

Instructions for Viewing MULTI-COLOR-PAM Sample Data Using PamWin-3 Software

1. Software download

Download PamWin-3 software from http://www.walz.com/products/chl_p700/mc-pam/downloads.html

Install PamWin-3 software.

2. Download of sample data

Download and unzip MCPAM_SampleData.zip data (see link above).

Copy directories "MCPAM_SampleData" and "Sigma" into directory "C:\PamWin_3\Data_MC\Report"

3. Import of sample data

Launch PamWin-3.

In the absence of a MULTI-COLOR-PAM, select "No" in the dialog box and then select "MC-PAM". In the window "Open Report", select folder MCPAM_SampleData.

With a MULTI-COLOR-PAM connected to the computer, PamWin-3 will start in the measure mode of the MULTI-COLOR-PAM. Switch to the view mode and open report MCPAM_SampleData.

Go to Report window and check "Rpt" to see the list of Records:

Date	Time	No.	Type	No.SP	No.FK	Comment
23.05.12	08:16:00	1	IC+	23	0	Auxenochlorella protothecoides, induction
23.05.12	08:39:40	2	LC	12	0	Auxenochlorella protothecoides, light res
23.05.12	08:48:37	3	LC	11	0	Auxenochlorella protothecoides, light res
23.05.12	08:57:49	4	LC	12	0	Auxenochlorella protothecoides, light res
23.05.12	09:08:11	5	LC	12	0	Auxenochlorella protothecoides, light res
23.05.12	09:26:25	6	LC	12	0	Auxenochlorella protothecoides, light res
23.05.12	09:39:37	7		0	5	Auxenochlorella protothecoides, 5 actinic
23.05.12	10:00:59	8		0	5	Auxenochlorella protothecoides, 5 actinic
23.05.12	10:14:56	9		0	5	Auxenochlorella protothecoides, 5 actinic
23.05.12	10:37:17	10		0	1	Auxenochlorella protothecoides, Fast Kin
23.05.12	11:03:07	11		0	5	Auxenochlorella protothecoides, polyphas

4. Sample information

A stirred suspension of *Auxenochlorella protothecoides*, Chlorophyta (<http://www.algaebase.org/>), at a chlorophyll concentration of about 200-300 µg Chl/L was investigated.

5. Information on measurements

The report file "MCPAM_SampleData" contains 11 Records:

- No. 1. Fluorescence induction and recovery.
- Nos. 2 to 6. Light response curves for different actinic light colors.
- Nos. 7 to 9. Fast $O \rightarrow I_1$ fluorescence rise kinetics for 5 actinic light colors acquired under control of script file Sigma1000Chlor_10.prg.
- No. 10. Fluorescence decay after single turn-over multi-color flash, automatic average of 9 consecutive kinetics.
- No. 11. Polyphasic rise kinetics ($F_0 \rightarrow I_1 \rightarrow I_2 \rightarrow F_M$; $O \rightarrow J \rightarrow I \rightarrow P$). Four 4 fast kinetics and their manual average

6. Information on Sigma files

Go to Multi Color window. Click icon "Open Sigma File". Four Sigma files for *A. protothecoides* are available: these Sigma files contain information on the wavelength-dependent functional absorption cross-section of PS II.

- The files A_ protothecoides01.sigma to A_ protothecoides03.sigma were derived from Records 7 to 9.
- File A_ protothecoidesMEAN corresponds to the mean of the above-mentioned three sigma files.

7. Viewing slow kinetics

In the Report window, select a Record by double clicking on an IC+ or LC line and click on Slow Kinetics tab.

8. Viewing fast kinetics

Select one of records 7 to 11 by double click and click on Slow Kinetics tab.

9. Data analysis

See the manual for instructions on how to analyze light curves and fast kinetics.