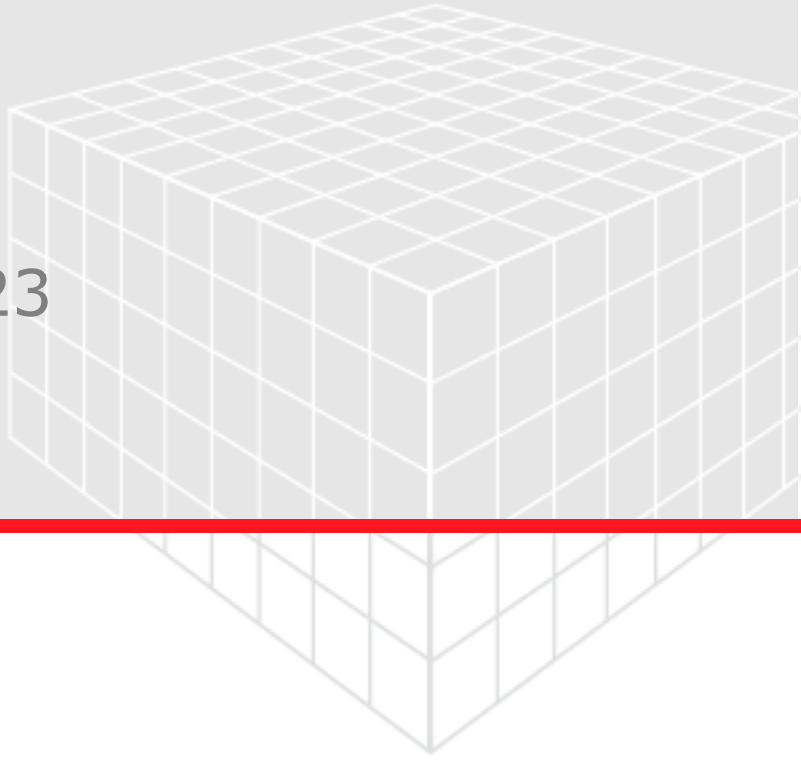
GeoDExcel



User Guide

GeoDict release 2023

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GeoDict

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ANALYZING AND PLOTTING GEODICT RESULT FILE DATA WITH GEODEXCEL

After GeoDict simulations, the results obtained from any analysis and prediction module (Dict-modules) can be studied in detail using the visualization options of the modules.

Additionally, the results can be evaluated and plotted using the GeoDexcel add-in or the MATLAB® interface GeoLab. GeoDexcel and GeoLab are included in the GeoDict package. To use GeoDexcel, Microsoft Excel™ must be installed on the computer. Using GeoDexcel requires Excel 2016 or newer and Windows 10.

Since GeoDict 2022, additionally, a python-based version of the generic export from the GeoDict Result Viewer is available. It can be used to export data in .xlsx format, even without Excel installation on the computer, e.g. on Linux systems.

GeoDexcel allows a deeper analysis of the simulation results by loading the GDR (**Geo**metry **D**ata **R**esult) file into a spreadsheet and, from it - automatically - locating, organizing, and loading the necessary data to generate the most appropriate chart to plot and compare the results.

GeoDexcel provides four options when importing data from a GDR file for analysis in Excel.

- The **Generic** import reads the complete result map and, if chosen, the input and the log map of a single GeoDict result file, in one Excel spreadsheet. Here, the user has access to all parameters / result values and can do his/her own analysis. The **Generic** import is available for all modules. Plots shown in the GeoDict **Result Viewer** are created in the Excel spreadsheet as well.
- The **Chart** import allows to import only the data of the graphs created in the GeoDict **Result Viewer**, and to create the same charts in the Excel spreadsheet.
- The **Specific** import includes predefined analysis, which is specific for a certain module. It provides predefined charts, e.g., the change of the pressure drop over time in a filter life time simulation, which can be plotted for different simulations in one graph to compare different results. Results of a parameter study of a single geometry or a comparison of different geometries can be plotted in one figure.

  The **Specific** import is available from the GeoDict Result Viewer for GeoDict 2023 result files of the module FilterDict. From the GeoDexcel M2M tab in Excel, the specific import is still available also for ElastoDict, FlowDict, PoroDict and MatDict. The functionality is explained in the GeoDexcel 2022 handbook of this User Guide. Since all the plots are available now in the GeoDict Result Viewer and in the generic GeoDexcel import for these modules, this functionality is obsolete and will be removed in future GeoDexcel versions.
- The **Single Table** import loads scalar values for each GeoDict result file in one single row in an Excel sheet. With this import, the user can summarize different simulated properties of a geometry such as pressure drop, largest through pore etc. and compare them with the corresponding results of different geometries or analyze the influence of different parameters in a parameter study. The **Single Table** import is available for all modules. In GeoDexcel 2023 it is supported only from the GeoDexcel add-in (see GeoDexcel 2022 handbook) and cannot be used from the GeoDict Result Viewer anymore. Within the **Result Viewer**, use the more convenient **Combine Results** functionality, see the Result Viewer handbook of this User Guide.

