Normal XRD (NXRD)

CONTACT

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Machine Information

- Model : D8 ADVANCE (Bruker)
- Introduction year: 2011
- Asset number:
- Address : Bldg.102 B101-2room

You can check machine condition through

'Status Light' located at bottom of both sides.

1) Normal operation : Ready & On

2) During Measurement : Ready & On & Busy

3) Equipment error : On & Alarm

Sampling

<Thin film Sample>

1) Cut rubber clay with scissors as size of sample.

   - When rubber clay is smaller than sample, thin film can be leaned.

2) Do not mass rubber clay, and stacks in the middle of the holder.

   - When you transform rubber clay, thin film can be leaned because of each different density and thickness of clay.

3) Put a thin film on rubber clay, and then press down with slide glass slowly.

   ※ Before that, wash the slide glass clearly.

4) Do not reuse rubber clay because it has getting lower stickiness as you use.
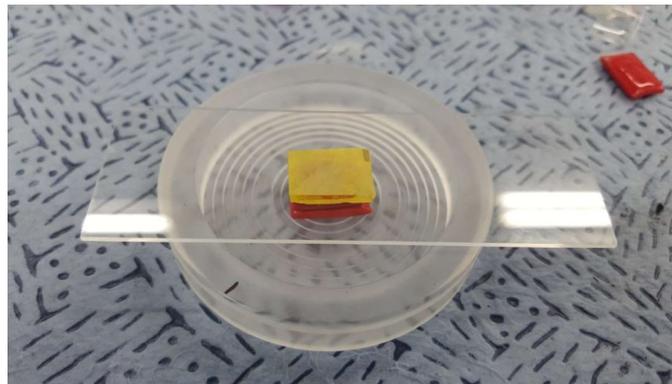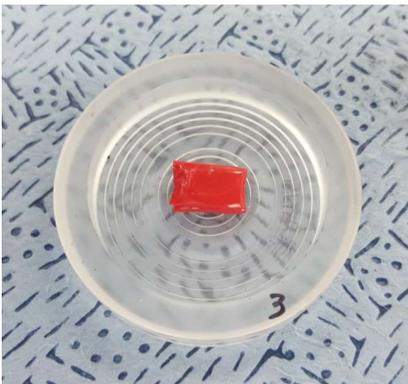
Door Open & Sample Loading

> **How to open NXRD door:**

1) After push the button 'Door open' located at bottoms of both sides, check the Alarm blinking.
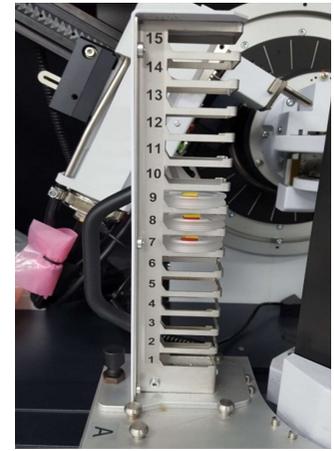
   ※ **Only open Left door !**

2) Fix left index finger to Pb glass, and then pull open the door with the rest 3 fingers.

   - At that time, it is important to maintain this situation that index finger has power.

3) Insert holder straightly to avoid leaning on the Auto Sampler.
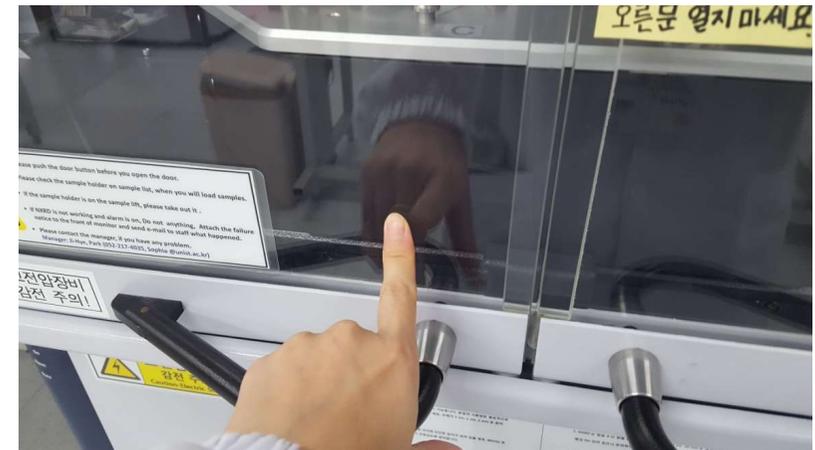
   - In case of non-square thin film, Place it so that it looks similar.

> **How to close NXRD door:**

1) push the glass door all the way.

2) Push the handle to the inside, check a clicking sound.

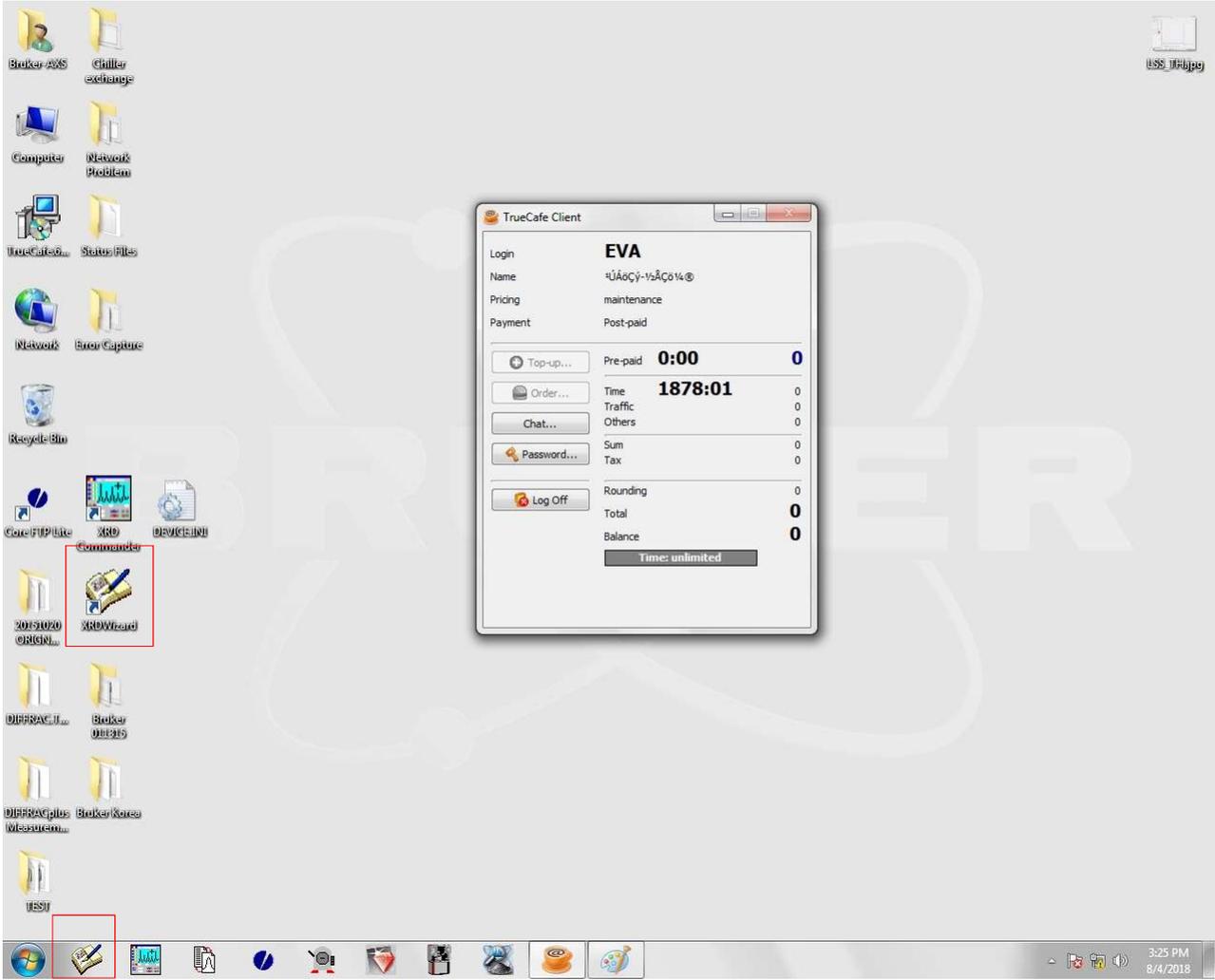3) Check 'Alarm' Light off.

NXRD PC Access: True Cafe
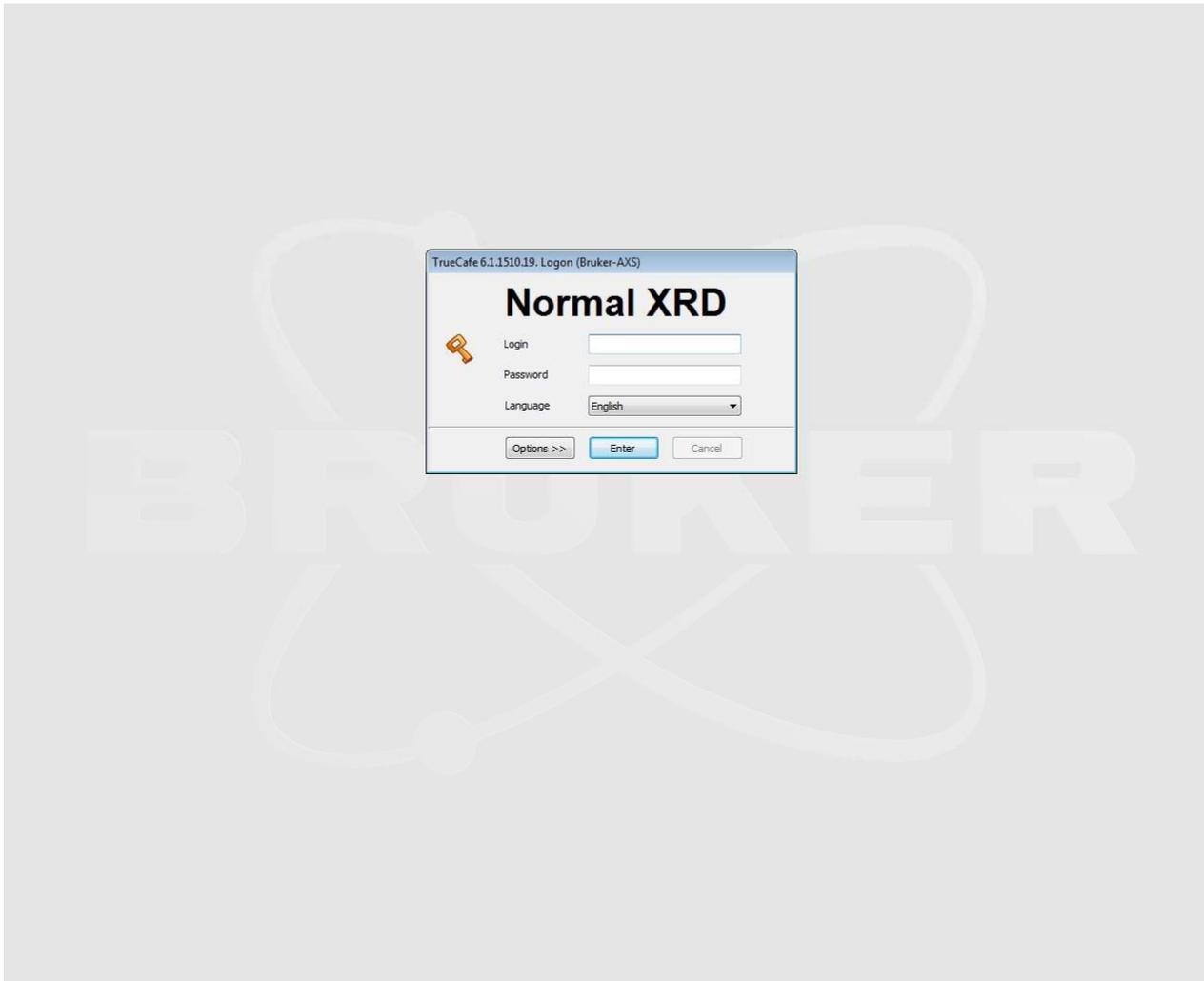
1. Enter individual ID & Password in True Café.

   (One ID per person !)

2. Do not share individual ID & Password.

   - sharing has penalty or stop using for 90 days!

3. In case of machine manager,

   - request writing ID produce manual.

   - request writing corresponding manual

     when having problem.

FIRST IN CHANGE

XRD WIZARD Execution

XRD WIZARD is program producing measurement
condition file.

Double click one of both.

XRD WIZARD Execution

In WIZARD, you fill in below items.

-Start, Stop,

-Step size,

-No. of steps,

-Time/Step,

-Spinner

After inserting condition value you want,

Check Total Scan Time.

