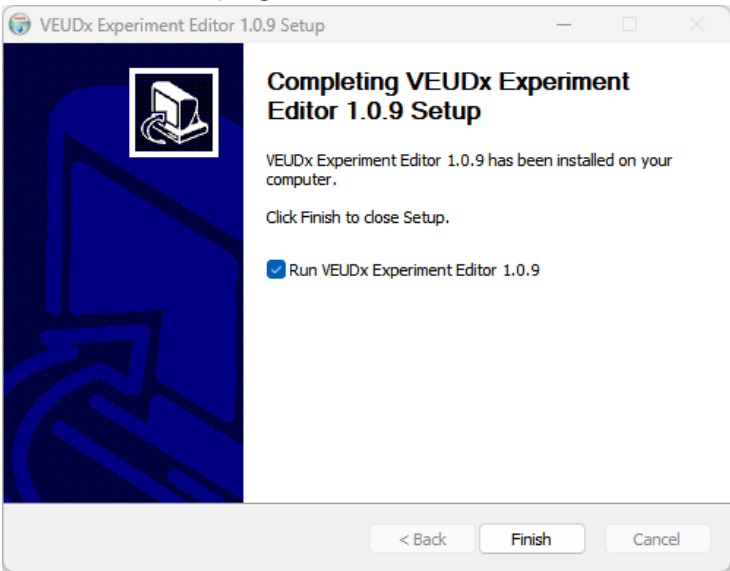
Check the installation path and click 'Install'.

location



1.1.6 Installation completion

Check to run the program and click 'Finish'.



2. Term definition

2.1 ITEM

2.1.1 ITEM	ITEM consists of ITEM name(ex) TBI, Neurology), Marker name, Pixel Cut, Experiment Protocol, etc.
2.1.2 Protocol	Protocol is a collection of experimental procedures (Steps).
2.1.3 Step	This is the procedure for each well. (ex) Well 6 Washing 1 min)
2.1.3 ITEM file	ITEM File is created as VEUDxITEM_ITEM_name.zip file. (ex, VEUDxITEM_TBI.zip)

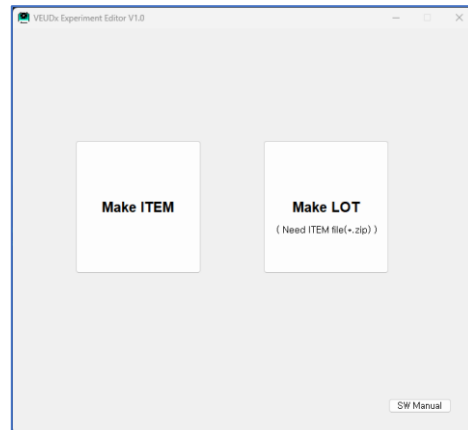
2.2 LOT

2.1.1 LOT	Depending on the produced LOT, it consists of calibration, concentration cut-off value, etc. An ITEM file is required to create a LOT.
2.1.2 LOT file	A LOT XML file that stores LOT information and a Barcode PDF file are created. Ex) VEUDxLOT_TBI_EZTB22111601.xml VEUDxLOT_TBI_EZTB22111601_BarCode.pdf

