# CQ1

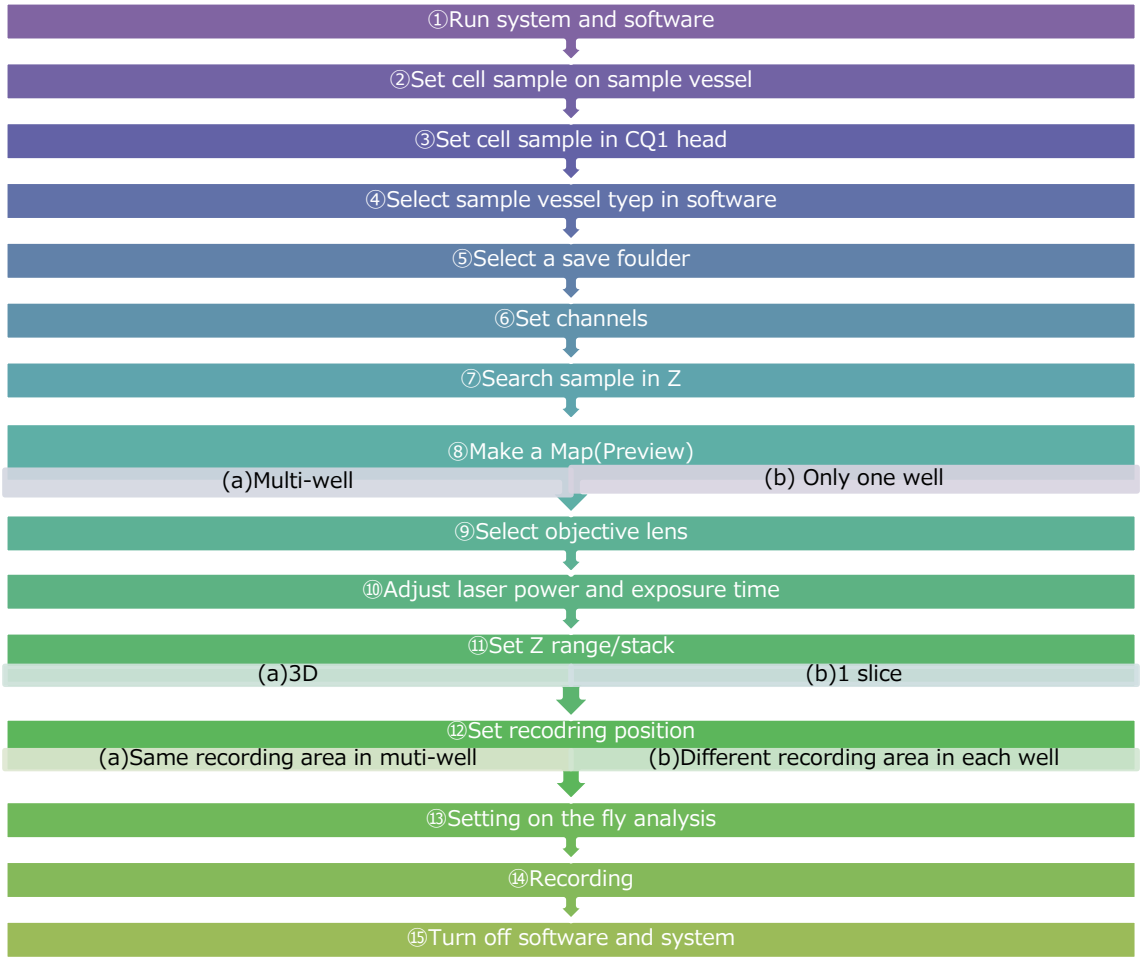
## Simple procedure: Image acquisition

YOKOGAWA

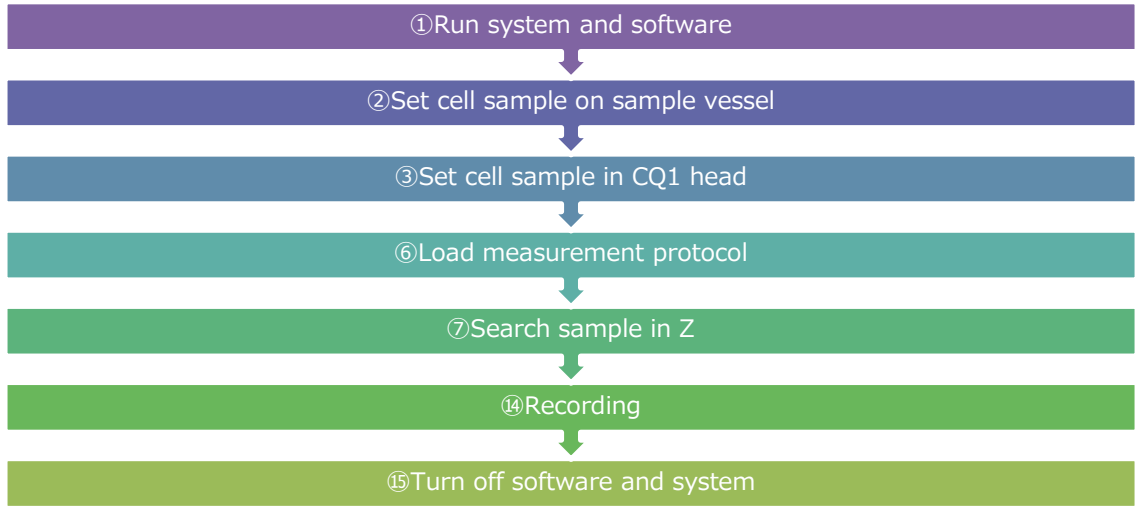
LSSR-E278

## FlowChart

First time




From second time



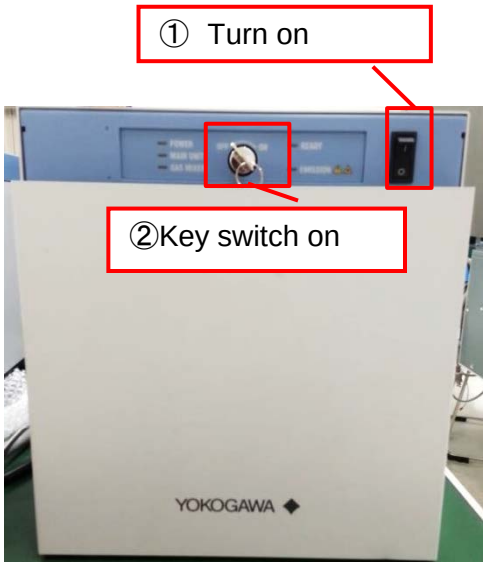
## 1. Run system and software

Turn on a switch on utility box

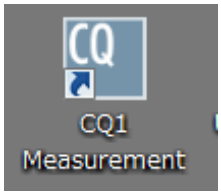
Turn on laser key on utility box

Turn on workstation

Run CQ1 measurement software



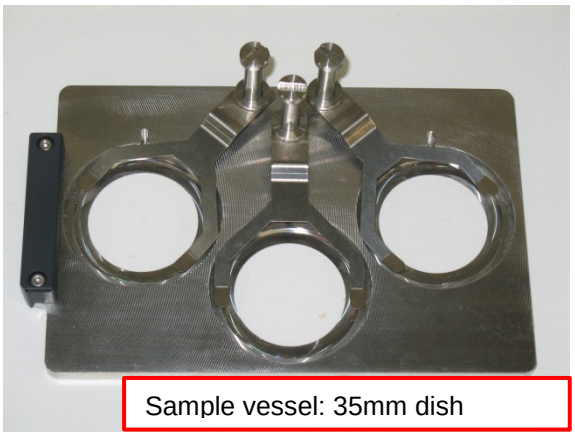




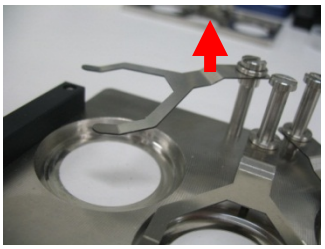
## 2. Set cell sample on sample vessel

<In case of sample vessel: triple 35mm dish>

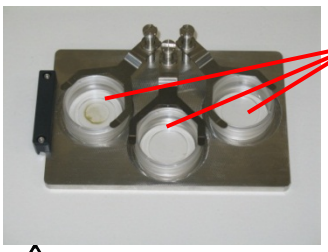
Set 35mm dish on sample holder (Fill up triple 35mm dish. Blank dish is OK)




Pick up a plate spring, set a dish, push down a plate spring and fix it.