'Start' is measurement start degree,

Stop is measurement complete degree,

Step size is step of measurement degree,

Time/Step is each measurement time of step,

Spinner means whenever of not to rotate and

rotation velocity.

XRD WIZARD Execution

Click 'Save As' in 'File'.
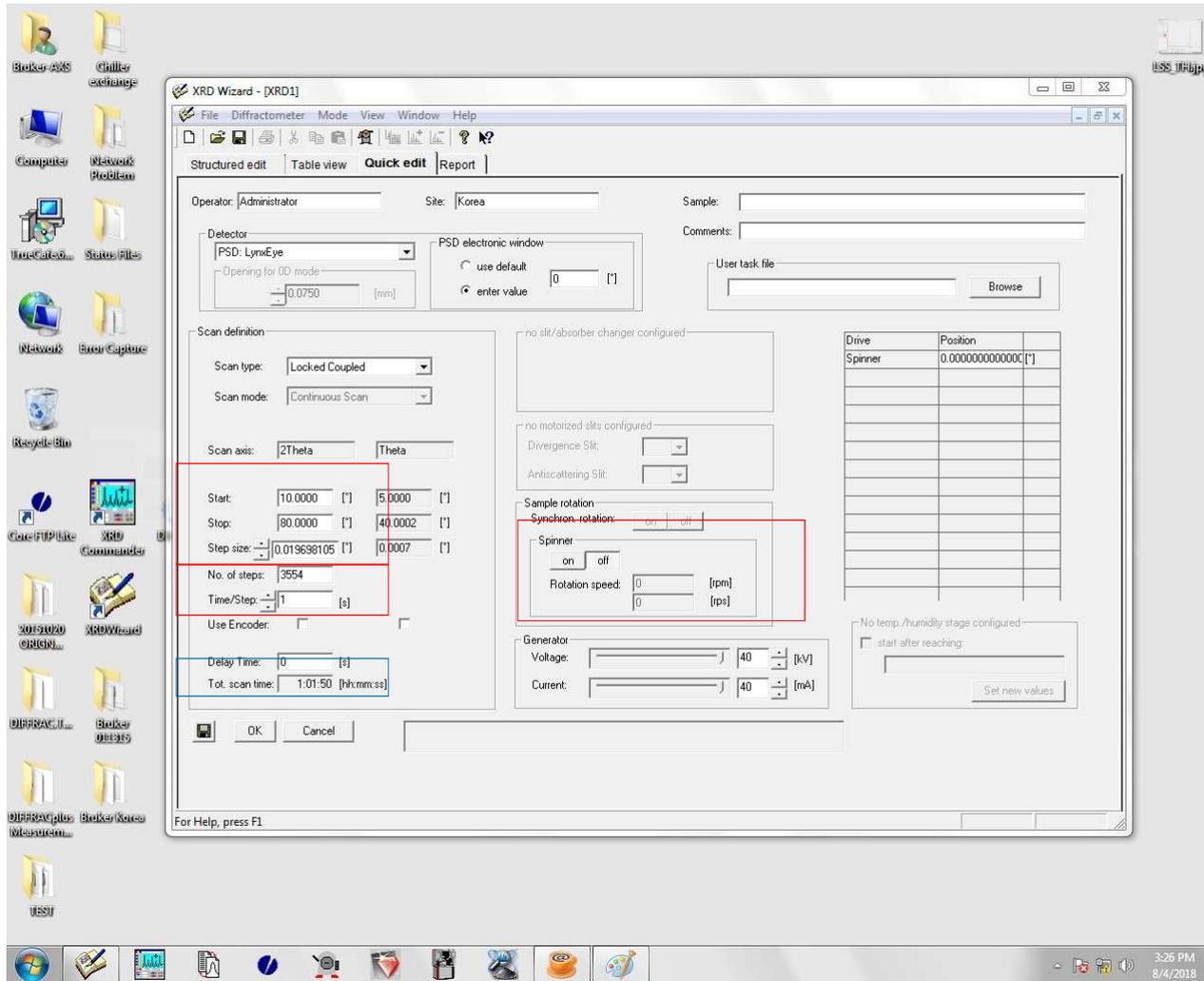
XRD WIZARD Execution

Save measurement condition file produced in 'fileWIZARD' as DQL file.
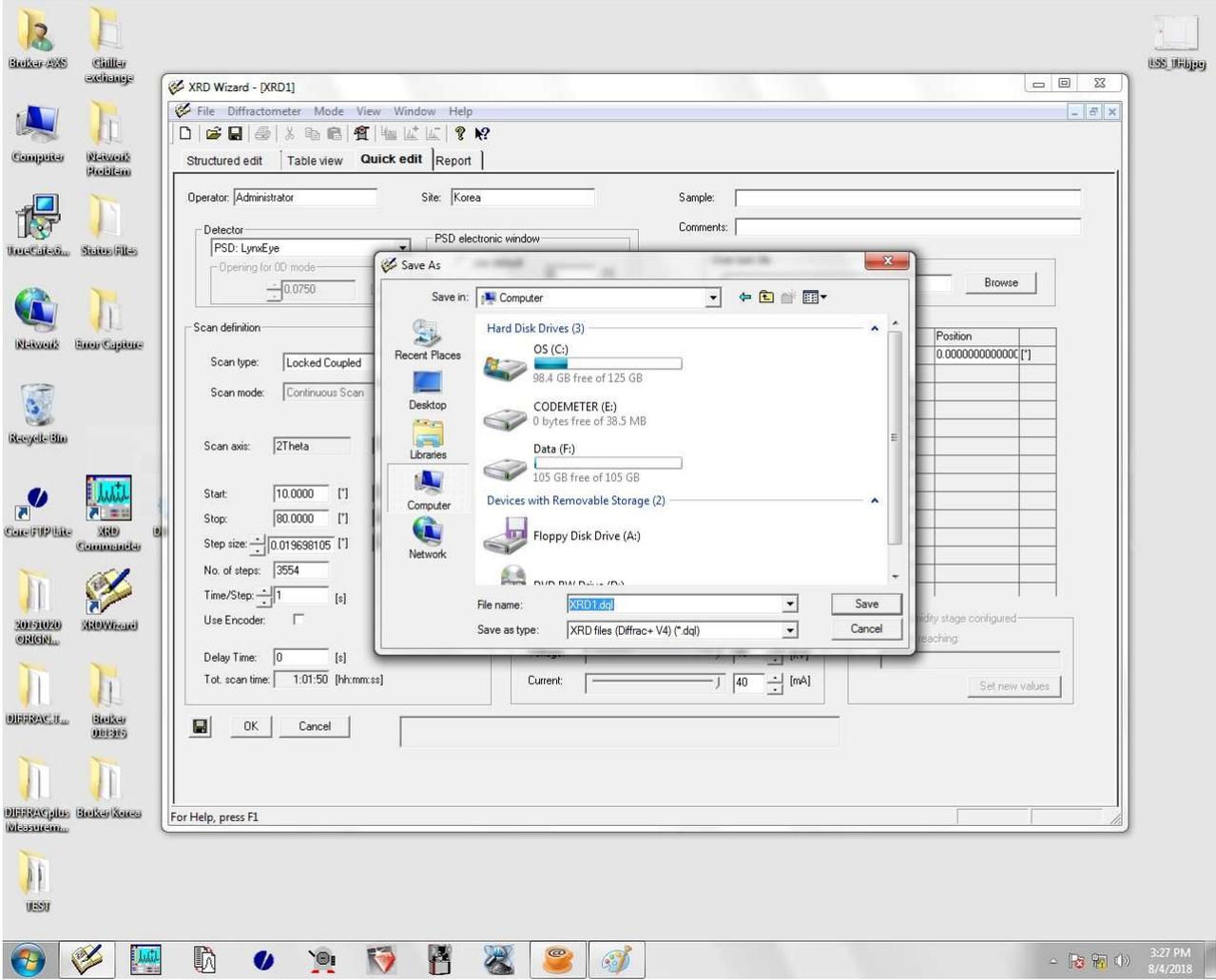
XRD WIZARD Execution
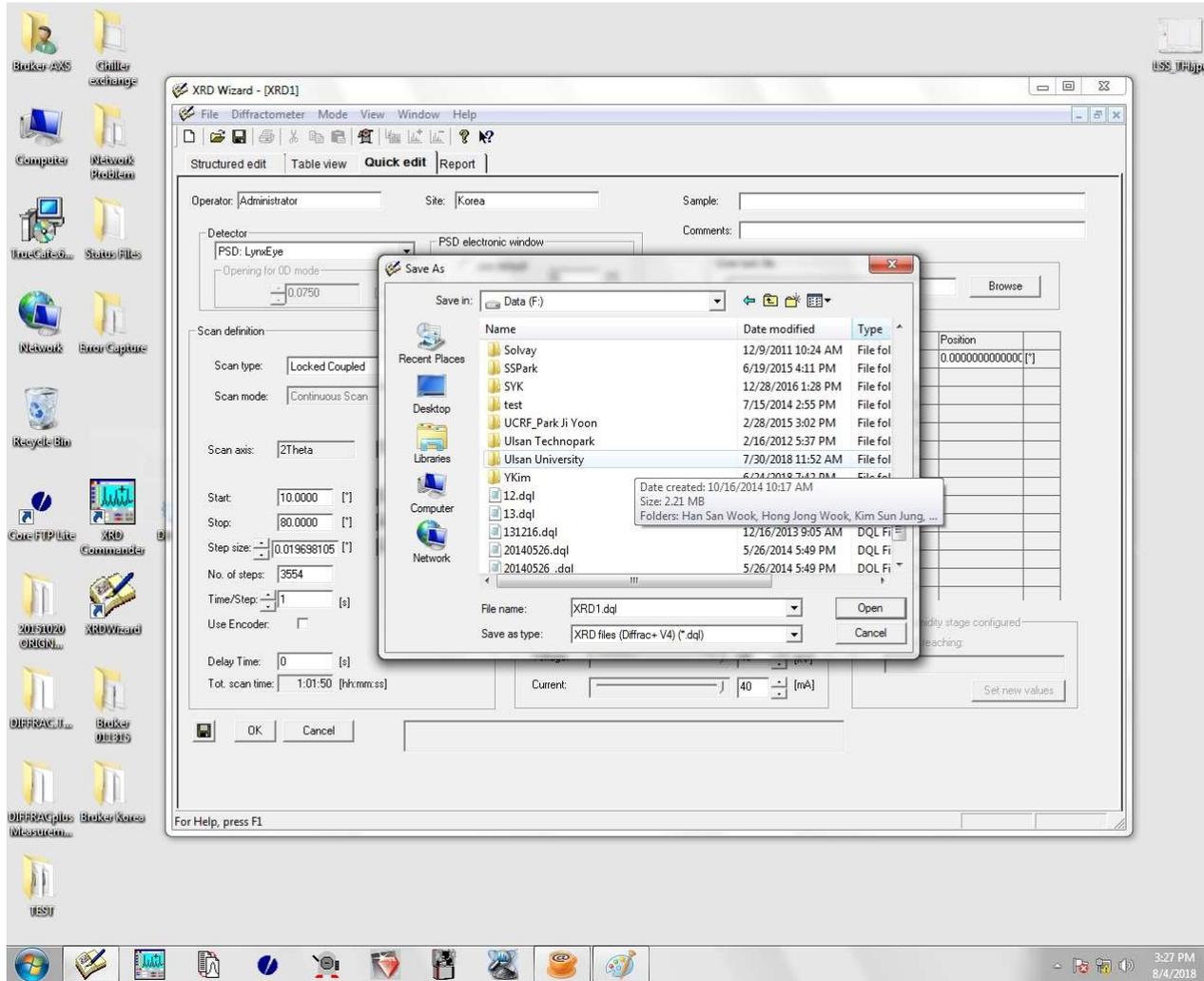
Save location is,

