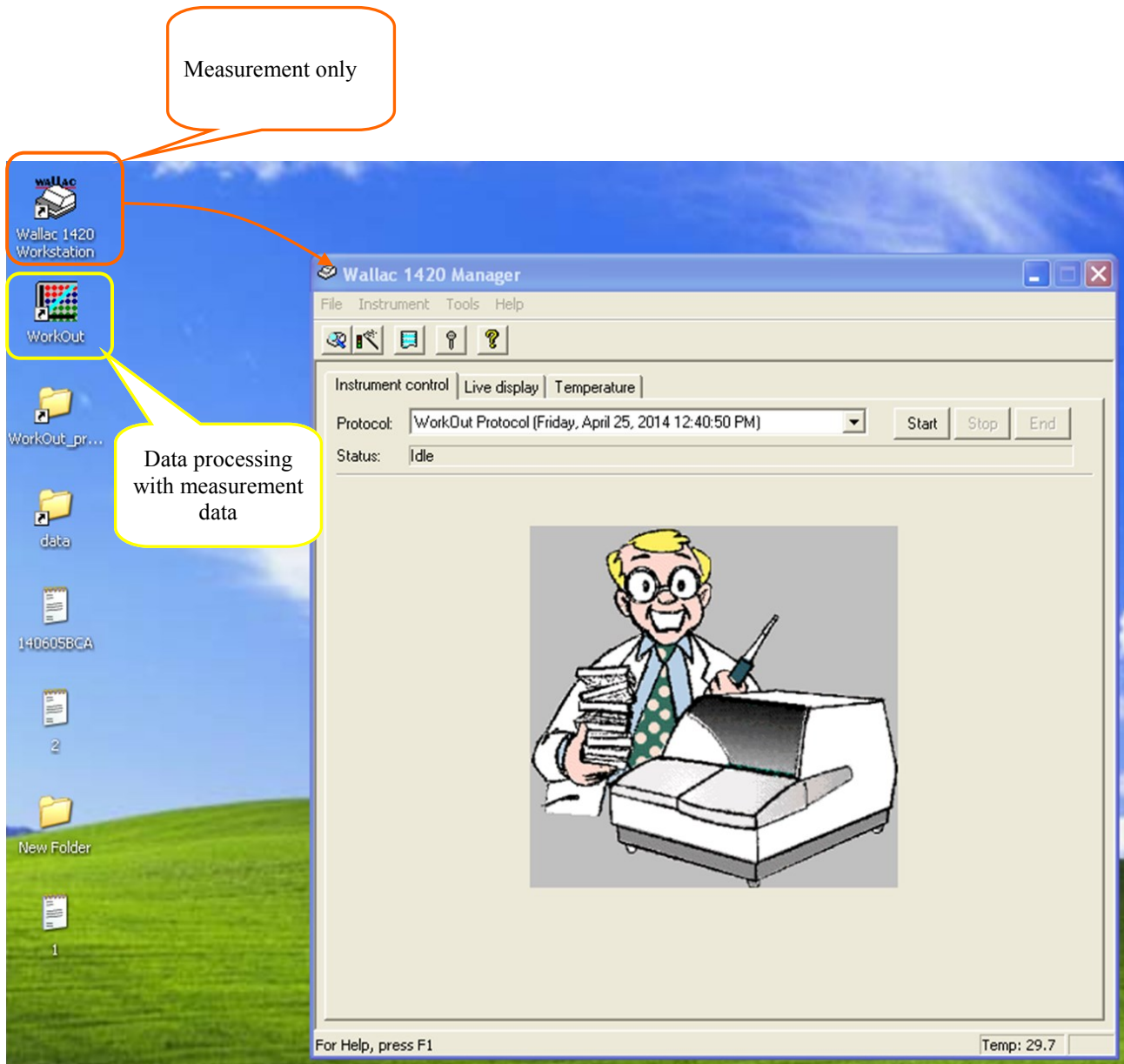


ALVO Operations Guide

Purpose	Software	
Measurement only	Wallc 1420 Workstation	
Measurement + data processing	Wallc 1420 Workstation WorkOut	Create standard curve with measurement data and determine concentrations



Measurement only

*Create protocol file previously

The image displays two software windows: **Wallac 1420 Manager** and **Wallac 1420 Explorer**. The Manager window shows instrument control options like 'Live display' and 'Temperature', and a protocol dropdown menu. The Explorer window shows a file tree under 'Protocols' and a table of assay results.

Wallac 1420 Workstation logo is shown to the right of the Manager window.