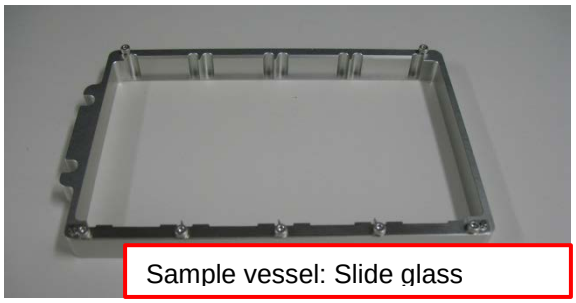



⚠ Caution

Fill up triple 35mm dish. Blank dish is OK

<In case of sample vessel: slide glass>

Set slide glass in sample vessel

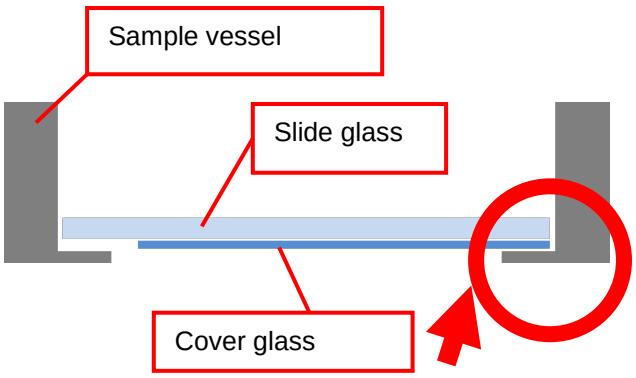



Set a slide glass pushing a plate spring on a wall of the sample vessel.

Make top of slide glass down. Don't give the glass a tilt


⚠ Caution

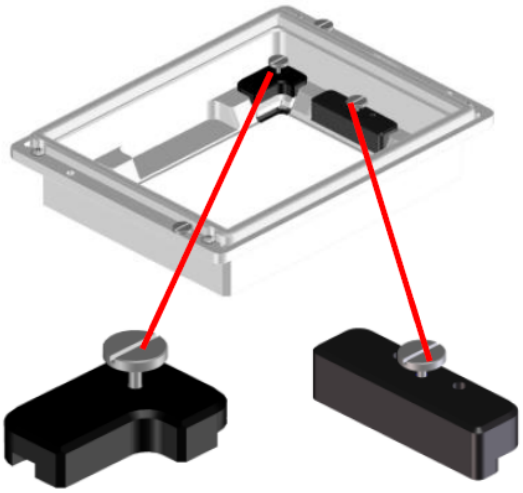
Don't put a cover glass on sample vessel



**<In case of wellplate with stage incubator>**

Attach 2 sets of sealing blacks.

Chambered Type

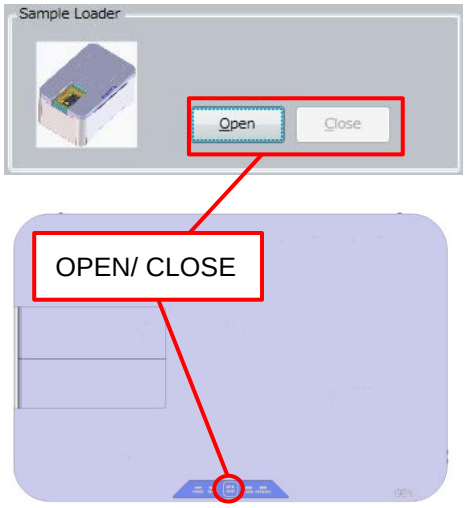


※Sealing Blocks

Capable of keeping the temperature, $CO_2$, $O_2$ concentration and humidity

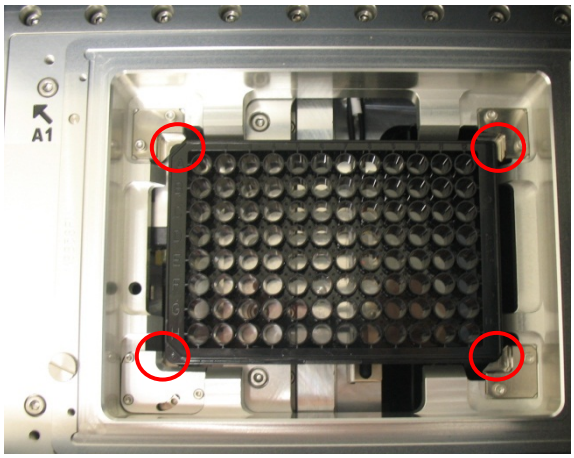
## 3. Set sample vessel in CQ1 head

Either click Open button in software or push OPEN/ CLOSE button in CQ1 main head (Keep pushing 3 sec) to open door in CQ1, set a microplate or a sample vessel in CQ1, and close the door.



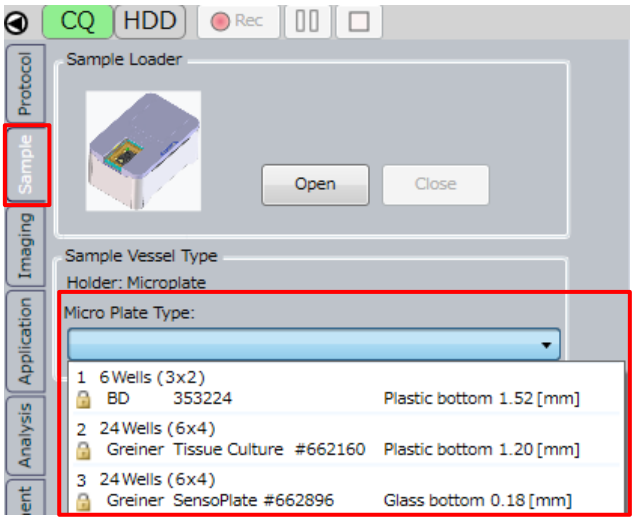

⚠ Caution

Confirm the corners of microplate on CQ1. Swing the microplate to check if the plate properly stand up on CQ1.