Computer

> F Drive

> Lab name folder

> Requester name folder

> Measurement date folder

XRD WIZARD Execution
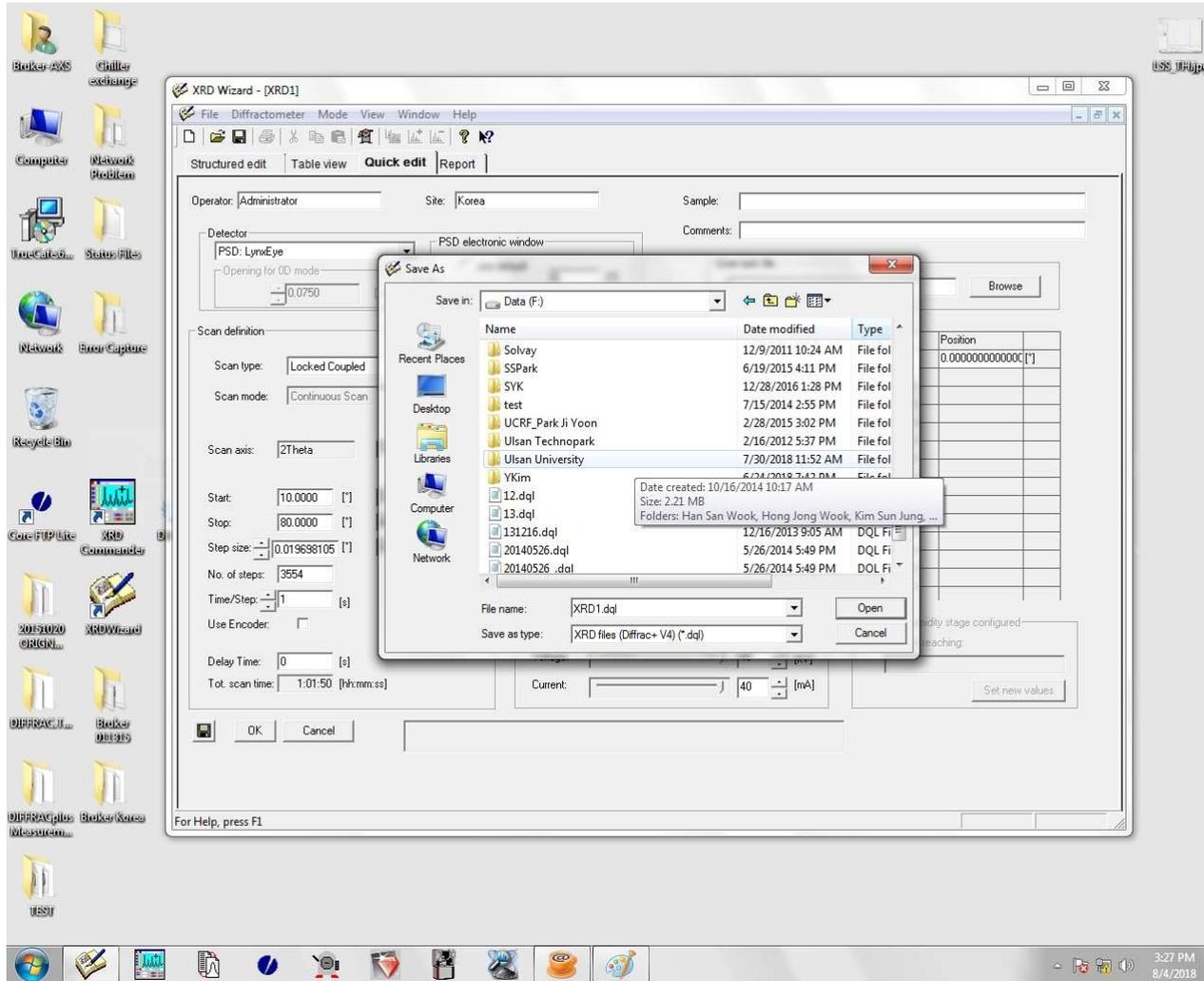
Save location is,

Computer

> F Drive

> Lab name folder

> **Requester name folder**

> Measurement date folder

FIRST IN CHANGE

XRD WIZARD Execution

Save location is,

Computer

> F Drive

> Lab name folder

> Requester name folder

> **Measurement date folder**

XRD COMMANDER Execution
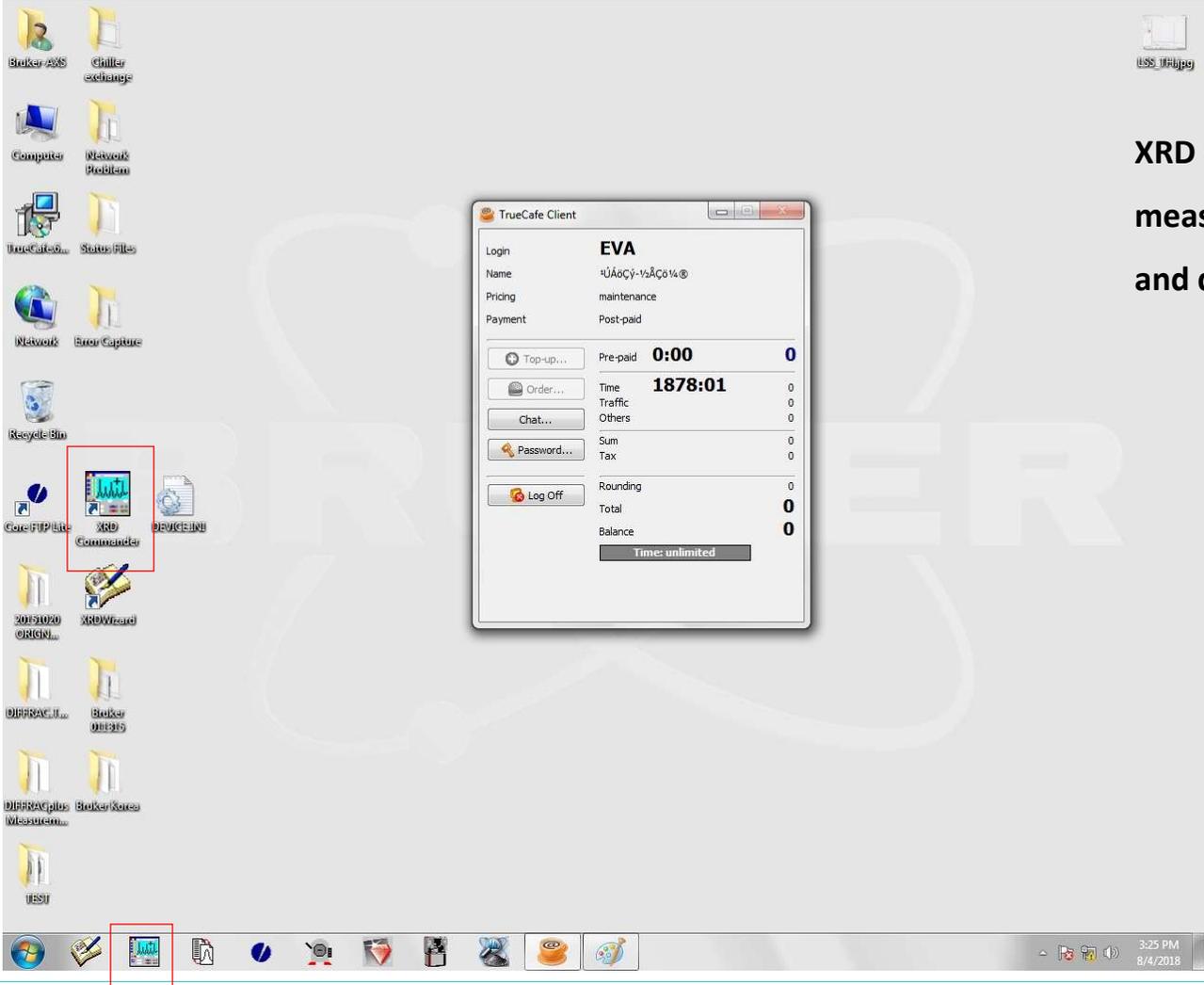
XRD Commander is,

measurement program with measurement condition file

and double check one of both.

XRD COMMANDER Execution

Click 'Jobs' button in upper TAB.

XRD COMMANDER Execution
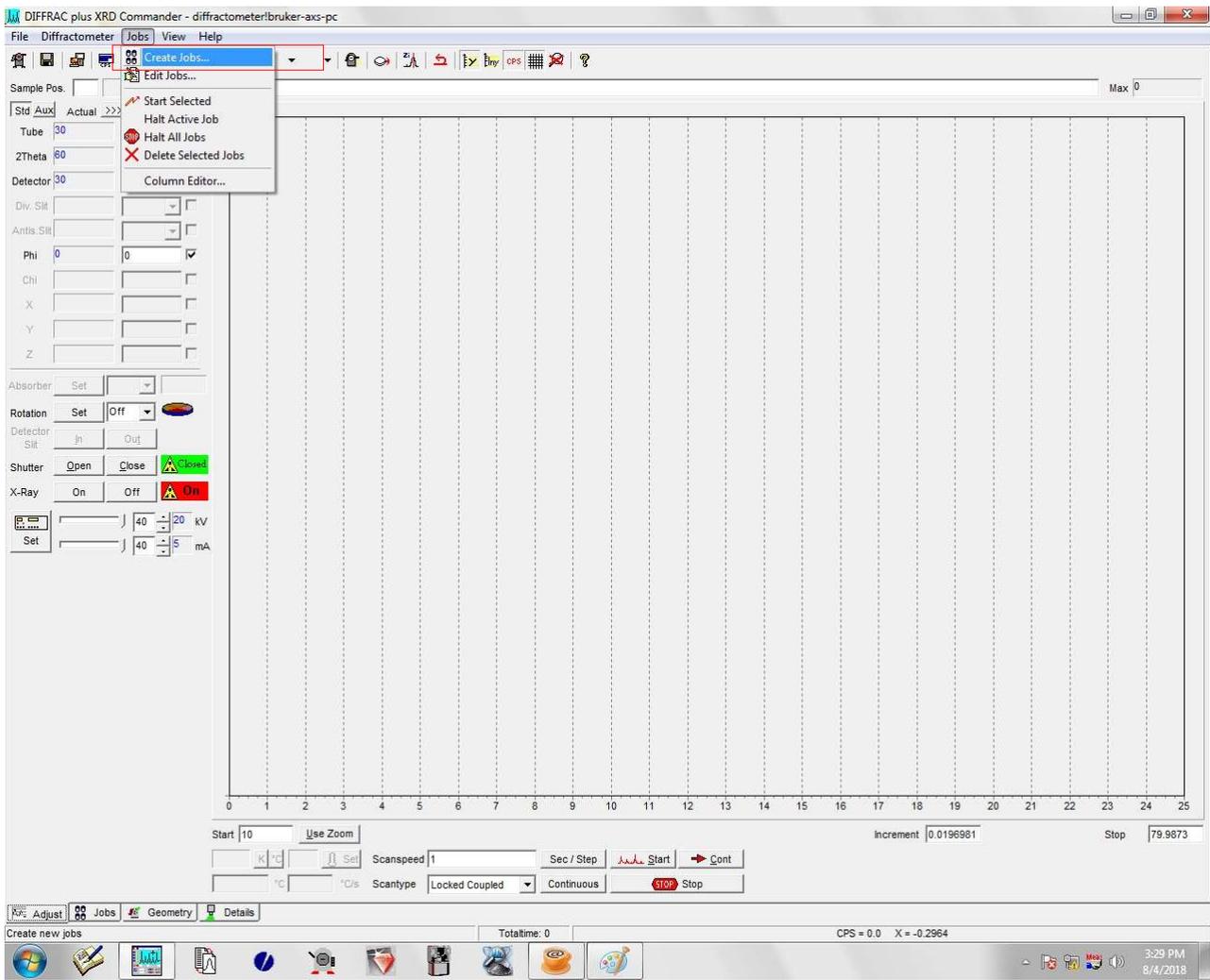
And then, click 'Create Jobs'.