Workflow Callouts:

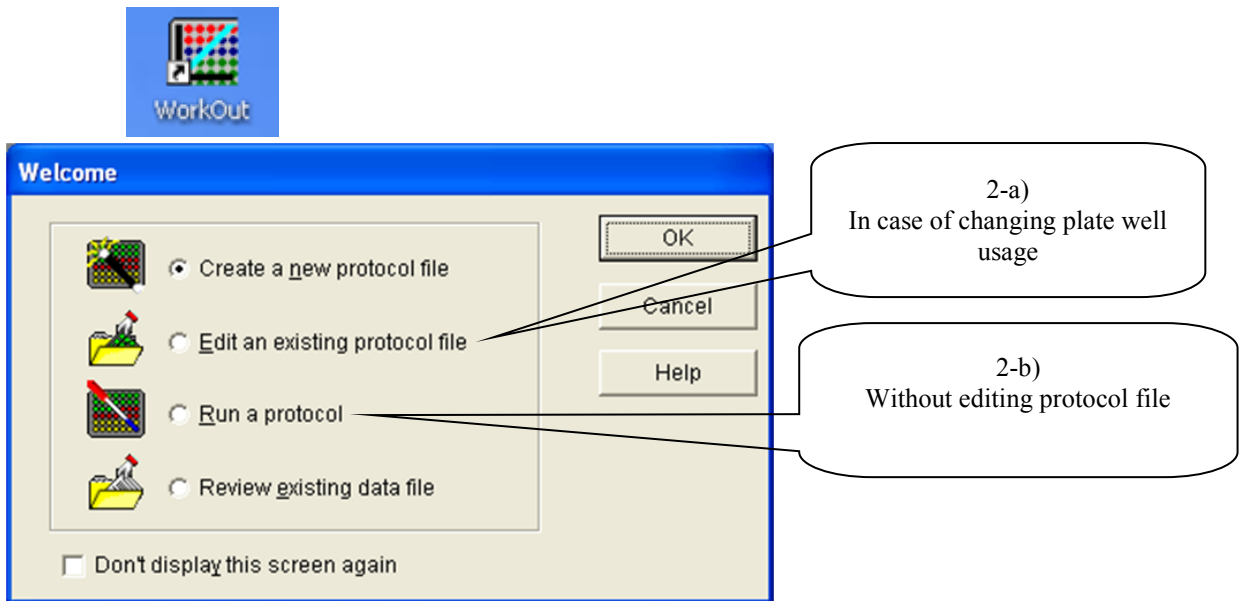
- ① Select your protocol file (points to a file in the Explorer tree)
- ② Right-click (points to the context menu)
- ③ start (points to the 'Start' option in the context menu)
- ④ Result (points to a row in the Assay table)

Assay Table Data:

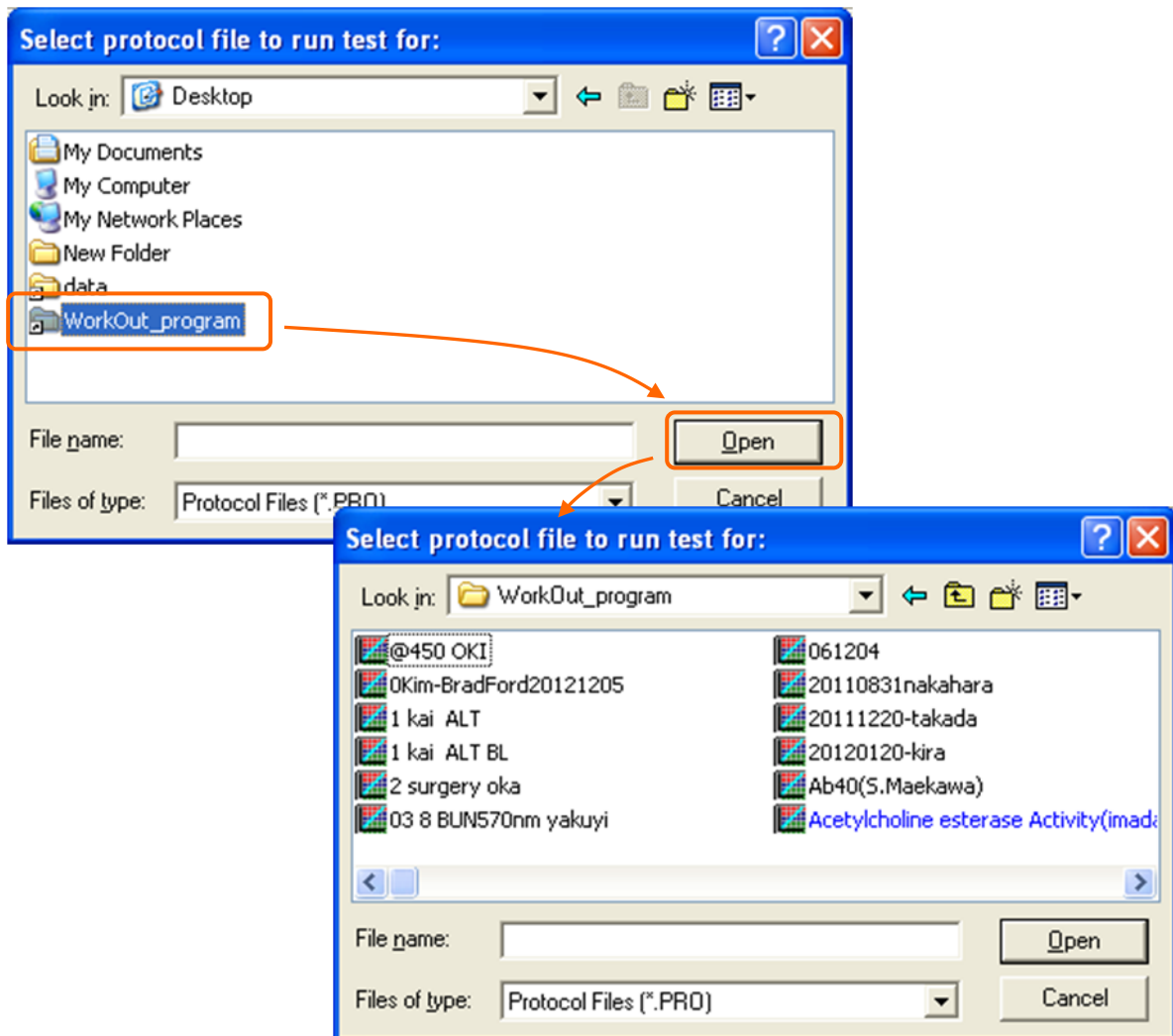
Assay	Begin date	End date	Notes
13418	6/3/2010 4:35:43 PM	6/3/2010 4:48:39 PM	Run starte
18432	10/11/2012 3:18:0...	10/11/2012 3:19:0...	Run starte
18433	10/11/2012 3:22:5...	10/11/2012 3:24:0...	Run starte

Data Processing with measurement data

*Create WorkOut Protocol File previously
Wallac 1420 Manager keep running
Work Out