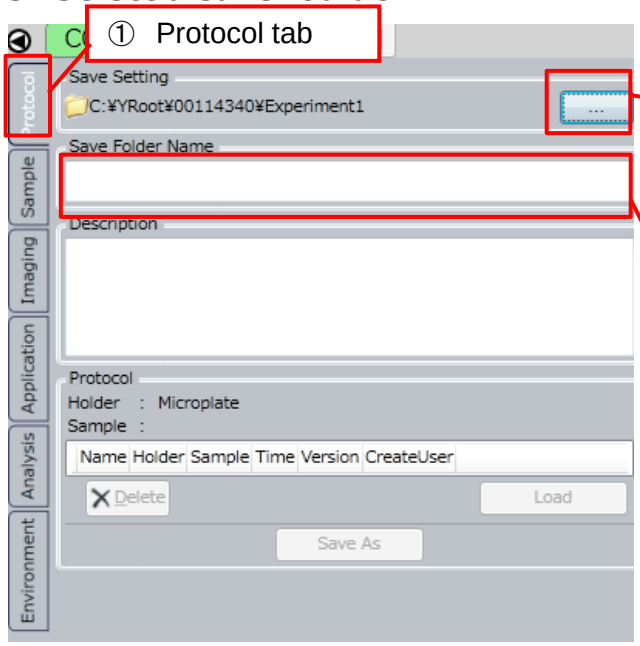
## 4. Setting sample vessel

Select sample vessel on 「Sample」tab




If you wish to register new sample vessel
（User's Manual5-17）

## 5. Select a save foulder

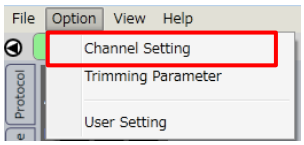


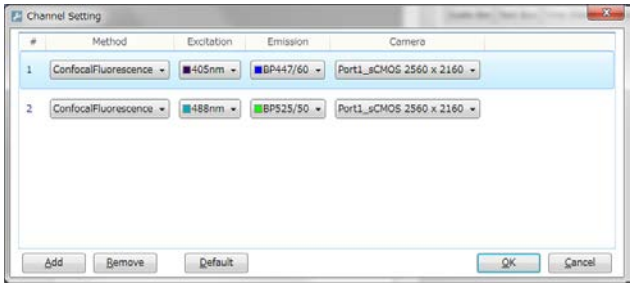

②Select a save data directory

③Name

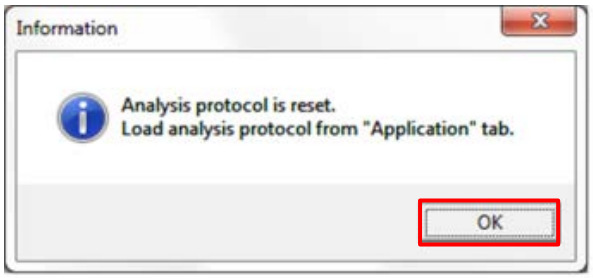
## 6. Setting channels

Double-click on channels window in Imaging tab or select「Option」→「Channels Setting」 on top bar. 「Channel Setting」window pops up. Set combination of laser and filters. Maximum 10 combinations are available.