XRD COMMANDER Execution
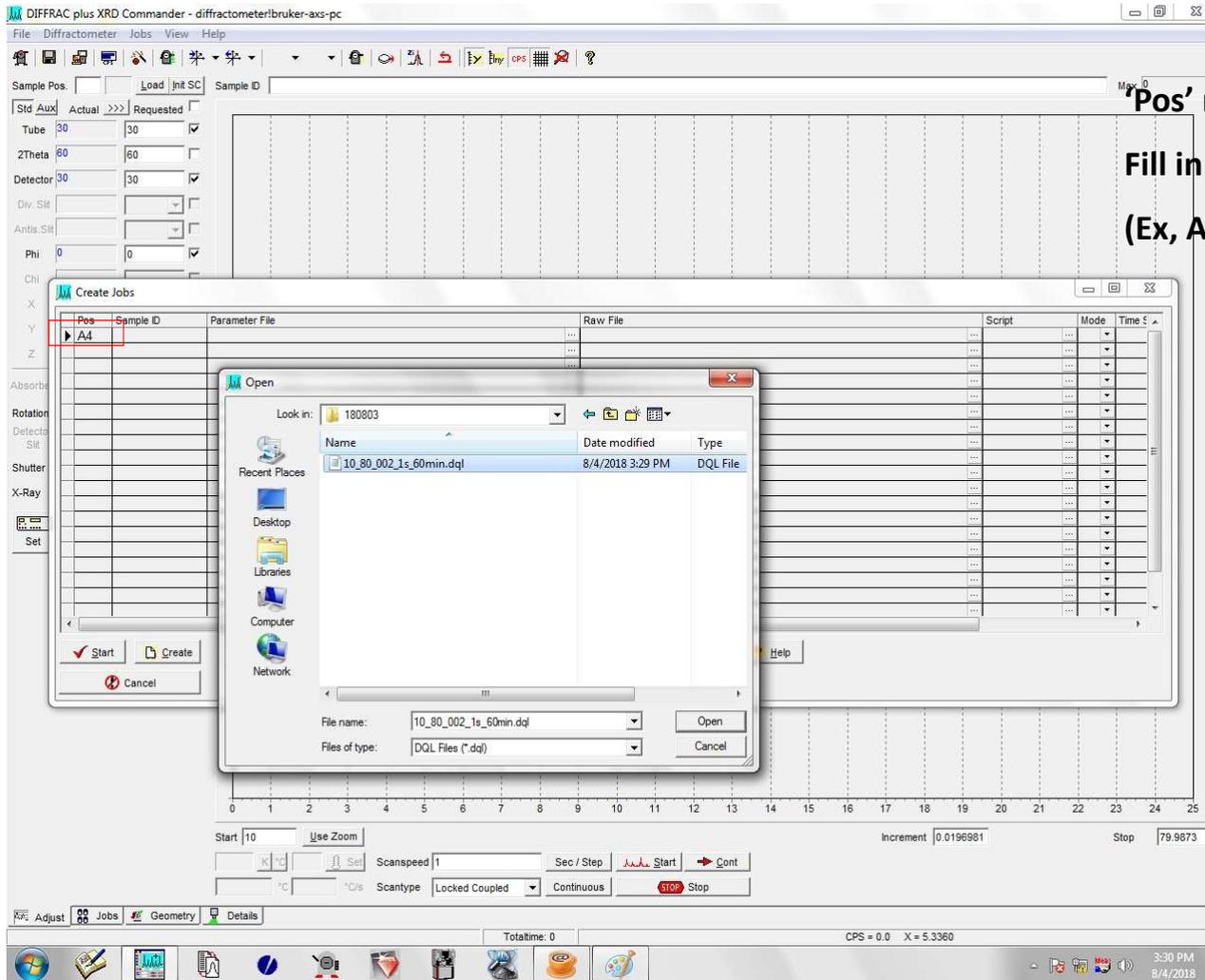
'Pos' means setting location of sample on the equipment.

Fill in location of sample.

(Ex, A3, A4, A5...)

XRD COMMANDER Execution
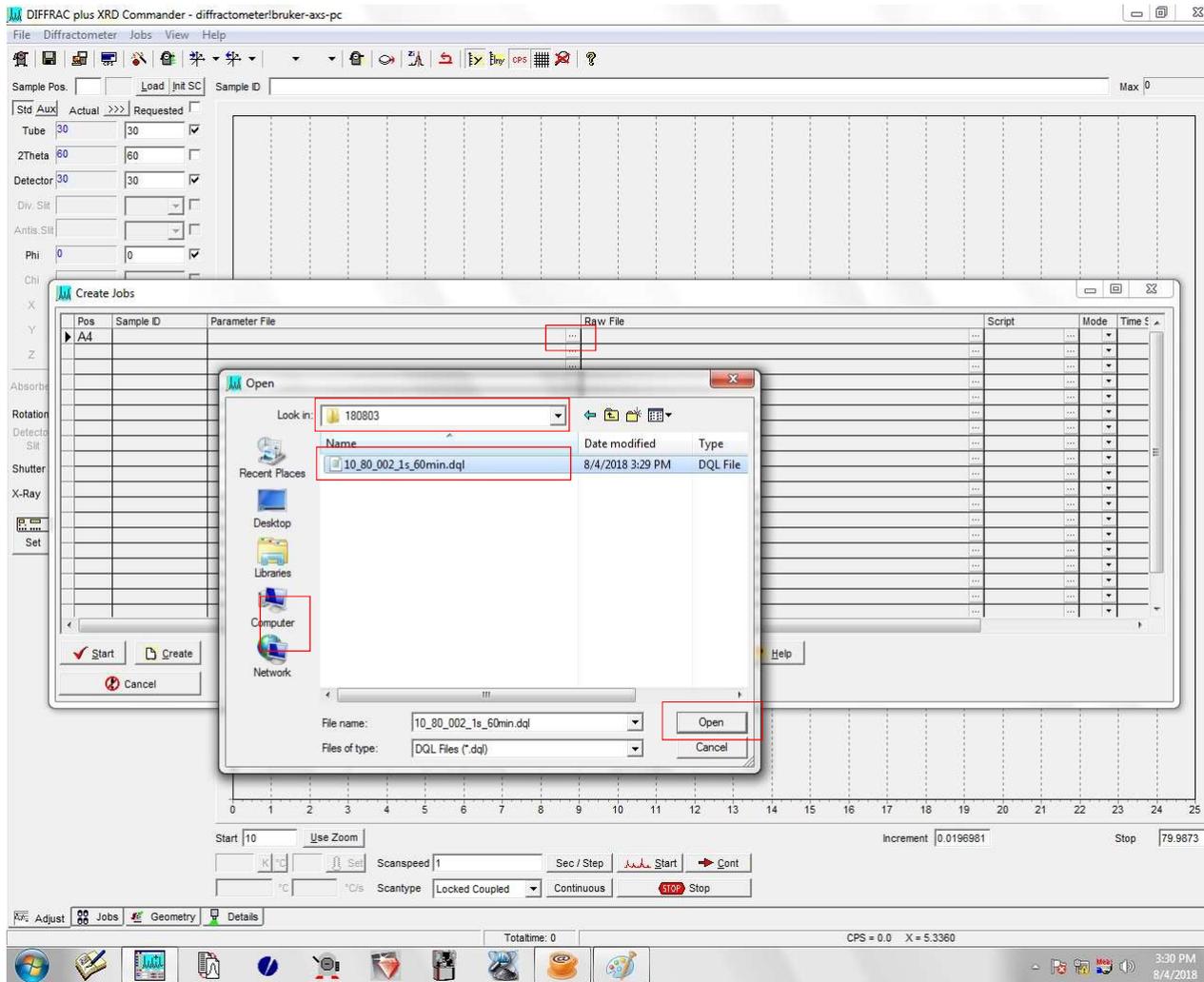
Parameter File means measurement condition file

  - Extension is '.dql'

Click shortcut icon '[…]'

Click 'Computer' and go to saved location of measurement condition file.

  - F Drive > Lab name folder > Requester folder

Click name of measurement condition file in measurement date folder and then open.

XRD COMMANDER Execution

Drag and Ctrl+C all save path without condition file name.

XRD COMMANDER Execution

Ctrl+V in 'Raw File' space.

XRD COMMANDER Execution

Click button Browse '[…]' of Raw File and then,

Write sample name that you want to save.

Click 'Open'

XRD COMMANDER Execution

Click 'Start' button and then,

You should check sample moves to <u>Sample Lift</u> well.

★When Signal is shown at program,

    It does not matter if you leave your seat.

Measurement Complete
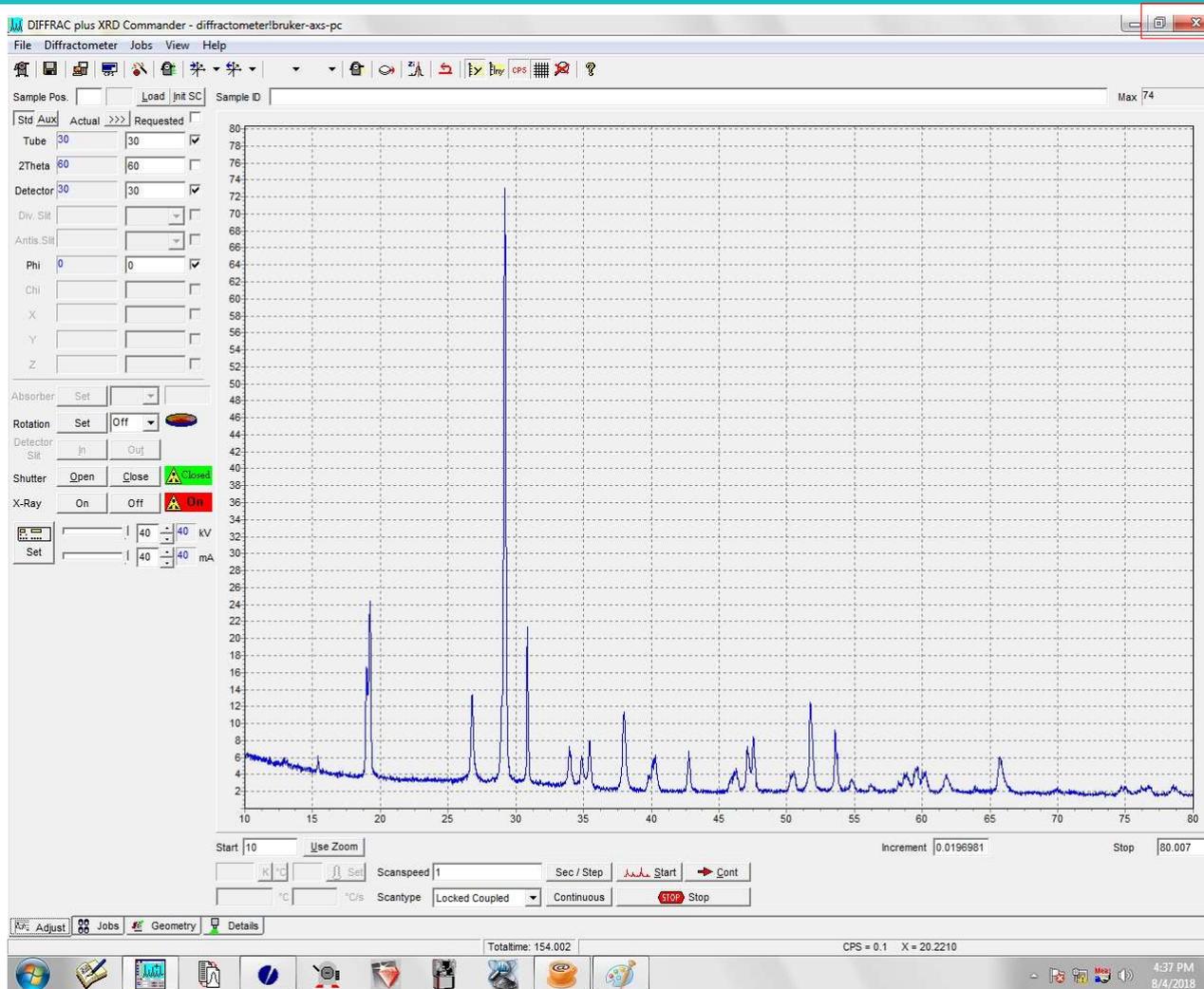
If 'Busy' LED button of Status Light is off,

It means measurement complete.

Finish Commander program.

File Exchanger Execution
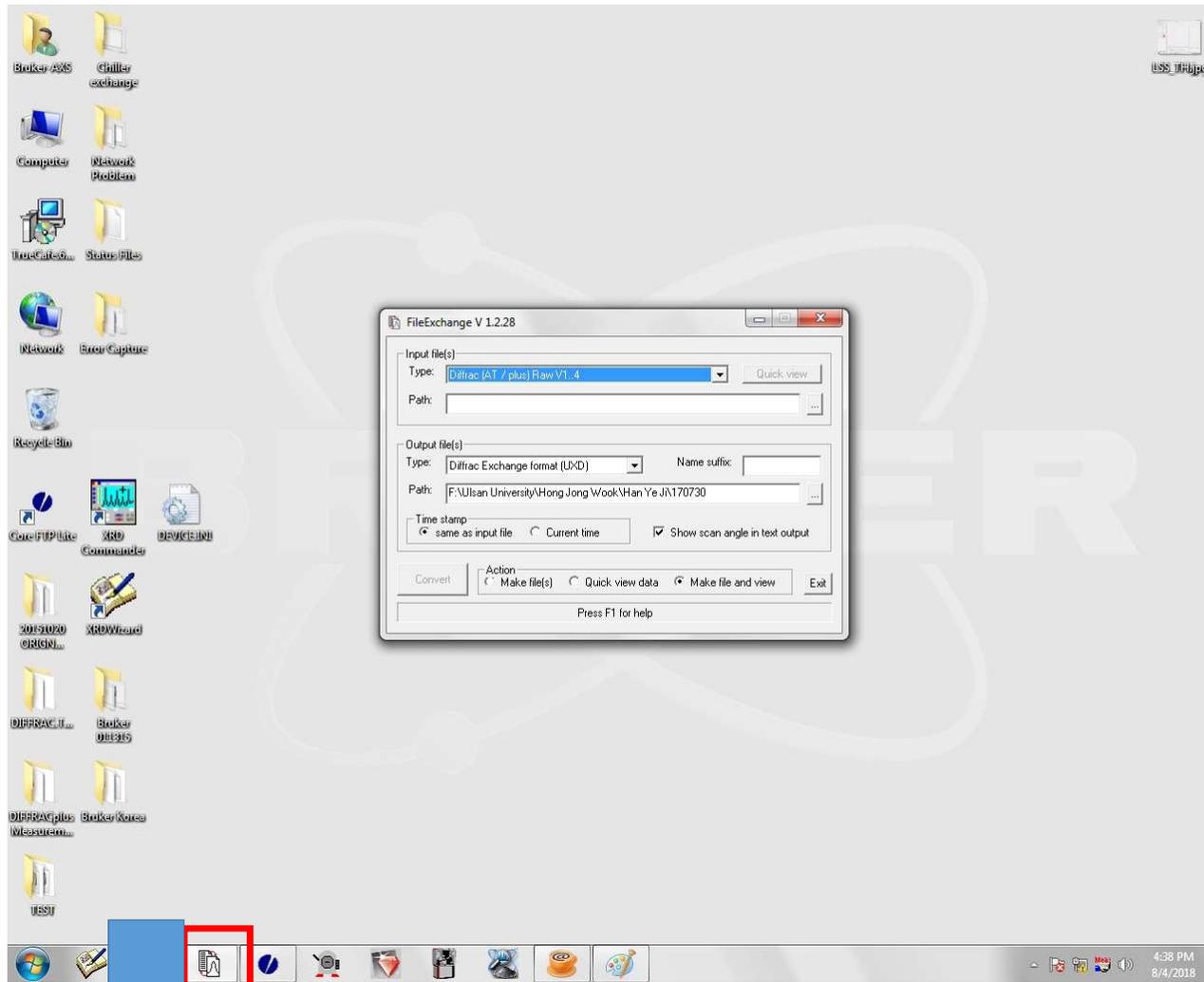
Double click 'File Exchanger' program.