3. Start

3.1 Start screen

3.1.1 Start screen On the start screen, you can select 'Create ITEM', 'Make LOT', or 'SW Manual'.

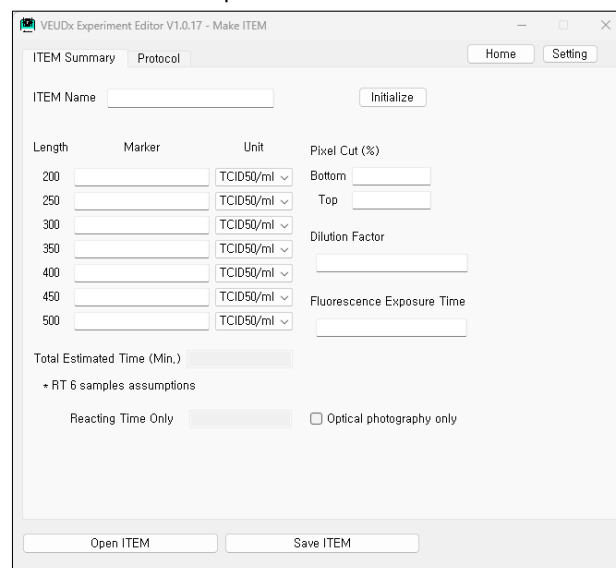


4. Make ITEM

4.1 ITEM creation start screen

4.1.1 Start screen ITEM Open, save and edit are possible.

- In the ITEM Summary tab, you can edit the item name, maker name by RSMP length, unit, pixel cut, experiment time, Dilution Factor, Fluorescence Exposure Time, Optical photography only, etc.
- You can edit steps in the Protocol tab.



4.2 Edit ITEM Summary

4.2.1 Open ITEM

Press the "Open ITEM" button to select the previously created ITEM file. ITEM files are in *.zip. (ex, VEUDxITEM_TBI.zip)

VEUDx Experiment Editor V1.0.17 - Make ITEM

ITEM Summary Protocol Home Setting

ITEM Name TBI3 Initialize

Length	Marker	Unit	Pixel Cut (%)
200	UCH-L1	pg/ml	Bottom 25
250		pg/ml	Top 5
300	GFAP	pg/ml	
350		pg/ml	Dilution Factor 4
400		pg/ml	
450		pg/ml	Fluorescence Exposure Time 500
500		pg/ml	

Total Estimated Time (Min.) 58

* RT 6 samples assumptions

Reacting Time Only 49 ☐ Optical photography only

Open ITEM Save ITEM

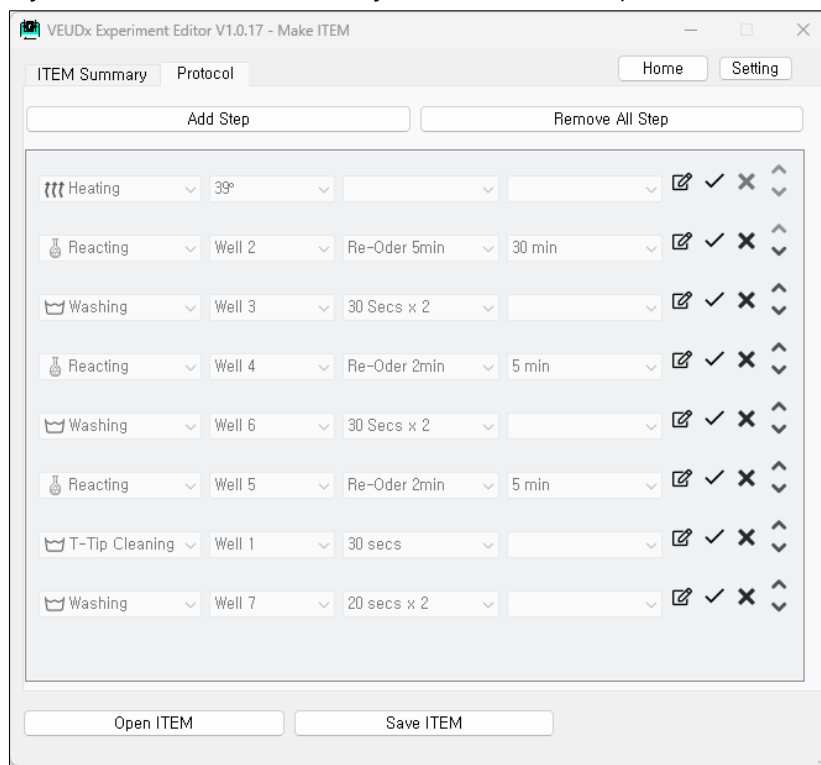
4.2.2 Edit ITEM Summary

- Item name
 - Marker name used by RSMP length
 - Unit used by RSMP length
 - Total experiment time
 - Pixel Cut Bottom, Top
 - Dilution Factor
 - Fluorescence Exposure Time
- Editable.
- If "Optical photography only" is selected, only optical photography is performed for the cartridge that has been tested.)