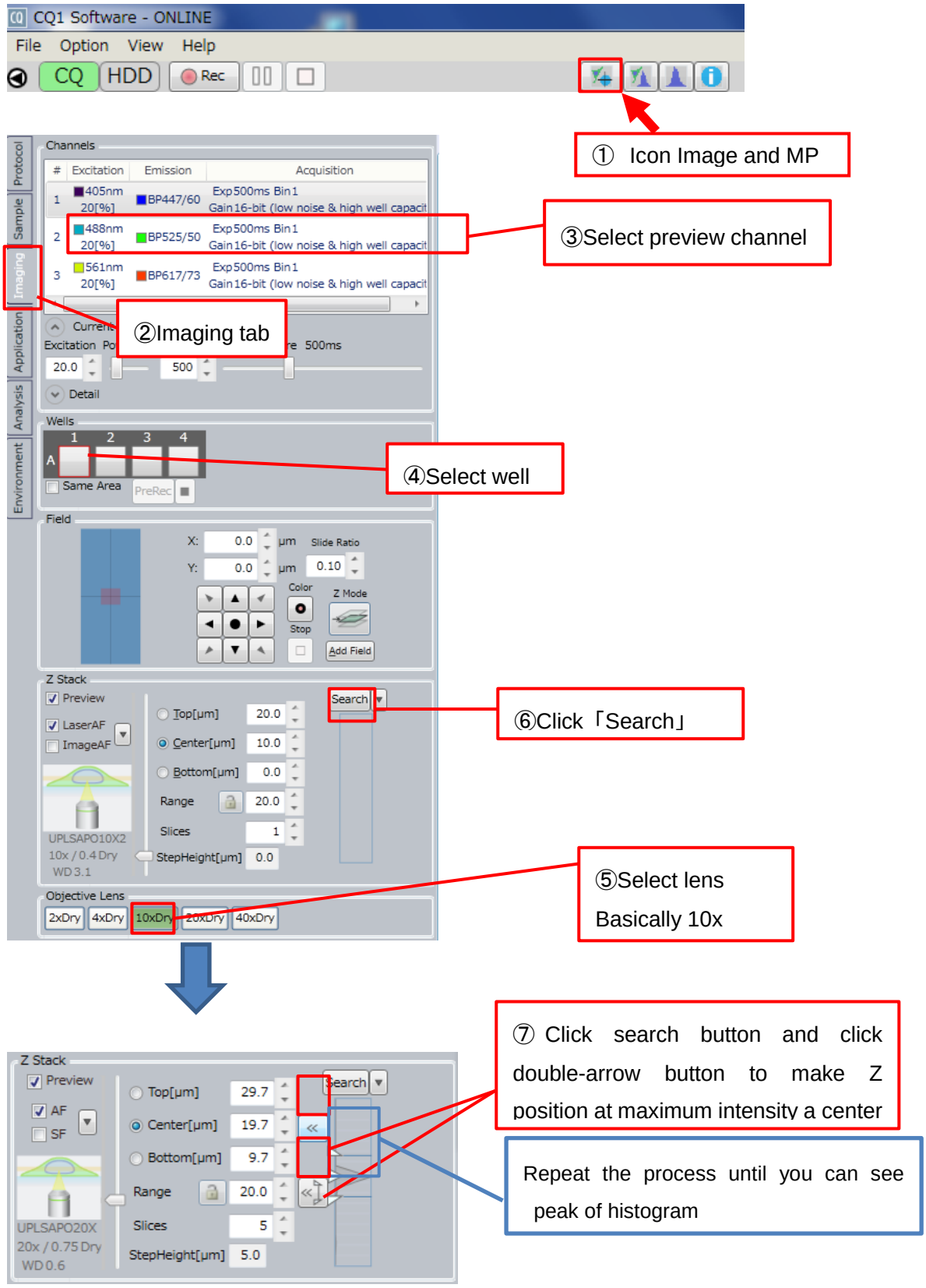


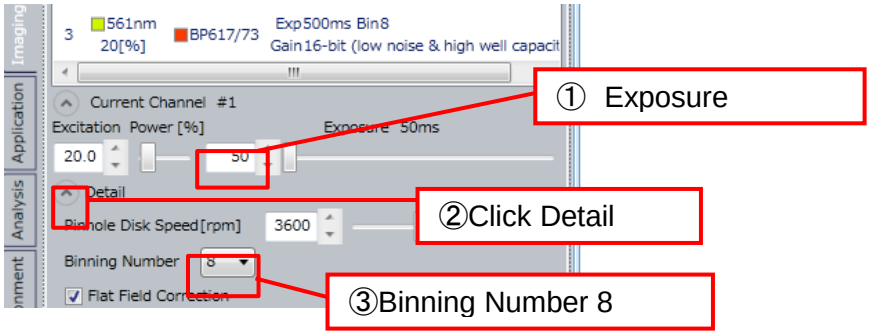

Click OK



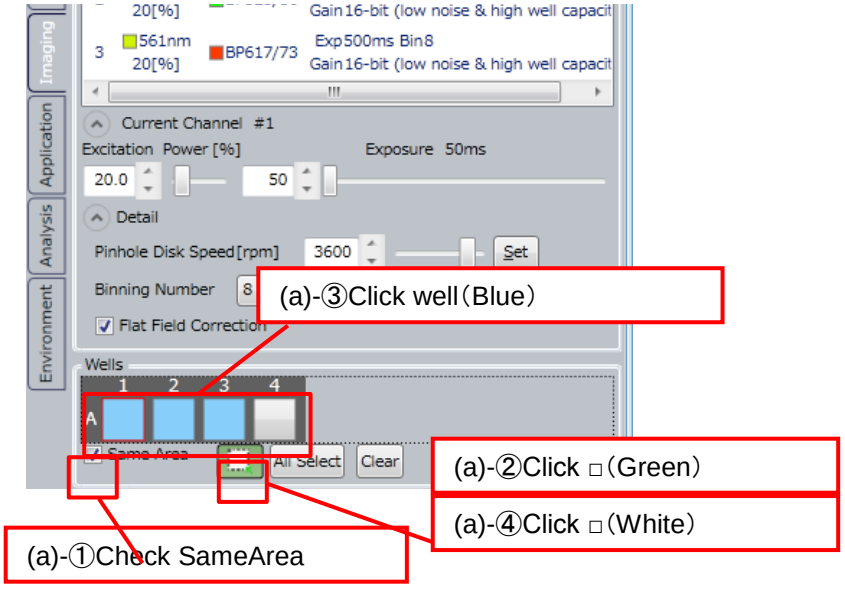
## 7. Search sample in Z

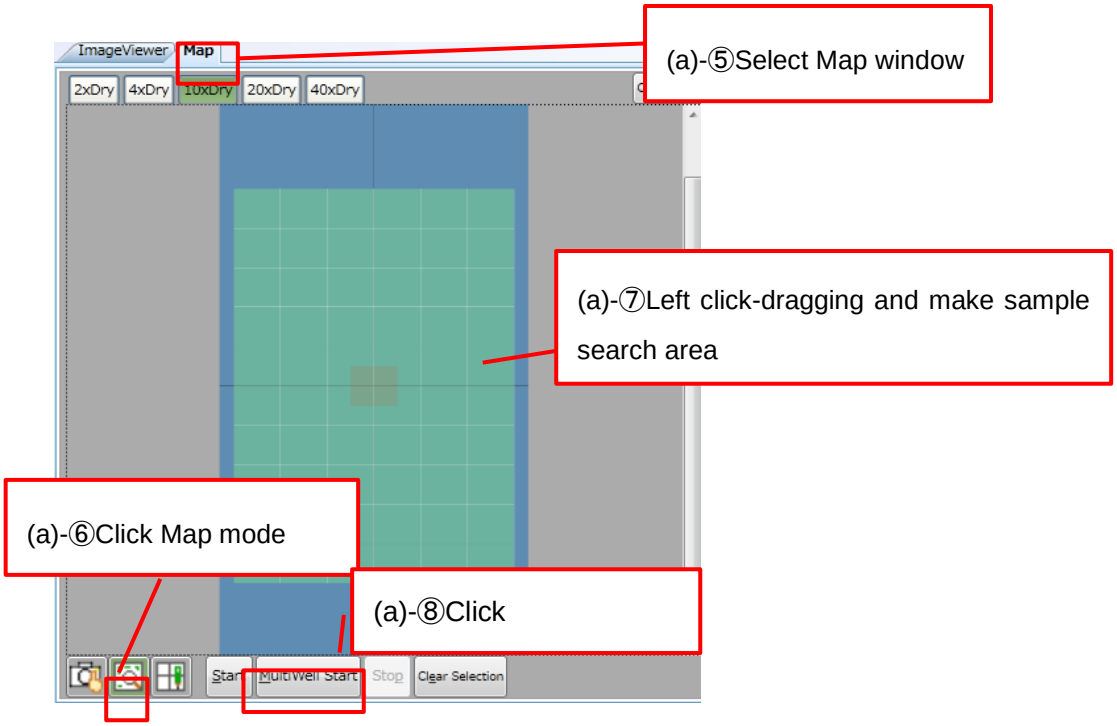


## 8. Make a Map(Preview)

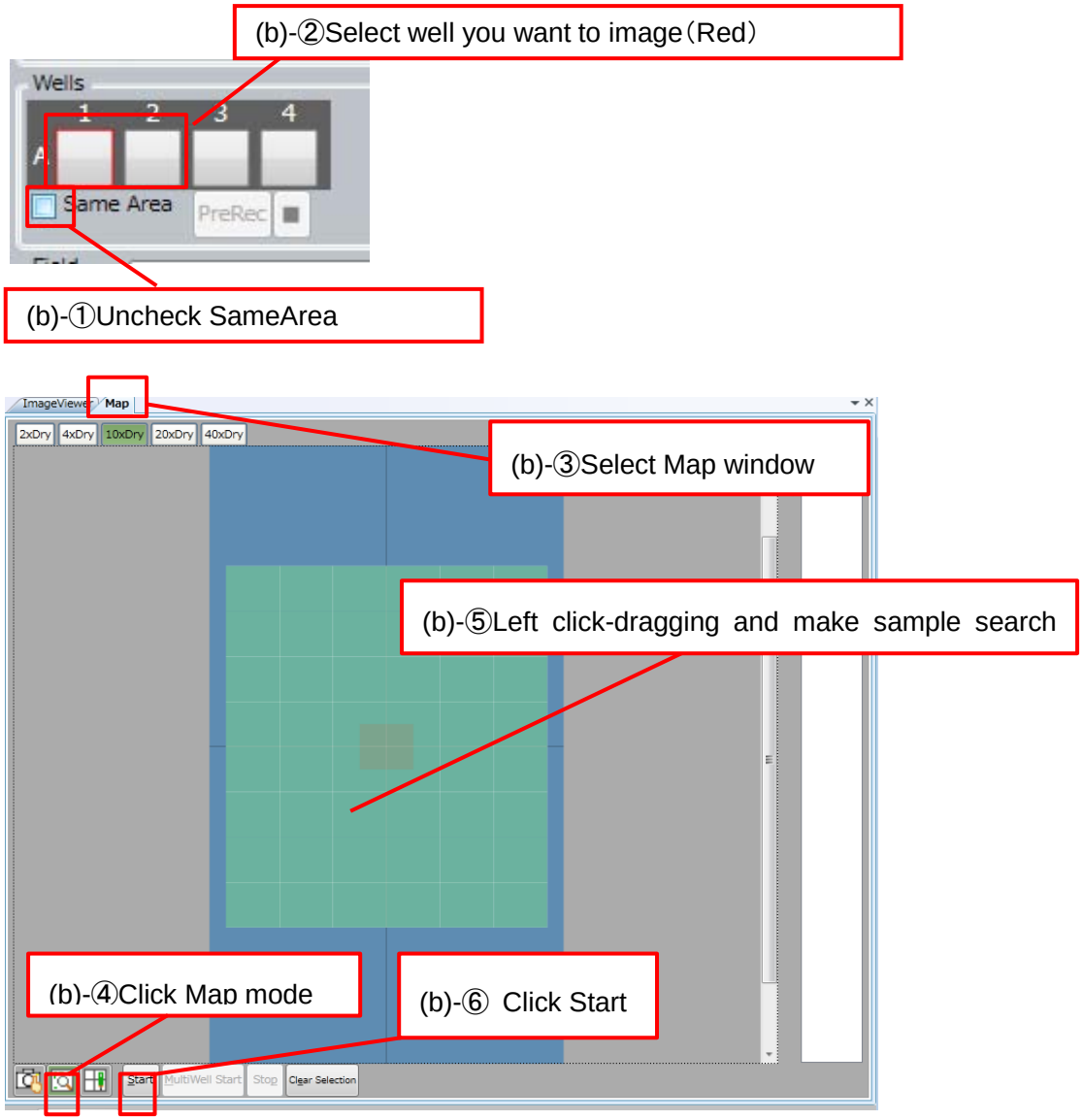


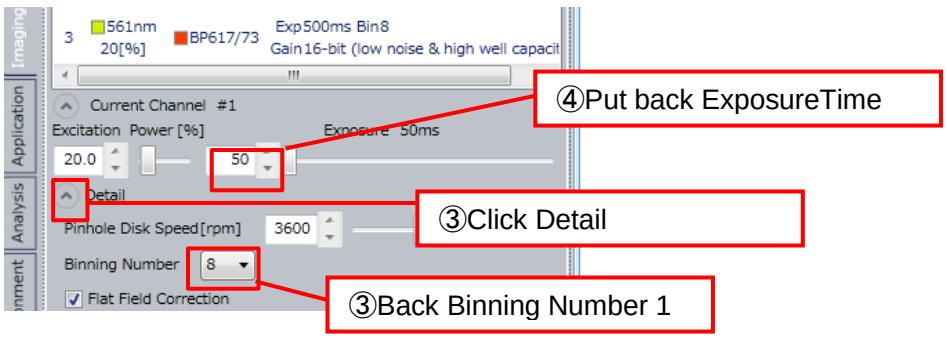

(a)Make a map for Multi-well



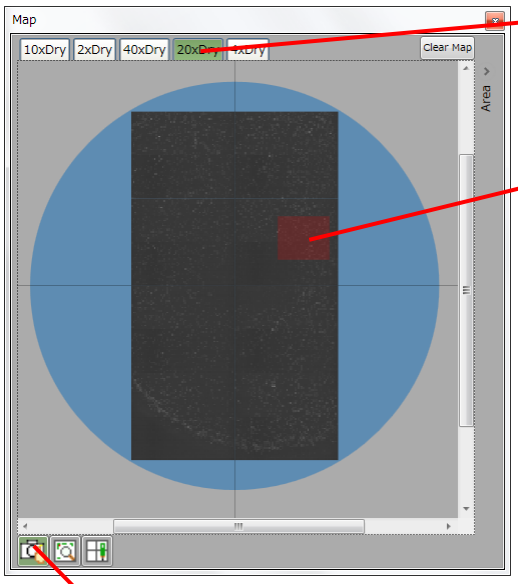
(b)Make a map for only one well



## 9. Select objective lens

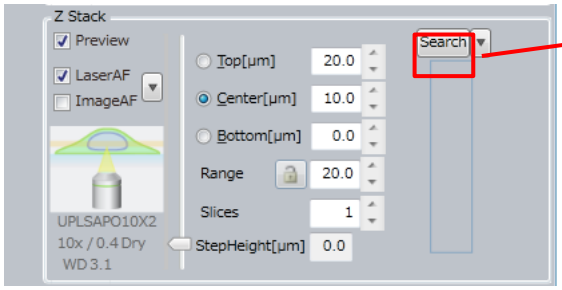
After Map acquisition, Click a field position mode、and switch the lens you want to use. And click the position you want to take images