File Exchanger Execution
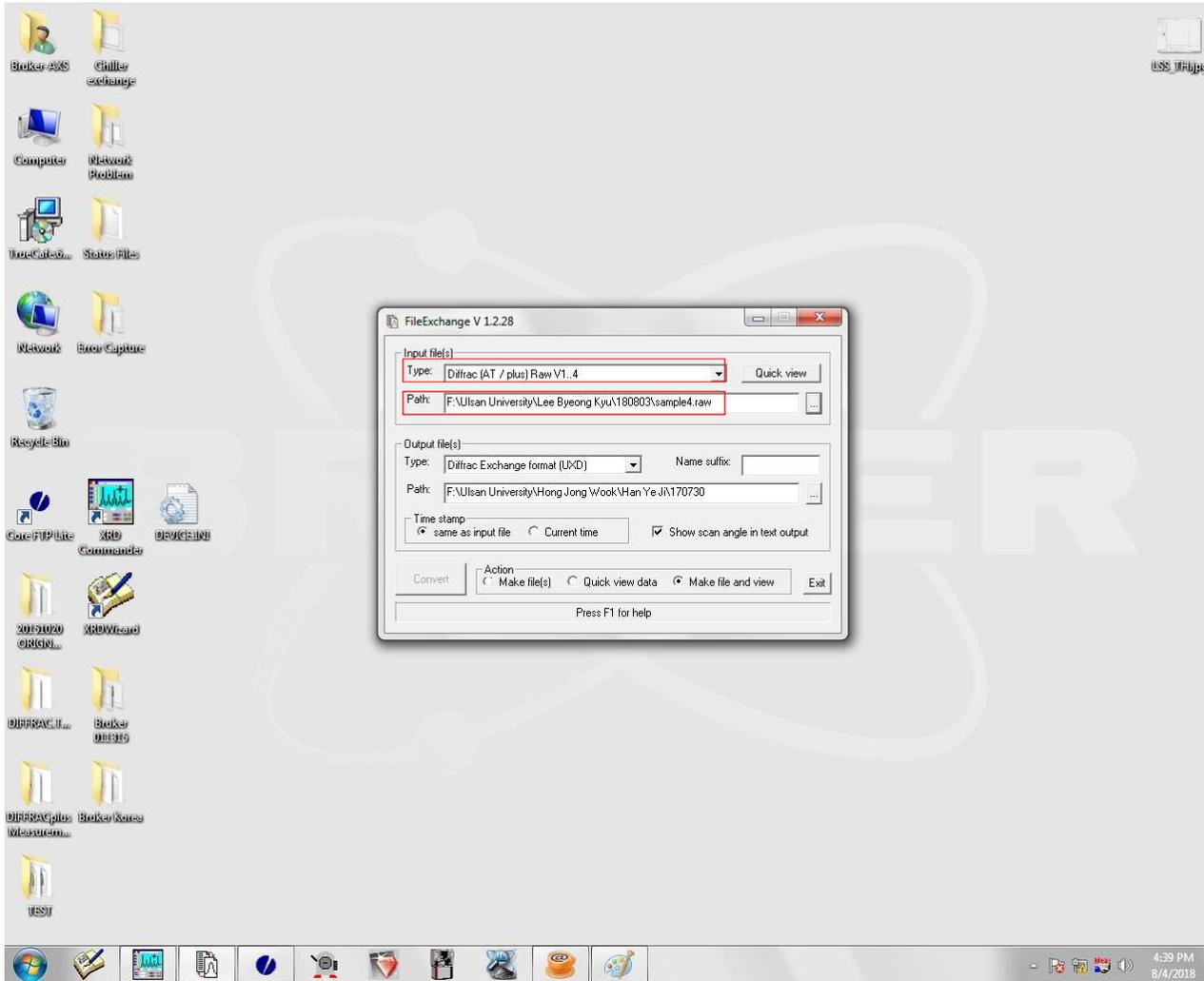
Input File Type:

Choose **'Diffrac (AT/Plus)Raw.V1.4'** of them.

File Exchanger Execution
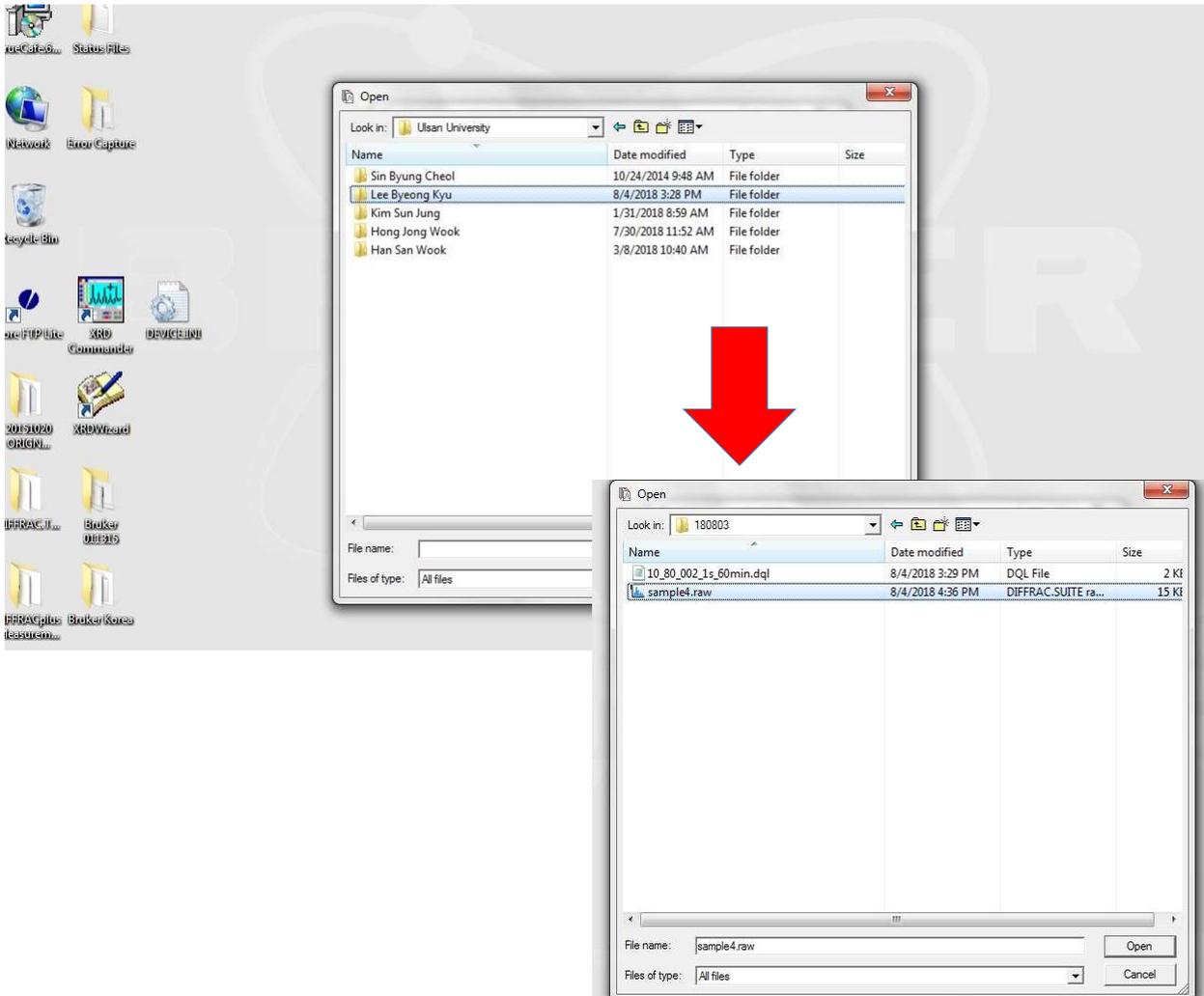
Bring the saved file in Path Browser '[...]'

> F Drive (1)

> Lab name folder (2)

➢ **Requester name folder (3)**

➢ **Measurement date (4)**

➢ **Sample name (5)**

And then, open.

File Exchanger Execution
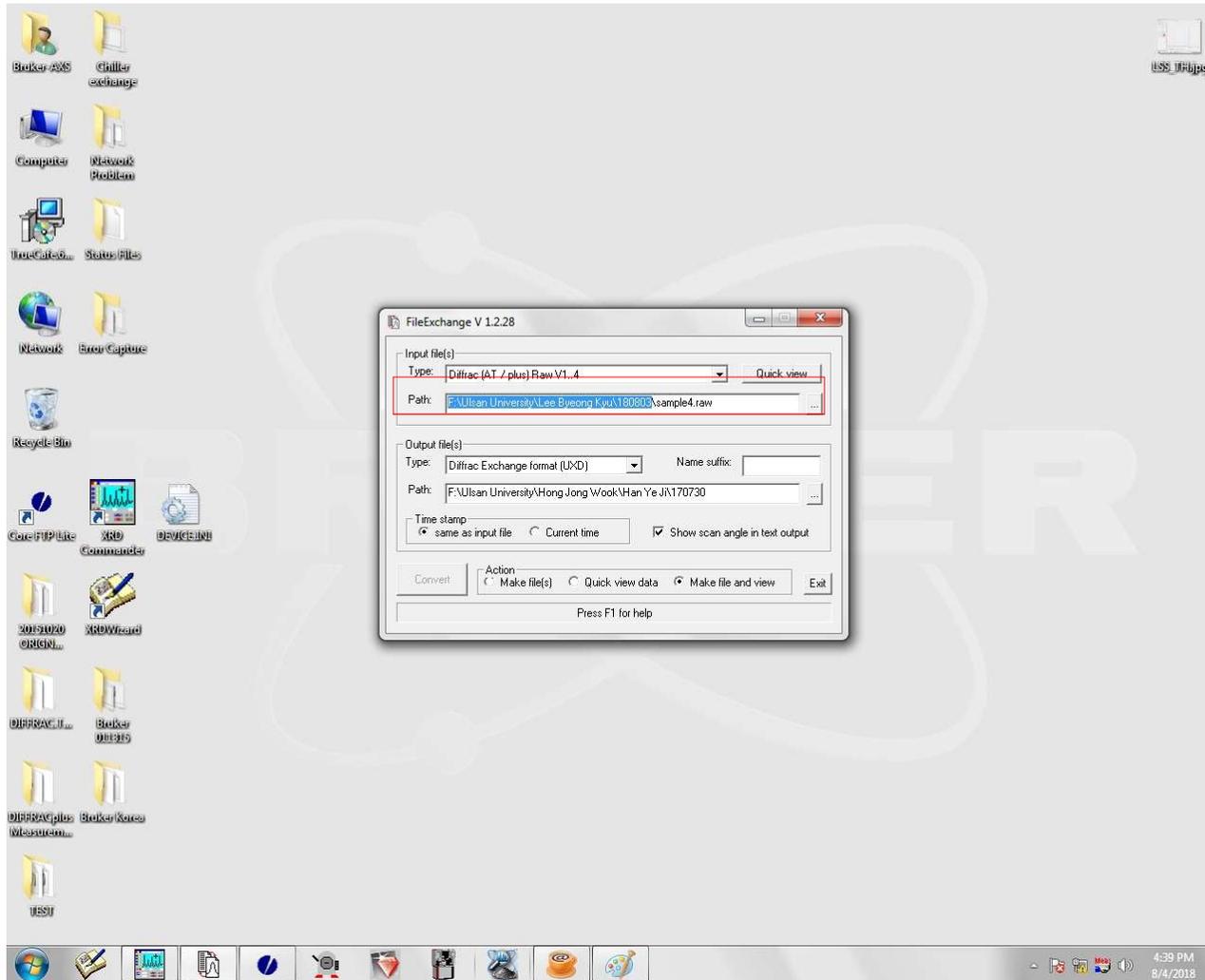
Drag and Crtl+C all Path name without sample name file.