4.3 Edit Protocol

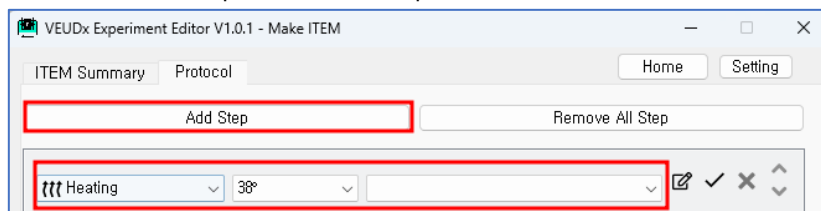
4.3.1 Protocol tab

If you select the Protocol tab, you can edit the Step.



4.3.2 Add Step

Click the "Add Step" box at the top and add an item.



- Selection by Category

.Heating : 30° / 35° / 37° / 38° / 39° / X / RT selectable

.Reacting : Reaction Well (Well 2~5) selectable

- Re-Order 2min (Change the location of RSMP every 2 minutes.)

-> 1~30 min selectable

- Re-Order 5min (Change the location of RSMP every 5 minutes.)

-> 1~480 min selectable

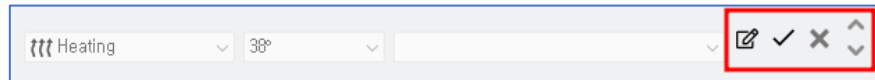
.Washing: Well1~7 and time (20 secsX2, 30 secsX2) selectable

.T-Tip Cleaning: Well1~7 and time (30 secs) selectable



Heating can be selected only once and must be located only in the first step.

4.3.3 Edit Step



- : Change edit Step mode
- : Save Step
- : Delete Step
- : Change Step Order

4.4 Save ITEM and Installation

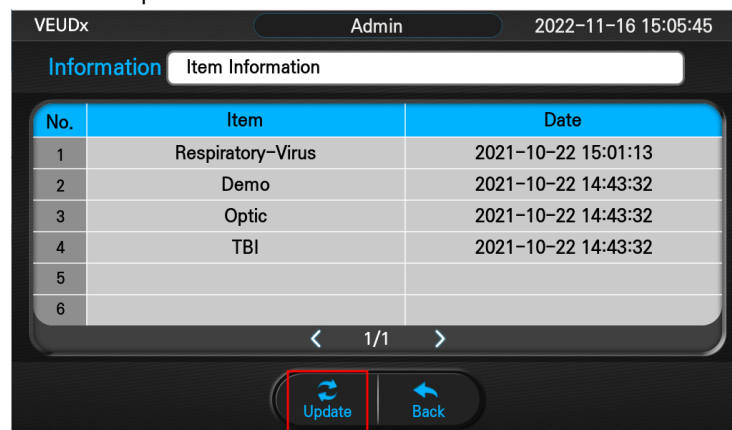
4.4.1 Save ITEM to PC

Click the "Save ITEM" button to create an ITEM zip file.

*For how to save only protocol (script) for development reference, refer to the setting section.

4.4.2 ITEM installation on VEUDx equipment

1. Copy the ITEM file created above to an external USB memory
2. Run VEUDx equipment
3. Admin Login (Initial Admin Password: 0000)
4. Click Settings
5. Click Information
6. Click Item
7. Mounting on an external USB memory device
8. Select Update



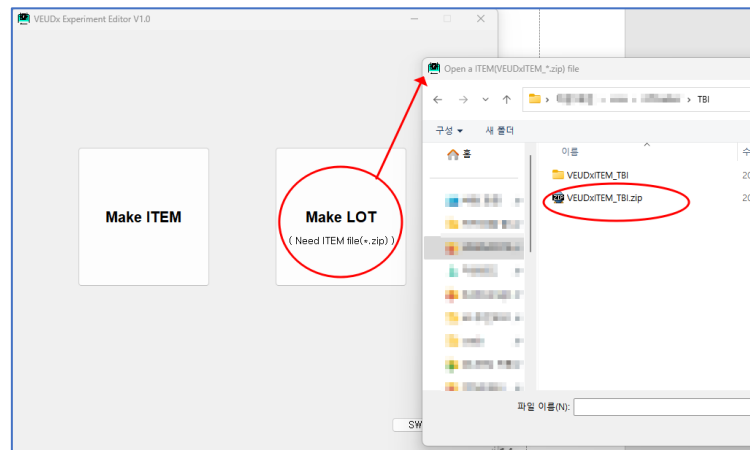
9. Select ITEM to update
10. ITEM update complete
11. Restart after shutting down the equipment