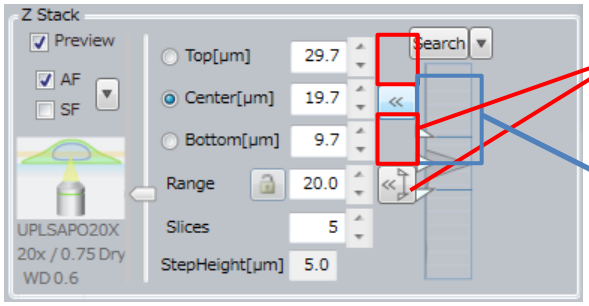

1. Switch the lens you want to use

2. Click the position you want to take images

3. Field position mode



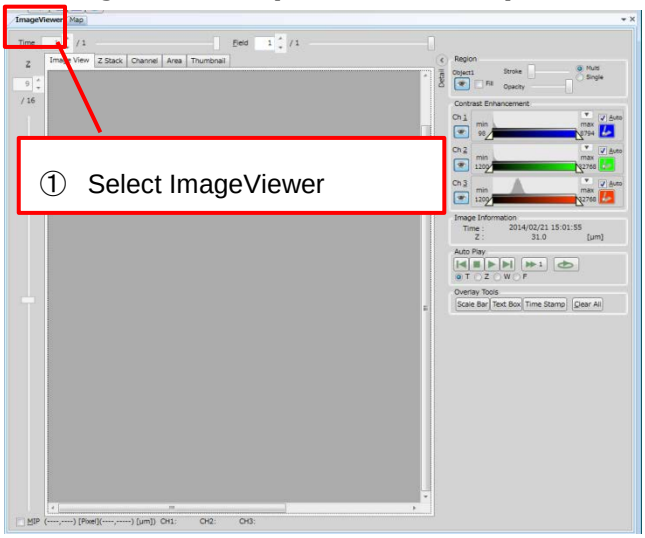

4. Click search

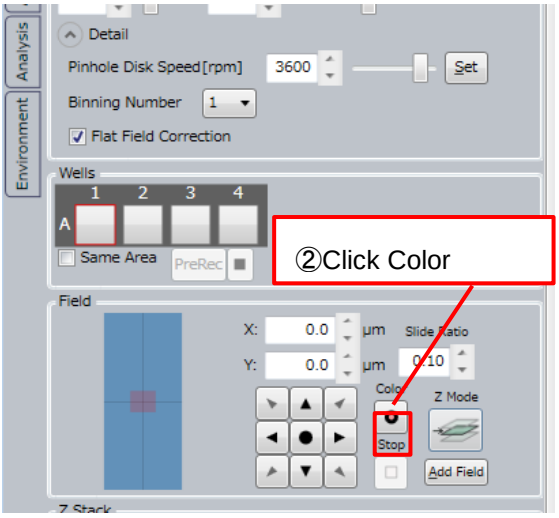


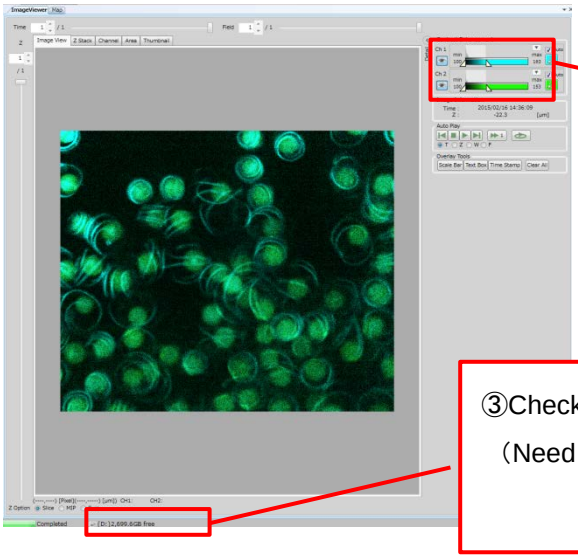

5. Click search button and click double-arrow button to make Z position at maximum intensity a center

Repeat the process until you can see peak of histogram

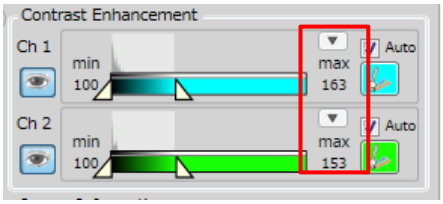
## 10 Adjust laser power and exposre time