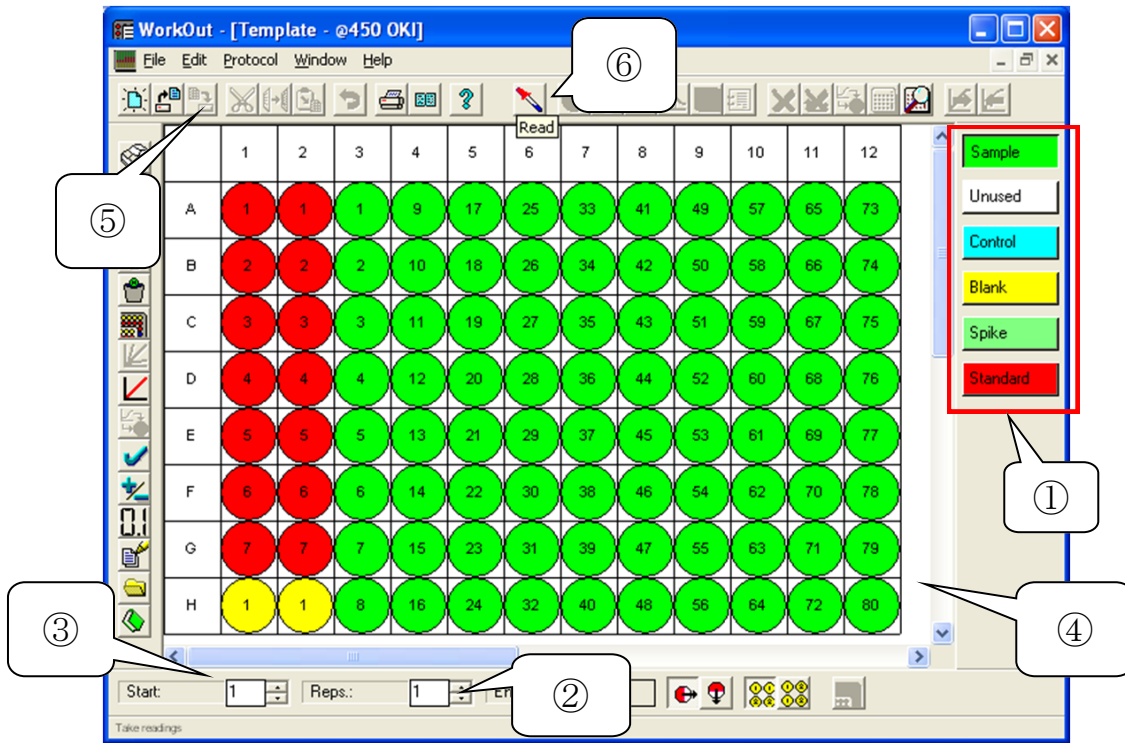


1) Select protocol file

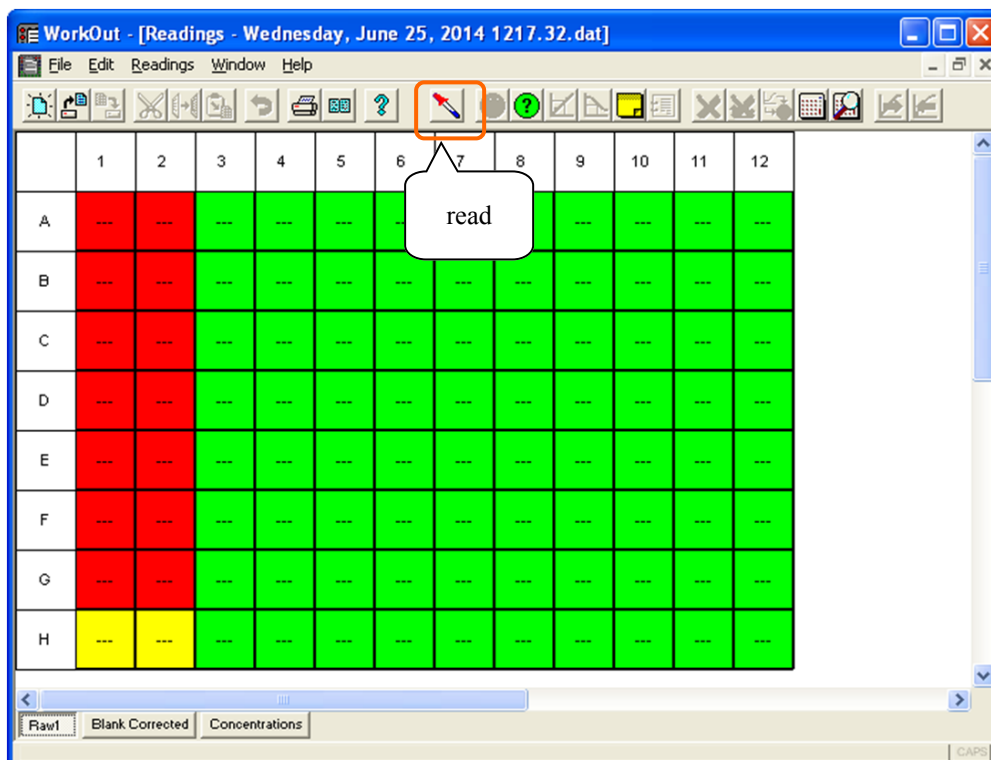


2-a) Edit an existing protocol file

- ① Select a group type
- ② Set a replicate number (Fill in "2" in case of duplicate)
- ③ Set a start number of a group
- ④ Click and drag to select wells on the virtual microplate
- ⑤ Save a protocol
- ⑥ Run a protocol



2-b) Run a protocol



3) Bring your data to your PC

The screenshot shows the WorkOut software interface with a data table. The table has columns 1-12 and rows A-H. The data is as follows:

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.087	0.086	0.222	0.213	0.258	0.255	0.288	0.292	0.258	0.249	0.277	0.266
B	0.097	0.097	0.215	0.211	0.248	0.256	0.255	0.251	0.259	0.265	0.215	0.217
C	0.113	0.114	0.228	0.224	0.246	0.249	0.273	0.280	0.242	0.239	0.250	0.239
D	0.146	0.147	0.244	0.245	0.219	0.213	0.289	0.285	0.218	0.226	0.261	0.258
E	0.158	0.159	0.243	0.237	0.272	0.267	0.296	0.299	0.249	0.245	0.039	0.039
F	0.226	0.229	0.252	0.255	0.273	0.268	0.305	0.308	0.234	0.236	0.038	0.039
G	0.362	0.372	0.212	0.210	0.247	0.246	0.267	0.269	0.243	0.231	0.037	0.038
H	0.600	0.627	0.237	0.237	0.261	0.265	0.330	0.335	0.266	0.263	0.037	0.037