(Location:

F:\Lab name > Requester name > Date)

File Exchanger Execution
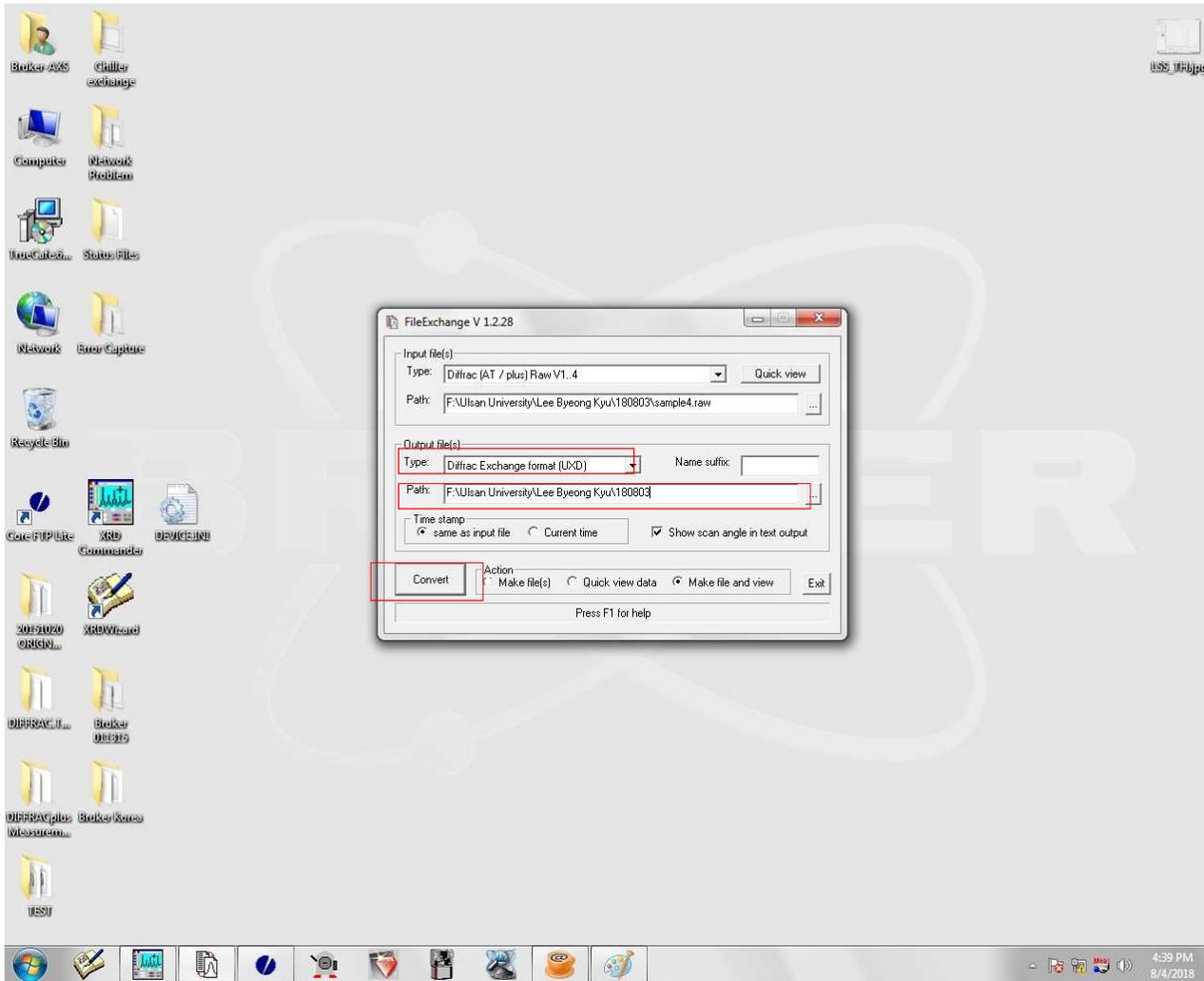
Output File Type:

Choose **'Diffrac Exchange Format (UXD)'.**

Output File Path → Ctrl+V

Click 'Convert' button.

File Exchanger Execution
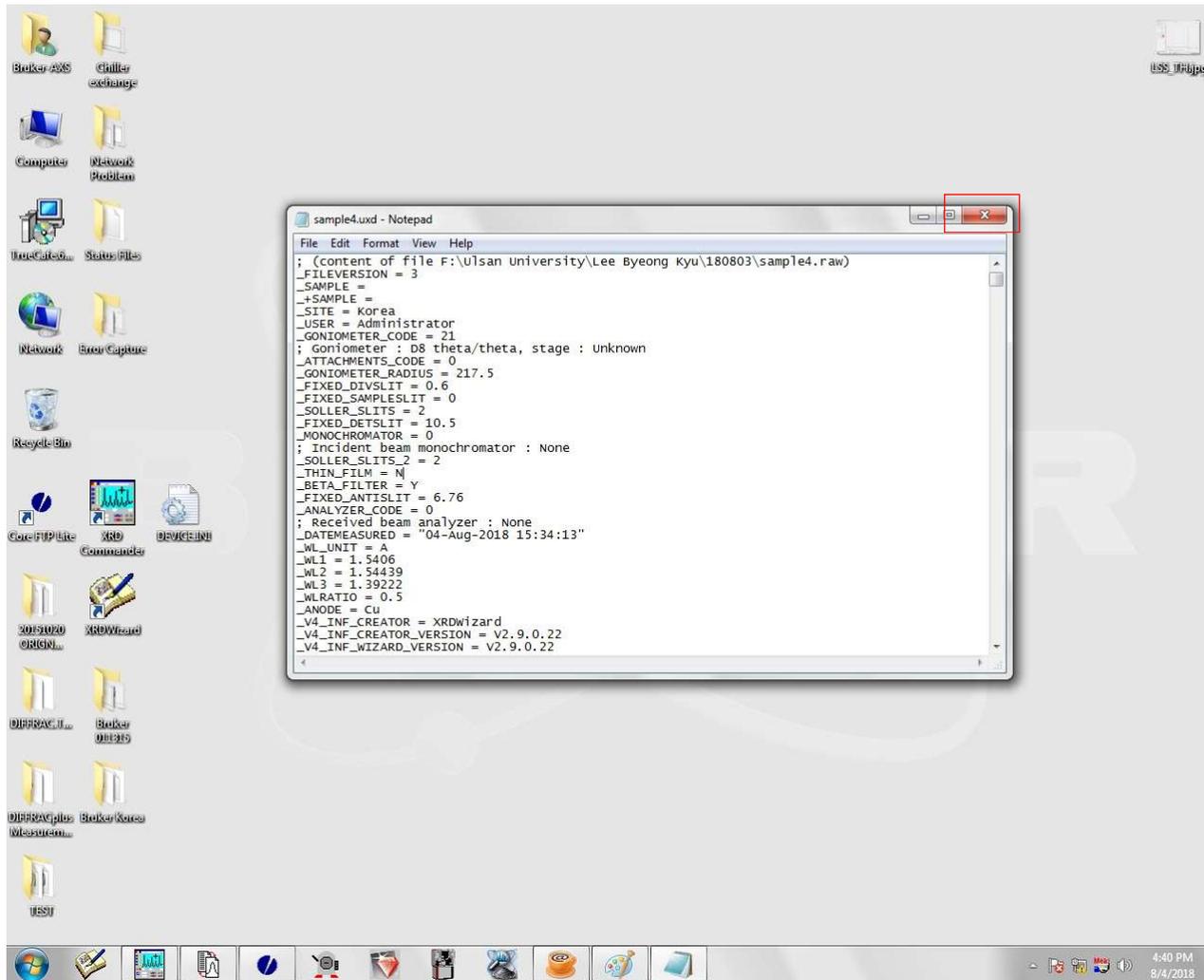
And then, it shows converted UXD files.

Click 'x' all UXD files.

File exchange complete !

Data Upload (Core FTP Execution)
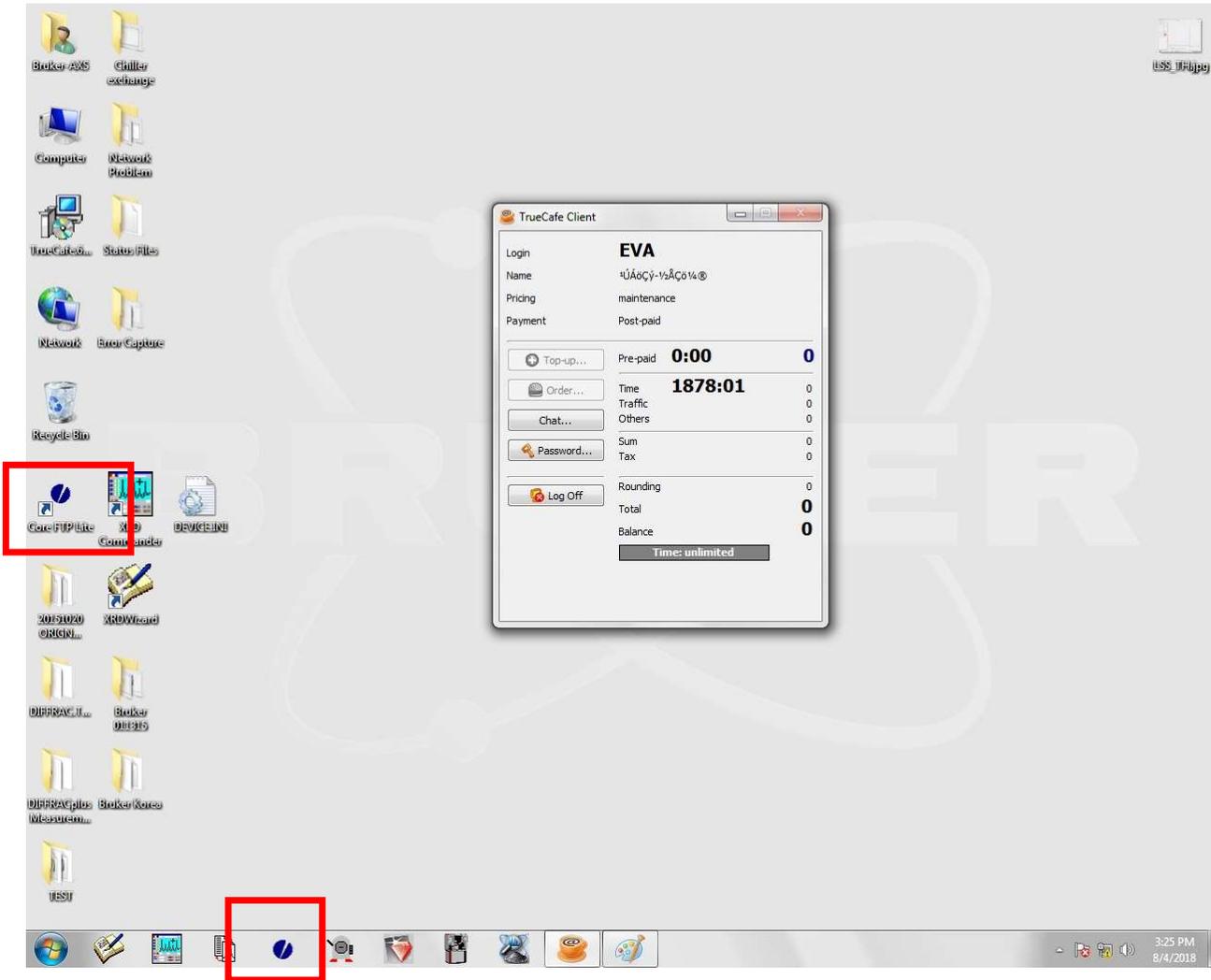
Core FTP is downloadable program without using USB.

Double click one of both.