INSTALLING GEODEXCEL

The GeoDict installer takes charge of copying and installing GeoDexcel in the installation folder and adding the GeoDexcel 2023 icon on the desktop.

The GeoDexcel add-in does not work for Macintosh, which considers it an attempt to access the system files.

STARTING GEODEXCEL

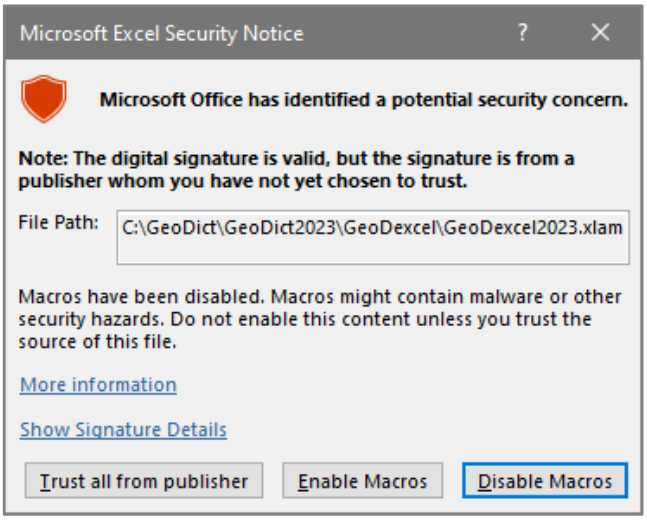
GeoDexcel can be started in several ways:

1. Start GeoDexcel through the Windows **Start** menu, upon installation of GeoDict.
2. A shortcut is created by the installer on the user's desktop. Load the GeoDexcel add-in by clicking this shortcut.
3. The user copies (or moves) **GeoDexcel2023.xlam** from C:\Program Files\Math2Market GmbH\GeoDict 2023\GeoDexcel\ into a folder and creates a link. The user must then manually start the add-in by double-clicking the link.
4. By clicking an Excel button in an opened GeoDict **Result Viewer** of a GDR file.
5. Via the "LoadGDRToExcel" command from a GeoDict (Python) macro.

When GeoDexcel is started, the system usually asks whether the macros contained in the add-in should be run.

The popping-up of this warning message can be suppressed for trusted macros by clicking **Enable Macros**.

If it appears in the warning, click **Trust all from publisher**. Then, the warning only appears for unknown macros and these macros must either be enabled or disabled every time.



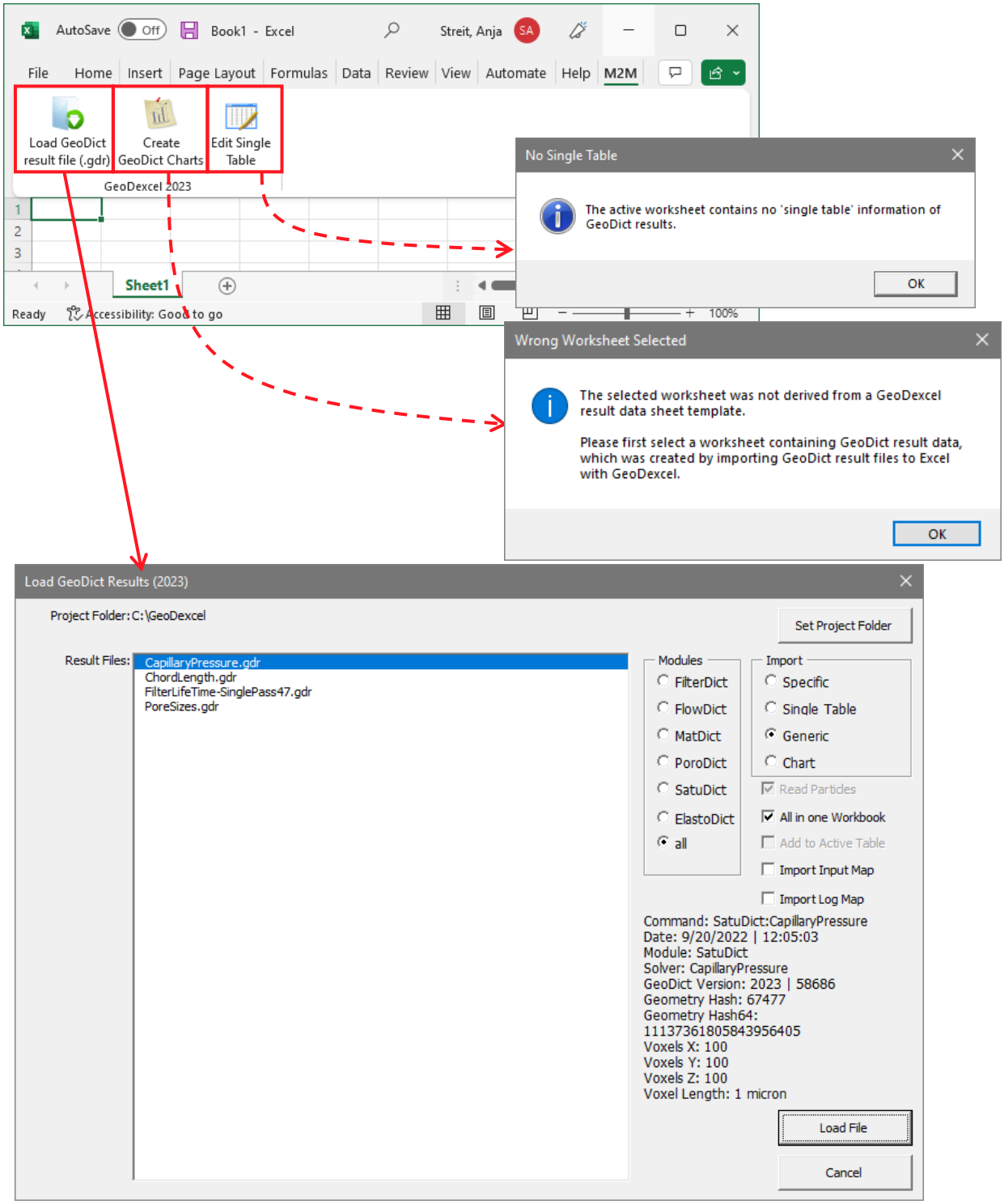
Not recommended is to minimize the macro security, by checking in Microsoft Excel™ **File** → **Options** → **Trust Center** → **Trust Center Settings...** button → **Macro Settings** → check **Enable all macros (not recommended; potentially dangerous code can run)**. In newer versions of Microsoft Excel™, the setting is called **Enable VBA macros (not recommended; potentially dangerous code can run)**. It is not recommended to use this option.

