TechnicalNOTE

# Gamry Instruments' .DTA File Type

## Introduction

Our Framework software is the controlling application for all Gamry Instruments potentiostats. When data are stored for later analysis and plotting, they are saved as a `.DTA` file type. This Technical Note describes more about the `.DTA` file type, and how to transfer data into other software packages such as spreadsheet programs.

## The `.DTA` File Type

Gamry Instruments uses a proprietary file type with the extension `.DTA` for storing Framework™ software data and electrochemical impedance spectroscopy data generated in Echem Analyst™ software. (For a general discussion of file types in our software, see our "Software" webpage.)

A `.DTA` file contains only tab-separated raw text, and can be opened in any text editor or spreadsheet program.

## Column Headers in `.DTA` Files

Gamry Instruments' `.DTA` files include headers. The following abbreviations are found in `.DTA` file headers:

| | |
|---|---|
| `Pt` | Data point number, starting with point 0 (not point 1) |
| `T` | Time since the start of the experiment |
| `Vf` | Measured cell voltage |
| `Im` | Measured cell current |
| `Vu` | Uncompensated voltage |
| `Sig` | Voltage from the signal generator entering the current amplifier |
| `Ach` | Voltage measured using the A/D input |
| `IERange` | Which current range was used for measurement |
| `Over` | A code indicating various kinds of error conditions |

## Copy and Paste Method in Echem Analyst™

You can copy and paste a section or entire results sheet from Echem Analyst.

The **Copy to Clipboard** button (see right) is on the toolbar of the tab showing the graph when your data file is displayed in Echem Analyst. This button gives you the choice to copy a Bitmap, Metafile, or raw data directly to the Windows® Clipboard. You can then paste the data into any other program. The **Copy to Clipboard** button opens a drop-down menu of choices (Fig. 1).

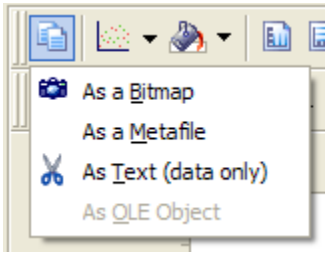


**Figure 1.** Copy to Clipboard drop-down menu.

- The **As a Bitmap** option copies the data as displayed in Echem Analyst, meaning that the data will be a replica of the current view of the data complete with any overlays, fits, or modifications of the visual style of the plot.
- Using the **As Text (data only)** button copies the *x* and *y* values of the currently displayed data, fits, and overlays as a table that you can directly paste into a cell-based spreadsheet application. By overlaying multiple data files you can use the Copy As Text feature to batch-export a number of data files all at once.

You can copy data to the clipboard from any of the **Analysis** tabs (e.g., Fig. 2) that are created when a fit is performed. Click in the cell (or click and drag to highlight multiple cells; see Fig. 3), then right-click and select **Copy**. You can now paste the data into any cell-based spreadsheet program.

| Parameter | Value | ± Error | Units |
|---|---|---|---|
| R1 | 24.88e-3 | 444.4e-6 | ohm |
| R2 | 23.75e-3 | 1.106e-3 | ohm |
| Yo4 | 1.813 | 305.8e-3 | S*s^a |
| a5 | 573.3e-3 | 31.91e-3 | |
| R6 | 48.11e-3 | 6.692e-3 | ohm |
| Yo7 | 246.8 | 38.65 | S*s^a |
| a8 | 685.6e-3 | 48.22e-3 | |
| Yo9 | 1.856e3 | 154.1 | S*s^a |
| a10 | 1.000 | 11.78e-3 | |
| L10 | 757.4e-9 | 12.87e-9 | H |
| Goodness of Fit | 480.6e-6 | | |
| 13p_pstaticEIS_100uHz.DTA | | | |

**Figure 2.** A typical **Analysis** tab with data created after a fit of a model.

| Parameter | Value | ± Error | Units |
|---|---|---|---|
| R1 | 24.88e-3 | 444.4e-6 | ohm |
| R2 | 23.75e-3 | 1.106e-3 | ohm |
| Yo4 | 1.813 | 305.8e-3 | S*s^a |
| a5 | 3.3e-3 | 31.91e-3 | |
| R6 | .11e-3 | 6.692e-3 | ohm |
| Yo7 | 246.8 | 38.65 | S*s^a |
| a8 | 685.6e-3 | 48.22e-3 | |
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| L10 | 757.4e-9 | 12.87e-9 | H |
| Goodness of Fit | 480.6e-6 | | |
| 13p_pstaticEIS_100uHz.DTA | | | |

Print
Copy

**Figure 3.** Data in the **Analysis** tab are selected, with a small menu that appears with choices to right-click.

## Directly Opening the File in Your Spreadsheet

Many customers extract their `.DTA` data via the copy-and-paste method described above. But there is another possibility: directly opening the `.DTA` file in your spreadsheet program. We sometimes find that opening a `.DTA` file in Excel® or another program works more reliably than copying and pasting.

For example, Fig. 4 is a `.DTA` file for an EIS experiment opened directly in Excel®:

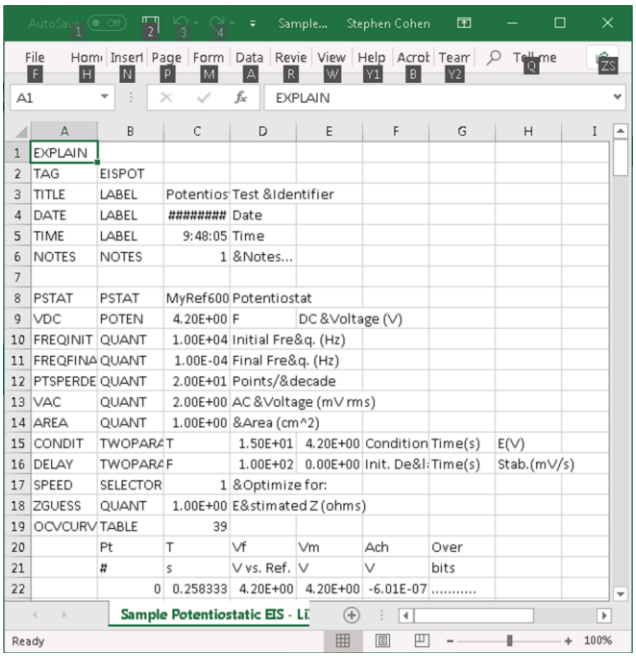


**Figure 4.** EIS file in `.DTA` format opened directly in the Excel® spreadsheet program.

## Conclusion

The `.DTA` file type for Gamry Instruments' software does not have to be treated as a mysterious black box. To transfer your data to other programs, you can simply select, copy, and paste; or you can open the file in your spreadsheet application.



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