Annotations and steps:

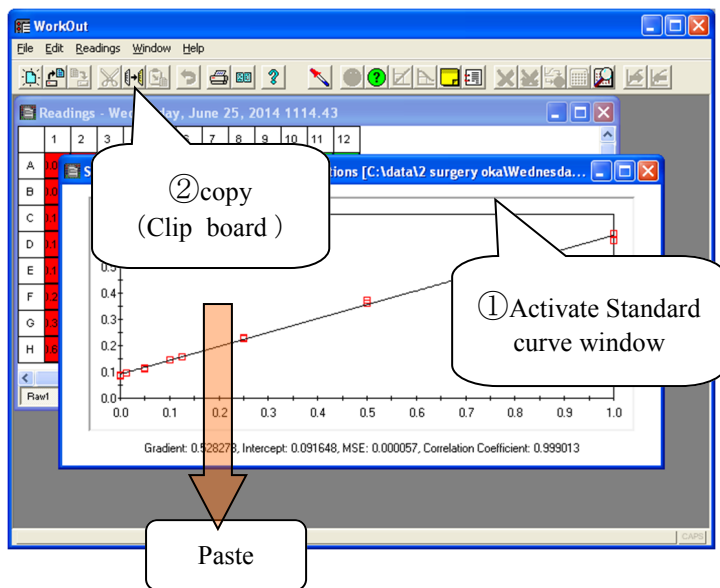
- ① Select a data sheet (Raw data and calculated data are saved in the individual sheet.)
- ② Select data
- ③ Right-click & copy
- Past data to EXCEL Sheet

4) Display standard curve

The screenshot shows the same data table as above, but with a 'Standard' curve overlaid. The curve is represented by a white box with the word 'Standard' inside, pointing to the data points. The data points are color-coded: red for the first two columns (1 and 2) and green for the remaining columns (3-12).

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.087	0.086	0.222	0.213	0.258	0.255	0.288	0.292	0.258	0.249	0.277	0.266
B	0.097	0.097	0.215	0.211	0.248	0.256	0.255	0.251	0.259	0.265	0.215	0.217
C	0.113	0.114	0.228	0.224	0.246	0.249	0.273	0.280	0.242	0.239	0.250	0.239
D	0.146	0.147	0.244	0.245	0.219	0.213	0.289	0.285	0.218	0.226	0.261	0.258
E	0.158	0.159	0.243	0.237	0.272	0.267	0.296	0.299	0.249	0.245	0.039	0.039
F	0.226	0.229	0.252	0.255	0.273	0.268	0.305	0.308	0.234	0.236	0.038	0.039
G	0.362	0.372	0.212	0.210	0.247	0.246	0.267	0.269	0.243	0.231	0.037	0.038
H	0.600	0.627	0.237	0.237	0.261	0.265	0.330	0.335	0.266	0.263	0.037	0.037

Copy standard curve to EXCEL sheet



5) Export file to TEXT format

Export file to text format only

Exported file can be opened by Excel.

Mean value (Raw data and calculated value)

%CV
 $\%CV = (SD/Mean) * 100$
 (Index of dispersion)

Group	Wells	Raw1	Concentra	%CV (Raw1)
standard1	A1,A2	0.086	-0.01	0.572
standard2	B1,B2	0.097	0.009	0.072
standard3	C1,C2	0.114	0.042	0.706
standard4	D1,D2	0.147	0.104	0.518
standard5	E1,E2	0.19	0.127	0.822
standard6	F1,F2	0.258	0.258	0.847
standard7	G1,G2	0.521	0.521	1.869
standard8	H1,H2	0.988	0.988	3.187
sample1	A3,A4	0.238	0.238	3.043
sample2	B3,B4	0.231	0.231	1.338
sample3	C3,C4	0.254	0.254	1.468
sample4	D3,D4	0.289	0.289	0.297
sample5	E3,E4	0.24	0.282	1.793
sample6	F3,F4	0.254	0.307	0.86
sample7	G3,G4	0.211	0.225	0.763