



## DL-Protocols

**DLP** DL-Protocols are provided in DatLab as files with the extension \*DLP. A DL-Protocol defines the sequence of [Events](#) and [Marks](#). Templates are linked to DL-Protocols for storing exported data in a database and for data analysis. A DL-Protocol can be assigned to O2k-Chamber A or B, or both.

**Instrumental:** Instrumental DL-Protocols are used for calibrations and instrumental quality control, without experimental sample in the incubation medium.

**SUIT** DL-Protocols for [substrate-uncoupler-inhibitor titrations](#) (SUIT) provide a guide through a sequence of [coupling control states](#) and [electron transfer-pathway states](#).

**Lower O<sub>2</sub> limit [μM]:** This can be set for each chamber, to trigger an automatic warning when the experimental O<sub>2</sub> concentration declines below this limit as a WARNING to remind the user that re-oxygenation of the medium may be required. In many cases the lower limit is set at 30 μM.

**Titration volumes and concentrations:** Users can edit titration volumes and concentrations in the Overview window of a DL-Protocol, save the overview, and export the file as a user-specific DL-Protocol [File \ Export \ DL-Protocol User (\*.DLPU)].

**DLPU** DL-Protocol User, with modified titration volumes and final concentrations, but unchanged steps.

**E** Event in DatLab, an action at a time point in the SUIT protocol.

**M** Mark in DatLab, a selected section over a period of time for numerical data analysis (Mark statistics).

## SUIT

<b>O2</b>	O2 channel only.
<b>AmR</b>	O2 channel and Amperometric channel (Amp) for Amplex UltraRed assay (AmR) for measurement of H <sub>2</sub> O <sub>2</sub> production.
<b>TPP</b>	O2 channel and Potentiometric channel (pX) for TPP <sup>+</sup> or TPMP <sup>+</sup> assay for measurement of mt-membrane potential difference.

## Abbreviations [1]

ce	cells; $N_{ce} = N_{vce} + N_{dce}$
dce	dead cells
imt	isolated mitochondria
MiR	mitochondrial respiration medium
mt	mitochondria
pce	permeabilized cells
pfi	permeabilized fibers
SUIT	substrate-uncoupler-inhibitor protocol
thom	tissue homogenate
vce	viable cells

**Units** Report flow per cell in units [ $\text{amol}\cdot\text{s}^{-1}\cdot\text{cell}^{-1}$ ] equivalent to [ $\text{pmol}\cdot\text{s}^{-1}\cdot 10^{-6}$  cells].

- [1] MitoEAGLE preprint 2018-11-24(47) Mitochondrial respiratory states and rates.  
[http://www.mitoeagle.org/index.php/MitoEAGLE\\_preprint\\_2018-04-20](http://www.mitoeagle.org/index.php/MitoEAGLE_preprint_2018-04-20)