Data Upload (Core FTP Execution)
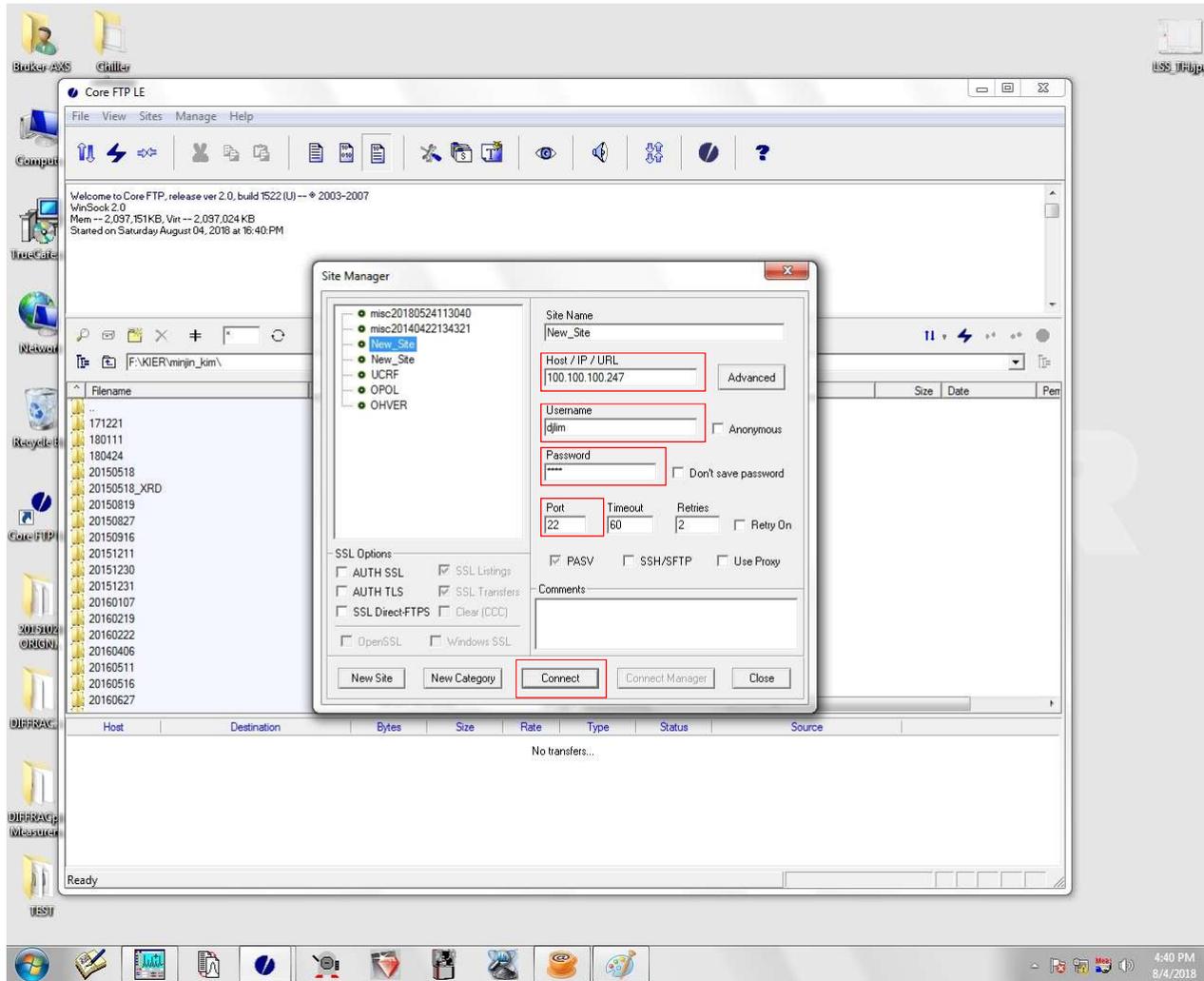
IP: 100.100.100.247,

Username: djlim,

Password: 0254,

Port: 22

And then, Click 'Connect'

Data Upload (Core FTP Execution)
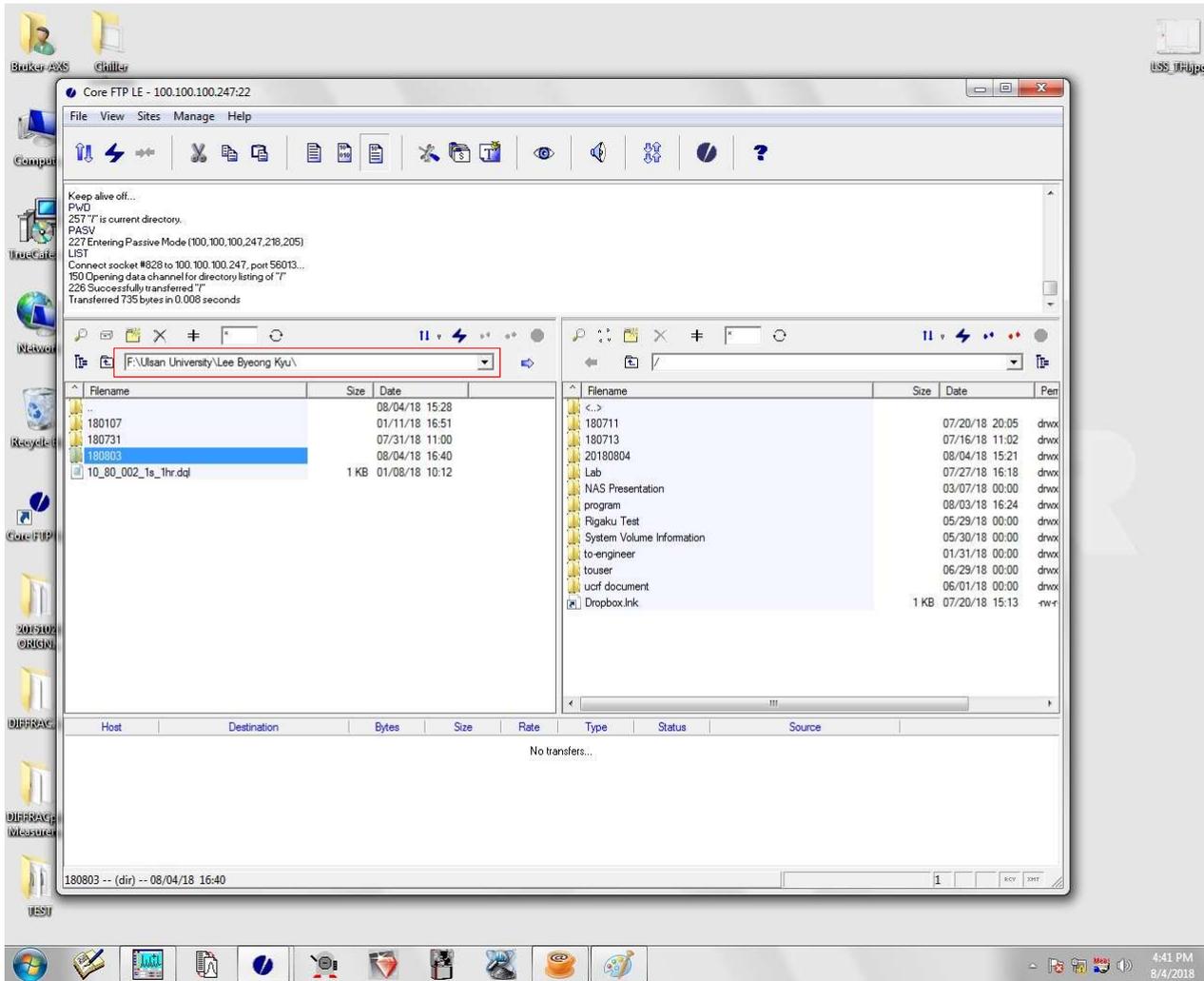
> In Analysis PC

 - Click 'Browser' (Left page)

   And check file location that you saved.

(Location: F:/Lab name/Requester name/Analysis date)

Data Upload (Core FTP Execution)
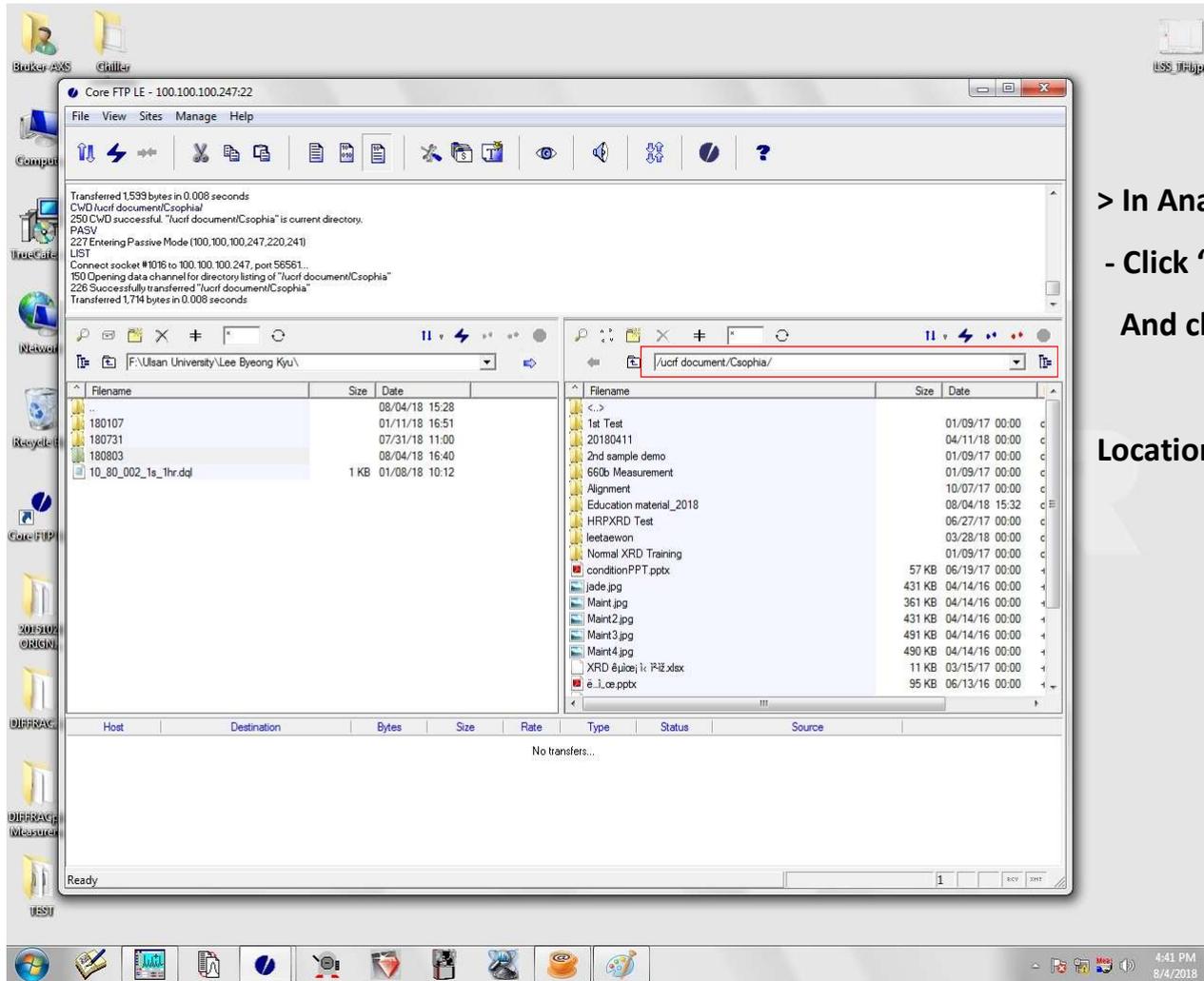
> In Analysis PC

 - Click 'Browser' (Right page)

   And check file server location that you want to save in Core FTP.

Location: /ucrf document/장비담당자 폴더 ????