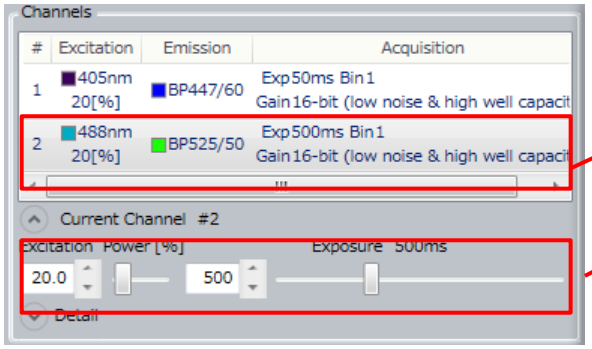
④Check Max intensity under 65556




③Check intensity hovering a mouse

（Need over 300 intensity for analysis）

CH1: 154 CH2: 211



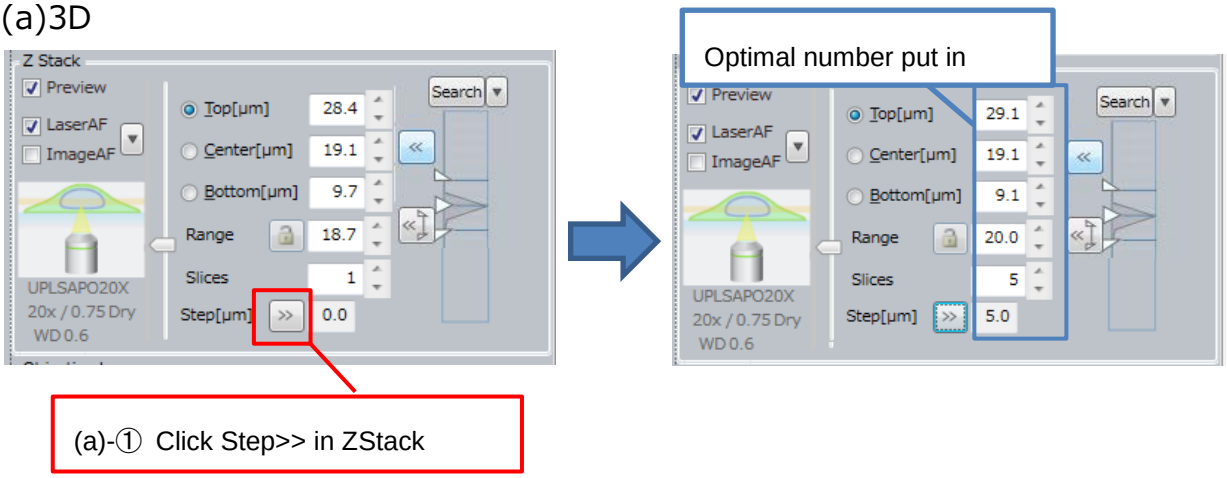

⑤Select channels

⑥Adjust parameters

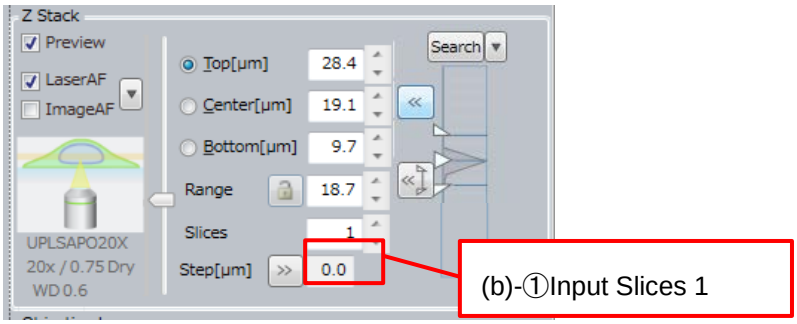
Repeat from ② to ⑥ until you get sufficient images

