

DATE:

## DRP-DROPSTAT PLUS

Configuration parameters form

### CONTACT INFORMATION

Researcher Name:

Affiliation:

Email:

Phone:

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DropStat Plus is a standalone electrochemical reader customized for your final application. Each DropStat Plus can be programmed with **up to three methods** and **up to eight calibration curves per method**. In case you want to reprogram the equipment with a different method or calibration curve, files with the new conditions can be provided upon request. You can upload the new files to DropStat Plus via DropView DropStat software.

Please, use **one questionnaire per method** and fill only the number of calibration curves, associated to the same previously defined method, that you need.

## 1. SELECT A METHOD

Select **just one method**. Choose one technique among the available ones and set the parameters.

For all the techniques it is possible to apply a pretreatment before applying the measurement. Please, check the box and complete the requested information if you need a pretreatment step. If not, continue with technique selection.

**Pretreatment** (applied, if necessary, for any technique)

PRETREATMENT	
Conditioning potential (V)	
Conditioning time (s)	
Deposition potential (V)	
Deposition time (s)	
Equilibration time (s)	

Select **just one of the available techniques** clicking on the drop-down list below.

Set the parameters of the choosen technique. Do not fill the parameters of the other techniques.

LINEAR SWEEP VOLTAMMETRY, LSV	
Initial potential (V)	
End potential (V)	
Scan rate (V/s)	
Step potential (V)	

CYCLIC VOLTAMMETRY, CV	
Initial potential (V)	
Vertex 1 potential (V)	
Vertex 2 potential (V)	
Scan rate (V/s)	
Step Potential (V)	

SQUARE WAVE VOLTAMMETRY, SWV	
Initial potential (V)	
End potential (V)	
Amplitude potential (V)	
Frequency (Hz)	
Step potential (V)	

DIFFERENTIAL PULSE VOLTAMMETRY, DPV	
Initial potential (V)	
End potential (V)	
Pulse potential (V)	
Pulse time (s)	
Scan rate (V/s)	
Step potential (V)	

AMPEROMETRIC DETECTION SINGLE-CHANNEL, AD	
Applied potential (V)	
Interval time (s)	
Total time (s)	

AMPEROMETRIC DETECTION DUAL-CHANNEL, AD dual	
Applied potential CH 1 (V)	
Applied potential CH 2 (V)	
Interval time (s)	
Total Time (s)	

OPEN CIRCUIT POTENTIOMETRY, OCP	
Interval time (s)	
Total time (s)	

Please, if you want to give a name to your method fill the next text box:

## 2. PROVIDE AN EXAMPLE OF OBTAINED SIGNAL

Please provide **curve graphics** of signals obtained for the whole calibration range (lower concentration, higher concentration), as well as for the background. Click on the chart below to insert a picture.

In case of SWV or DPV electrochemical techniques, provide forward and backward/reverse curves for the lowest and the highest concentration of the calibration range.

### 3. SELECT THE MEASUREMENT TO BE DONE

Please, choose among the different options provided the measurement to be done on the signal (**select just one**).

peak height  
peak position  
peak width  
charge  
current (only for AD)  
potential (only for OCP)

In case that the selected technique is **LSV**, **CV**, **SWV** or **DPV**, please define the potential window where the peak appears:

Initial peak potential (V):	
End peak potential (V):	

In case that the selected technique is a **CV** and a reversible process appears, please select the peak to be measured:

Anodic process	Cathodic process
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In **AD**, please define the time when the current should be measured:

In **OCP**, please define the time when the potential should be measured:

#### 4. PROVIDE INFORMATION ABOUT THE MAXIMUM REGISTERED CURRENT

Maximum current registered during the pretreatment:	
Maximum current registered during measurement:	

In **OCP**, please define maximum potential registered during measurement:

#### 5. DEFINE CALIBRATION CURVES

Fill the number of calibration curves that you want to record on the device for the selected method (up to eight). You can give a name to the calibration equations that will be the way in which it will be recorded on the device.

## CALIBRATION 1

Label name:

Please, provide a **calibration plot**:

Please, provide the **calibration equation** in one of the following formats, being "x" the measured value on the curve and "y" the information to be displayed:

- $y = a + bx$
- $y = a + bx + cx^2$
- $y = a + bx + cx^2 + dx^3$
- $y = a + b \cdot \ln(x)$
- $y = a + b \cdot e^{cx}$
- $y = a + b \cdot x^c$

Limits

- Upper:
- Lower:

Please, provide the **information to be displayed in the LCD** (select just one):

Peak height

Peak position

Charge

Current

Concentration

Units:

Decimal places:

Additional information:

## CALIBRATION 2

Label name:

Please, provide a **calibration plot**:

Please, provide the **calibration equation** in one of the following formats, being "x" the measured value on the curve and "y" the information to be displayed:

- $y = a + bx$
- $y = a + bx + cx^2$
- $y = a + bx + cx^2 + dx^3$
- $y = a + b \cdot \ln(x)$
- $y = a + b \cdot e^{cx}$
- $y = a + b \cdot x^c$

Limits

- Upper:
- Lower:

Please, provide the **information to be displayed in the LCD** (select just one):

Peak height

Peak position

Charge

Current

Concentration

Units:

Decimal places:

Additional information:

### CALIBRATION 3

Label name:

Please, provide a **calibration plot**:

Please, provide the **calibration equation** in one of the following formats, being "x" the measured value on the curve and "y" the information to be displayed:

- $y = a + bx$
- $y = a + bx + cx^2$
- $y = a + bx + cx^2 + dx^3$
- $y = a + b \cdot \ln(x)$
- $y = a + b \cdot e^{cx}$
- $y = a + b \cdot x^c$

Limits

- Upper:
- Lower:

Please, provide the **information to be displayed in the LCD** (select just one):

Peak height

Peak position

Charge

Current

Concentration

Units:

Decimal places:

Additional information:

## CALIBRATION 4

Label name:

Please, provide a **calibration plot**:

Please, provide the **calibration equation** in one of the following formats, being "x" the measured value on the curve and "y" the information to be displayed:

- $y = a + bx$
- $y = a + bx + cx^2$
- $y = a + bx + cx^2 + dx^3$
- $y = a + b \cdot \ln(x)$
- $y = a + b \cdot e^{cx}$
- $y = a + b \cdot x^c$

Limits

- Upper:
- Lower:

Please, provide the **information to be displayed in the LCD** (select just one):

Peak height

Peak position

Charge

Current

Concentration

Units:

Decimal places:

Additional information:

## CALIBRATION 5

Label name:

Please, provide a **calibration plot**:

Please, provide the **calibration equation** in one of the following formats, being "x" the measured value on the curve and "y" the information to be displayed:

- $y = a + bx$
- $y = a + bx + cx^2$
- $y = a + bx + cx^2 + dx^3$
- $y = a + b \cdot \ln(x)$
- $y = a + b \cdot e^{cx}$
- $y = a + b \cdot x^c$

Limits

- Upper:
- Lower:

Please, provide the **information to be displayed in the LCD** (select just one):

Peak height

Peak position

Charge

Current

Concentration

Units:

Decimal places:

Additional information:

## CALIBRATION 6

Label name:

Please, provide a **calibration plot**:

Please, provide the **calibration equation** in one of the following formats, being "x" the measured value on the curve and "y" the information to be displayed:

- $y = a + bx$
- $y = a + bx + cx^2$
- $y = a + bx + cx^2 + dx^3$
- $y = a + b \cdot \ln(x)$
- $y = a + b \cdot e^{cx}$
- $y = a + b \cdot x^c$

Limits

- Upper:
- Lower:

Please, provide the **information to be displayed in the LCD** (select just one):

Peak height

Peak position

Charge

Current

Concentration

Units:

Decimal places:

Additional information:

## CALIBRATION 7

Label name:

Please, provide a **calibration plot**:

Please, provide the **calibration equation** in one of the following formats, being "x" the measured value on the curve and "y" the information to be displayed:

- $y = a + bx$
- $y = a + bx + cx^2$
- $y = a + bx + cx^2 + dx^3$
- $y = a + b \cdot \ln(x)$
- $y = a + b \cdot e^{cx}$
- $y = a + b \cdot x^c$

Limits

- Upper:
- Lower:

Please, provide the **information to be displayed in the LCD** (select just one):

Peak height

Peak position

Charge

Current

Concentration

Units:

Decimal places:

Additional information:

## CALIBRATION 8

Label name:

Please, provide a **calibration plot**:

Please, provide the **calibration equation** in one of the following formats, being "x" the measured value on the curve and "y" the information to be displayed:

- $y = a + bx$
- $y = a + bx + cx^2$
- $y = a + bx + cx^2 + dx^3$
- $y = a + b \cdot \ln(x)$
- $y = a + b \cdot e^{cx}$
- $y = a + b \cdot x^c$

Limits

- Upper:
- Lower:

Please, provide the **information to be displayed in the LCD** (select just one):

Peak height

Peak position

Charge

Current

Concentration

Units:

Decimal places:

Additional information:

## ELECTRODE USED

Please, provide information about the **electrode** used in your assay.

Check the electrode employed:

- Conventional
- Screen-printed electrode (SPE)

Please, provide information about **SPE substrate material**:

Ceramic      White plastic      Transparent plastic      Glass

Other (please specify)

Please, provide information about **electrodes material**:

Working electrode material	
Auxiliary electrode material	
Reference electrode material	

## ELECTROLYTE USED

Please, provide information about the electrolyte used in the measurement (i.e.: 0.1 M PBS pH 7.0, KCl 0.1M, etc.):