5. Make LOT

5.1 Select ITEM file

5.1.1 Select ITEM file

Select ITEM file to make LOT.



5.2 Make LOT

5.2.1 Start

The screenshot shows the 'VEUDx Experiment Editor V1.0 - Make LOT' window. It contains the following fields and controls:

- LOT Bar Code**: Home, Setting buttons.
- Barcode Name**: Text input field.
- ITEM Name**: Text input field with 'Neurology-3plex' entered.
- Initialize**: Button.
- Marker**: Table with columns a, b, c, d, Max, Min.
- Cal Value**: Table with columns a, b, c, d, Max, Min.
- Cut-Off(0~65535)**: Table with columns Max, Min.
- LOT ID**: Table with columns Maker, ITEM Abbr., Made date, LOT Serial.
- Bar Code Version**: Text input field with 'V1' entered.
- Expire Date**: Text input field with '2022-01-01' entered.
- Note**: Text input field.
- Open LOT**: Button.
- Save LOT(+ PDF)**: Button.

Marker	a	b	c	d	Max	Min
200					65535	0
250					65535	0
300 pTau231					65535	0
350					65535	0
400 pTau181					65535	0
450					65535	0
500 Tau					65535	0

LOT ID	Maker	ITEM Abbr.	Made date	LOT Serial
	EZ	Ne	2022-11-16	01

The ITEM name and Marker name read from the ITEM file are displayed.

5.2.2 Enter LOT information

- Cal Value (a, b, c, d),
- Concentration Cut-Off Max/Min

- LOT creation date
- LOT Serial
- LOT Expire Date can be entered.

*Barcode Name, Note can be used as a reference.

*For TBI ITEM, TBI Calibration min can be used. (Refer to Setting item)

5.2.3 Save LOT

Click the "Save LOT(+PDF)" button

Two LOT XML files and Barcode PDF files are created.

- LOT XML file (ex, VEUDxLOT_TBI_EZTB22111601.xml)

.Used to save work

When using VEUDx equipment, it can be used when there is no Barcode Reader equipment.

- Barcode PDF file (ex, VEUDxLOT_TBI_EZTB22111601_BarCode.pdf)

It is used for reading VEUDx equipment LOT/Script Barcode by printing it out on paper.



< VEUDx equipment LOT reading screen >

- Barcode Created : 2022/12/9

- Barcode Name : Neurology20220624

- LOT ID : EZNe22062401

- ITEM : Neurology-3plex

- Note :

- LOT Barcode :

VEUDx LOT/V1/EZNe22062401/Neurology-3plex/221124/3_a3427.628697_b0.940849_c53383

7.496638_d39832549.230105_x65535_n0/5_a3427.628697_b0.940849_c533837.496638_d398

32549.230105_x65535_n0/7_a3427.628697_b0.940849_c533837.496638_d39832549.230105_

x65535_n0



- Bead/Marker Information

Length / Marker / Unit

300 / pTau231 / pg/ml

400 / pTau181 / pg/ml


500 / Tau / pg/ml

Pixel Cut (%) Bottom :

Pixel Cut (%) Top :

Total Time(Min.) : 115

- Strip Barcode : VEUDx Strip/V1/EZNe22062401/Neurology-3plex/221124



- Reaction Protocol

1 : Heating | X

2 : Reacting | Well 2 | 60 min

3 : Washing | Well 3 | Washing 1 (1 Min)

4 : Washing | Well 4 | Washing 1 (1 Min)

5 : Reacting(Staining) | Well 5

6 : Washing | Well 6 | Washing 2 (30 Secs X 2)

7 : Washing | Well 7 | Washing 3 (1 Min + 30 Secs X 3)

< PDF file for LOT Barcode output >

5.2.4 Open LOT

Editing is possible by selecting the saved LOT XML by pressing the “Open LOT” button.