## 11. Set Z range/stack

(a)3D

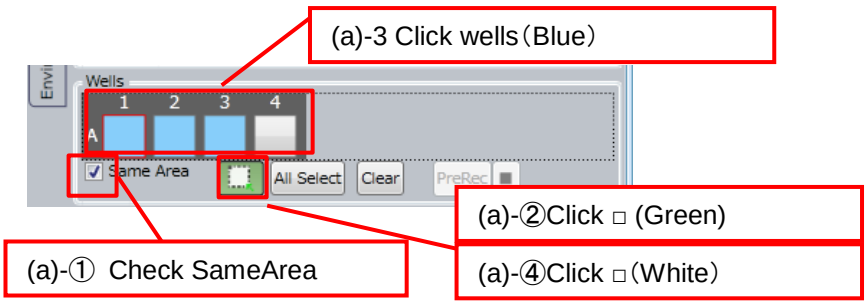


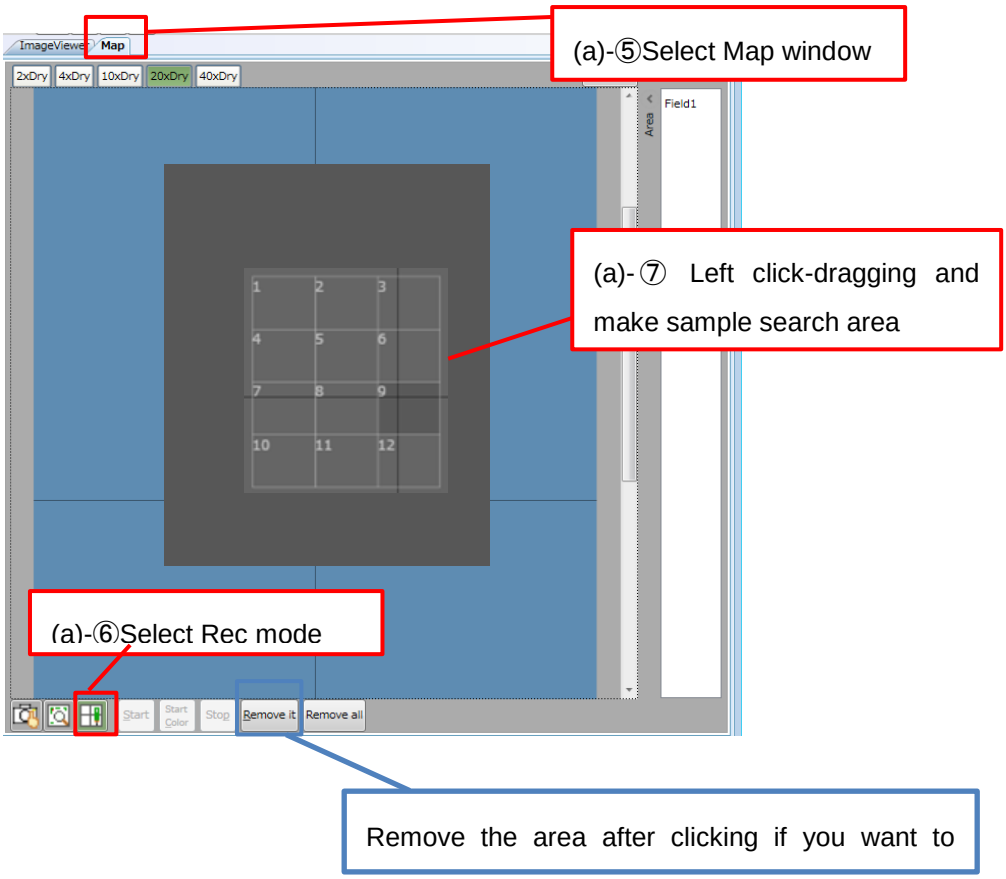

(b) 1 slice



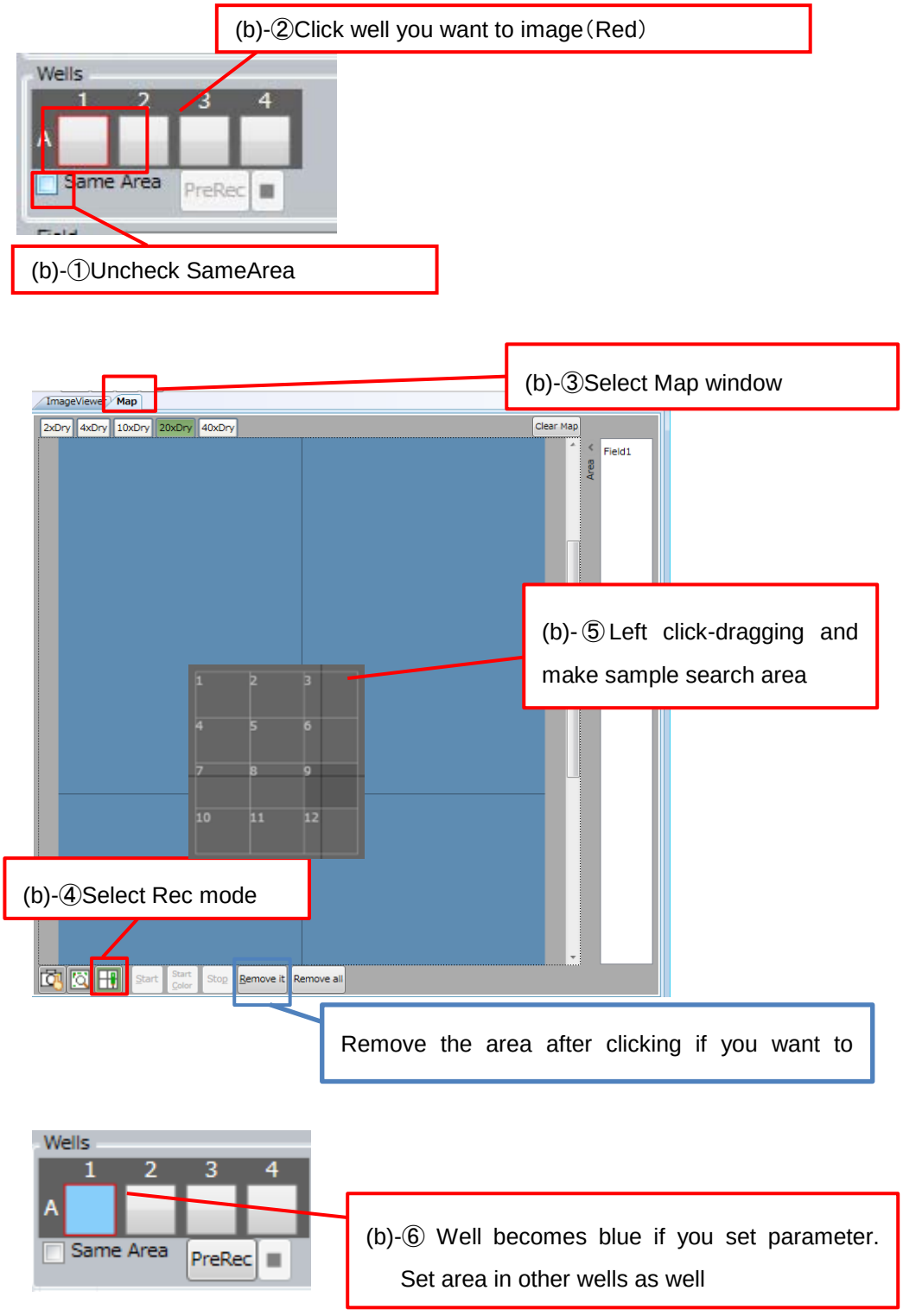
## 12. Set recodring position

(a) Same recording area in multi-well

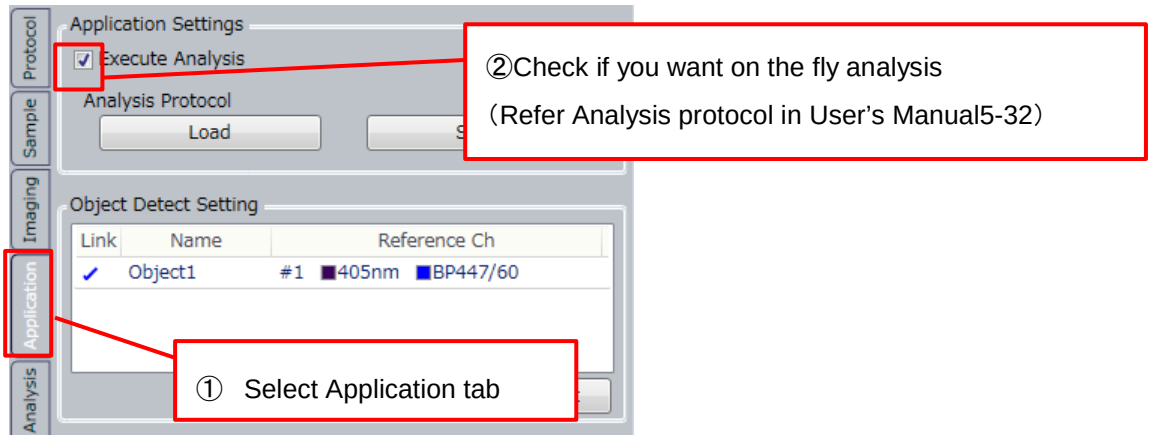


(b) Different recording area in each well

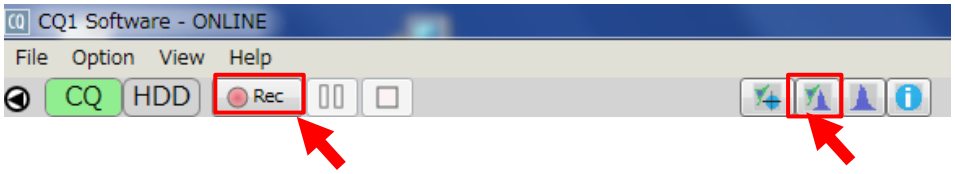


## 13. Setting on the fly analysis(See reference on the last page)




## 14. Recodging

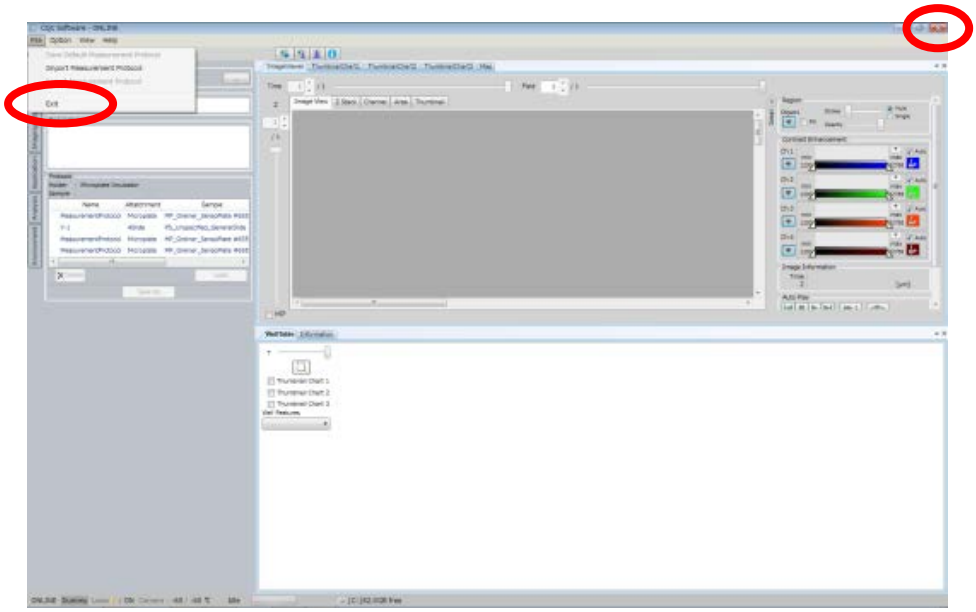
Click 「Image＆graph」icon to change view layout. Click 「Rec」button to start acquisition.



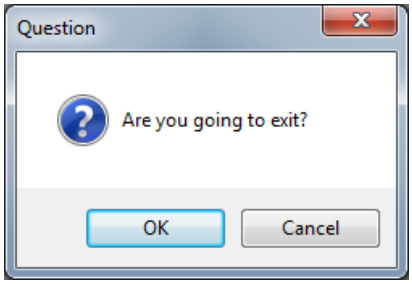

During recording, acquired output data (default: count) is displayed on WellTable

## 15. Turn off software and system

Select either [File] menu → [Exit] on top bar or click close button in software.



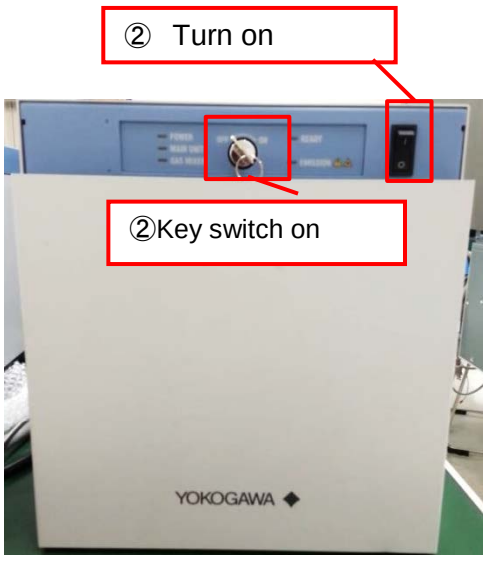