Data Upload (Core FTP Execution)
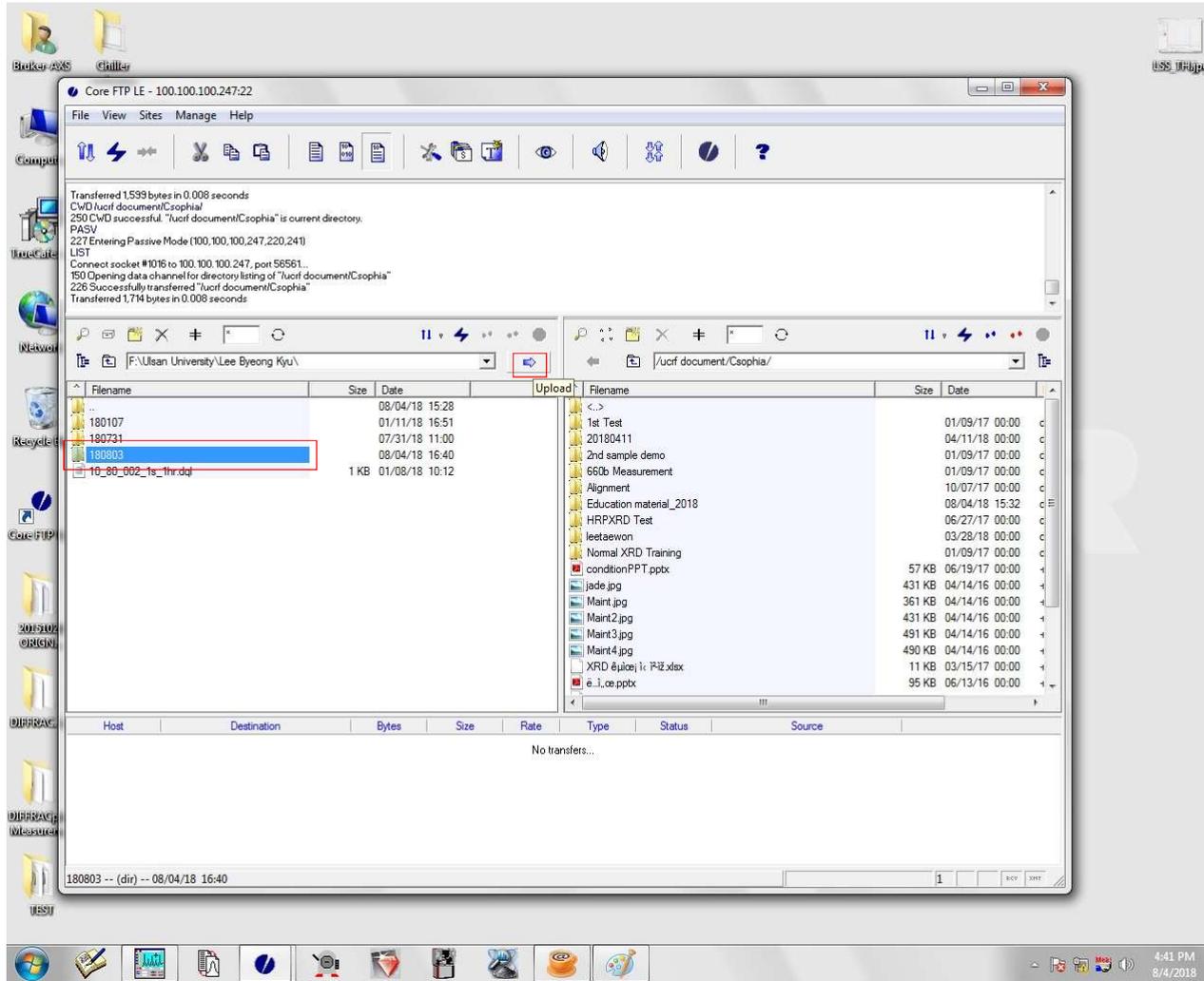
And then, Click file you want to upload in Analysis PC,

Click the 'Upload' button.

Data Upload (Core FTP Execution)

In case of successful Data upload,

It shows and disappear success signal in bottom page.

And then, finish Core FTP program.

Data Download (Core FTP Execution)
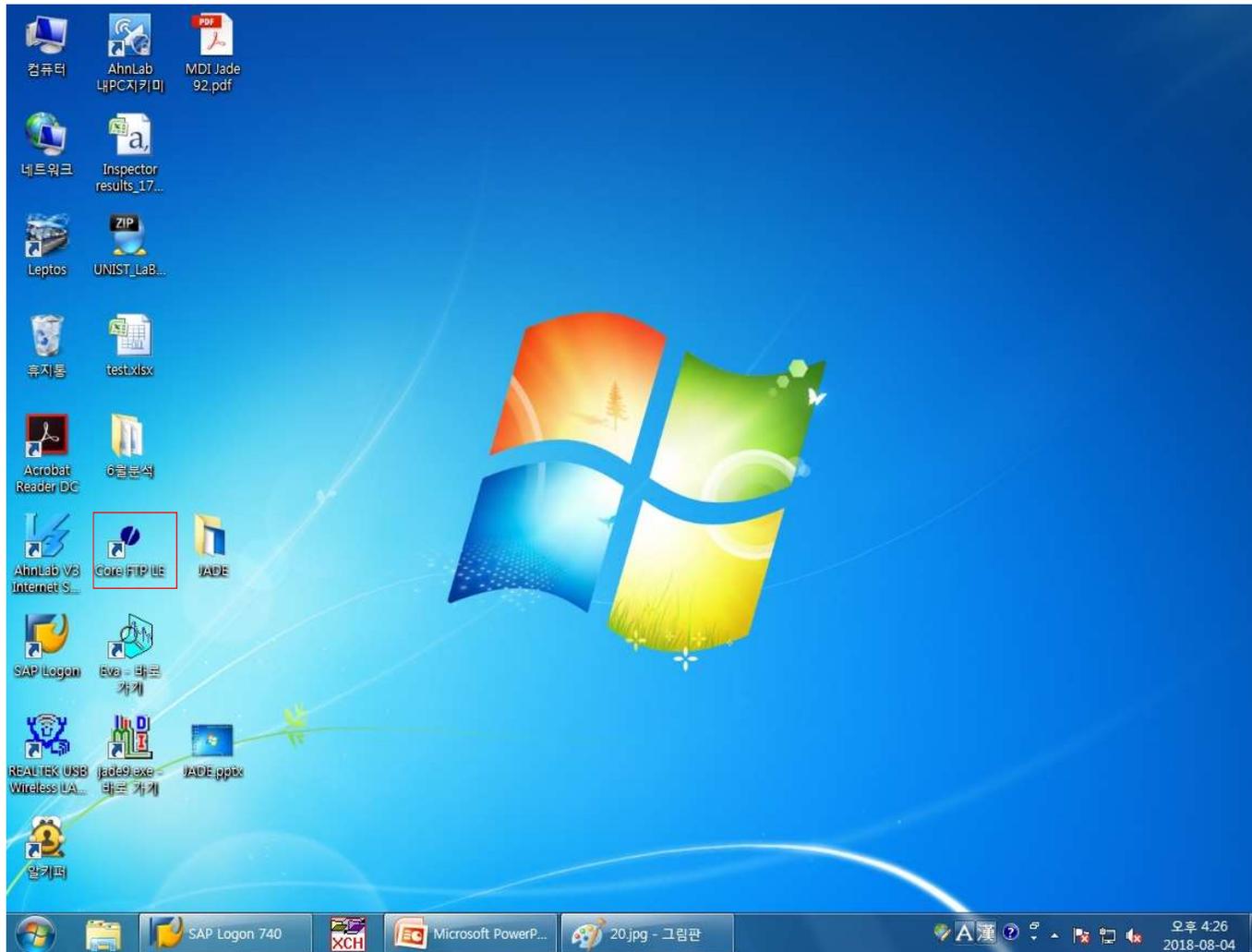
> In PC for **INPUT RESULT**, (center table)

Double click 'Core FTP LE' in desktop

For Data Download.

FIRST IN CHANGE

Data Download (Core FTP Execution)
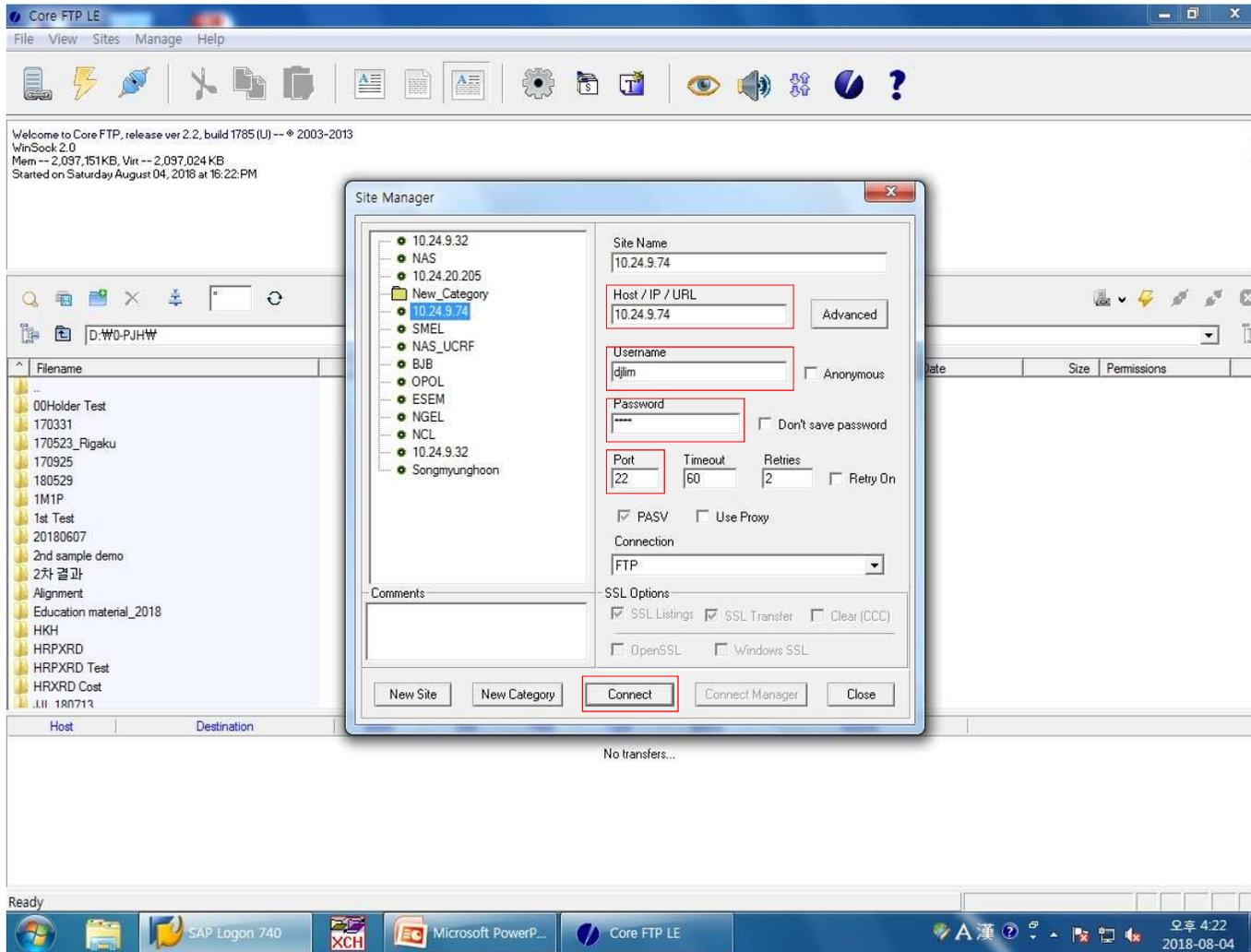
IP: 10.24.9.74,

Username: djlim,

Password: 0254,

Port: 22

Click 'Connect'.

FIRST IN CHANGE

Data Download (Core FTP Execution)

➢ **Move Left to Right folder**

  (opposite to Analysis PC move path)

Click 'Browse' button in Right page.

Check file location that download files exist.

Location: /ucrf document/담당자 이름 폴더??

FIRST IN CHANGE

Data Download (Core FTP Execution)

Click 'Browse' button in Left page.

Check file location that you want to save.

위치: /ucrf document/담당자 폴더???

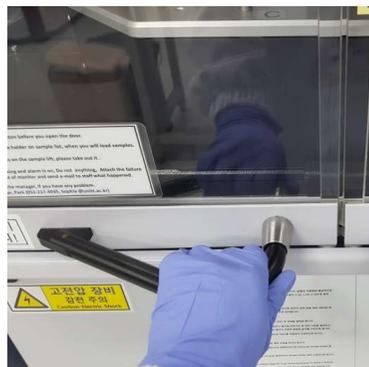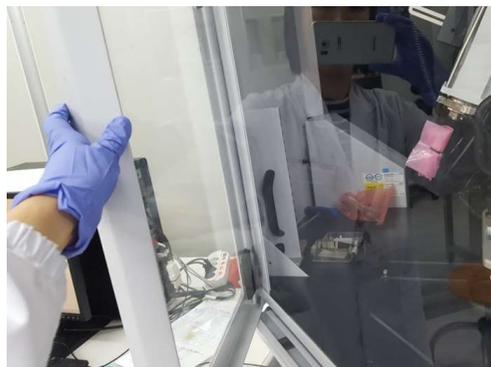**Click 'Download' button with clicked folder.**

FIRST IN CHANGE

Sample Recovery

> PRINCIPLE:

The recovery of samples should be done within a week

after measurement.

If not recovery, manager discards it.

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*XRD has X-ray that is harmful so it has strict Safety Rule.

If you do Door Open or Close without pressing 'Door Open' button,

machine is damaged due to force quit of X-ray.

Be careful to do Door Open & Close !