6. Settings

6.1 Open Settings

6.1.1 Open Settings

‘Press the ‘Settings’ button.

VEUDx Experiment EditorV1.0 - Make ITEM

ITEM Summary Protocol Home Setting

ITEM Name Initialize

Marker	Unit	Pixel Cut (%)
200	pg/ml	Bottom
250	pg/ml	Top
300	pg/ml	
350	pg/ml	
400	pg/ml	
450	pg/ml	
500	pg/ml	

Total Time(Min.)

Open ITEM Save ITEM

Settings

TBI

☒ TBI Calibration

Unit

pg/ml

TCID50/ml

Add Delete

Development

☐ Show Development Menu

Save Cancel

6.2 TBI Calibration

6.2.1 TBI Calibration

If TBI Calibration is checked, 'TBI Calibration min' menu is displayed
* This is a dedicated menu for "TBI" ITEM, and other items can be used if necessary.

TBI

☒ TBI Calibartion

VEUDx Experiment EditorV1.0 - Make LOT

LOT Bar Code

Barcode Name

ITEM Name

Neurology-3plex

Initialize

Marker	Cal Value				Cut-Off(0~65535)		TBI Calibration Min(%)
	a	b	c	d	Max	Min	
200					65535	0	
250					65535	0	
300	pTau231				65535	0	
350					65535	0	
400	pTau181				65535	0	
450					65535	0	
500	Tau				65535	0	

LOT ID

Maker

EZ

ITEM Abbr.

Ne

Made date

2022-11-16

LOT Serial

01

Bar Code Version

V1

Expire Date

2022-01-01

Note

Open LOT

Save LOT(+ PDF)

6.3 Unit

6.2.1 Unit

Units to be displayed in the Unit Combo List of the ITEM Summary tab can be edited.

Unit

Add

Delete

pg/ml

TCID50/ml

6.4 Development menu

6.4.1 Development

If you select the development menu, you can open/save only the protocol and display comments for analysis.

menu

Development

☒ Show Development Menu

VEUDx Experiment EditorV1.0 - Make ITEM

ITEM Summary

Protocol

Home

Setting

ITEM Name

Initialize

	Marker	Unit	Pixel Cut (%)
200	<div></div>	<div>pg/ml</div>	Bottom <div></div>
250	<div></div>	<div>pg/ml</div>	Top <div></div>
300	<div></div>	<div>pg/ml</div>	
350	<div></div>	<div>pg/ml</div>	
400	<div></div>	<div>pg/ml</div>	
450	<div></div>	<div>pg/ml</div>	
500	<div></div>	<div>pg/ml</div>	

Total Time(Min.)

Open ITEM

Save ITEM

Open Protocol

Save Protocol

☐ Add Comment

6.4.2 Save protocol file

If you press the 'Save Protocol' button, only the Protocol (Script) file can be saved separately.

This is a development file and cannot be installed on a machine.
When "Add Comment", comments are displayed on the Protocol (Script).

H_ALL
LCD_H
ON_H180
W_H55
OFF_H
C_H
ON_H44
W_H38
OFF_H
M_Z0
M_Y1
M_X1
OFF_H
W30000
ON_H44
W10000
ON_H46
W20000
ON_H45
W40000

LCD_R
M_T3
M_M1
W2000
R2_M1W510MOW510

M_M1
W1000
M_T0
W500

//Heating 39°

H_ALL
LCD_H
ON_H180
W_H55
OFF_H
C_H
ON_H44
W_H38
OFF_H
M_Z0
M_Y1
M_X1
OFF_H
W30000
ON_H44
W10000
ON_H46
W20000
ON_H45
W40000

//1 Well Collect_RSMP
LCD_R
M_T3
M_M1
W2000
R2_M1W510MOW510

//Condensation
M_M1
W1000
M_T0
W500

< Protocol display according to annotation options >