Click OK




Turn off workstation

Turn off laser key on utility box

Turn off a switch on utility box

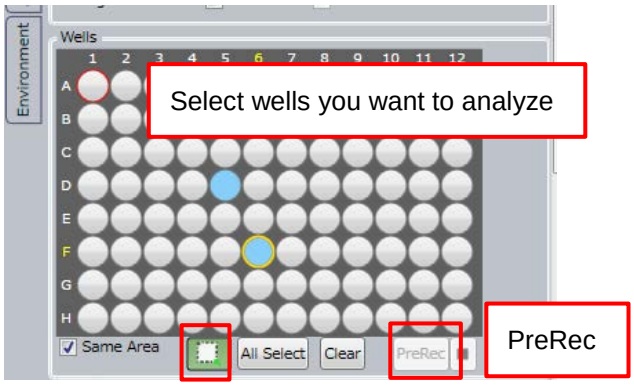



# Reference

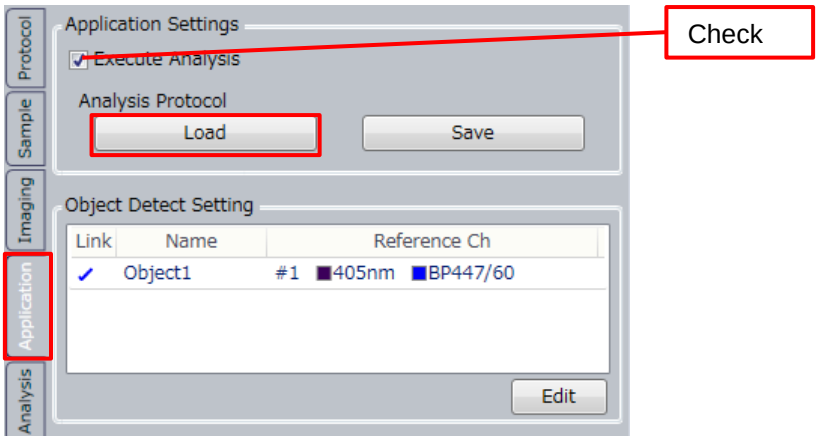
**Image acquisition on and on the fly analysis**

After setting for recording area in well, select wells you want to pre-analyze.

And, click PreRec to start preview.

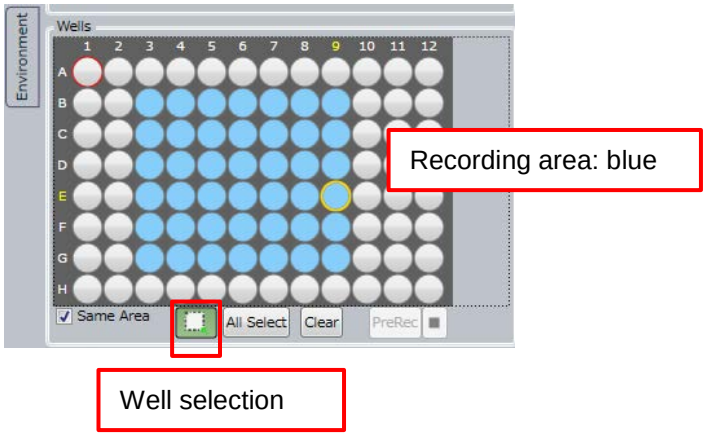



Check 「Execute Analysis」on 「Application」tab.

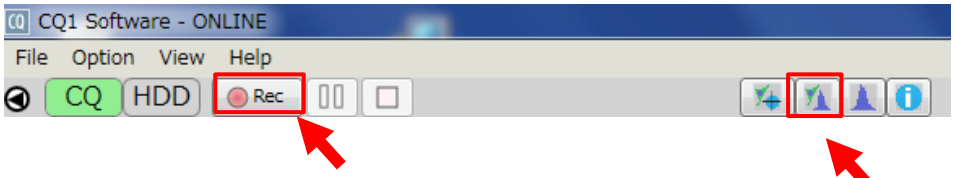



Click load and select protocol you want to use.(Refer to Simple procedure __analysis)

Select well selection button to set recording area in wells window in imaging tab




Click 「Image＆graph」icon to change view layout. Click 「Rec」button to start acquisition.




During recording, acquired output data (default: count) is displayed on WellTable