GeoDexcel add-in toolbar

After starting GeoDexcel, click the **M2M** tab in the menu bar. Three icons for the control of the program (**Load GeoDict result file (.gdr)**, **Create GeoDict Charts**, and **Edit Single Table**) appear in the **GeoDexcel 2023** group.

Three corresponding dialog boxes, to load result files in Microsoft Excel™, to generate predefined charts and to edit single result tables, start when clicking the icons.

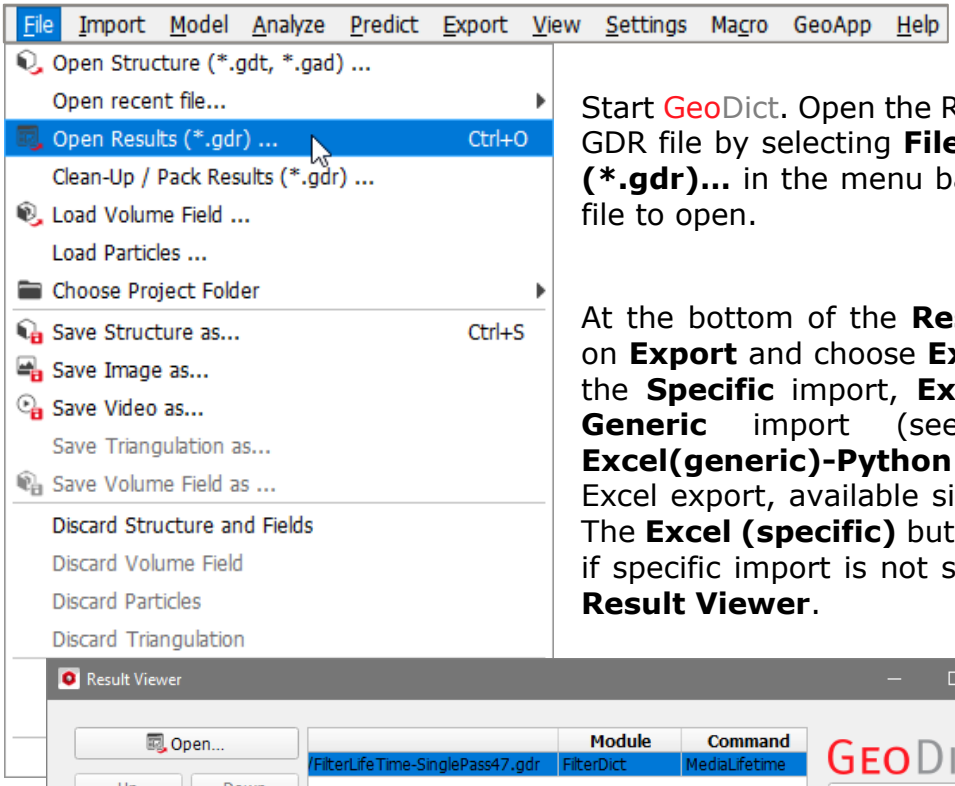
Of course, **Create GeoDict Charts** and **Edit Single Table** only work after a worksheet has been opened by clicking the **Load GeoDict result file (.gdr)** icon rep. if single table data is loaded. Otherwise, a warning message appears.



Load GeoDict result file (GDR) data into GeoDexcel

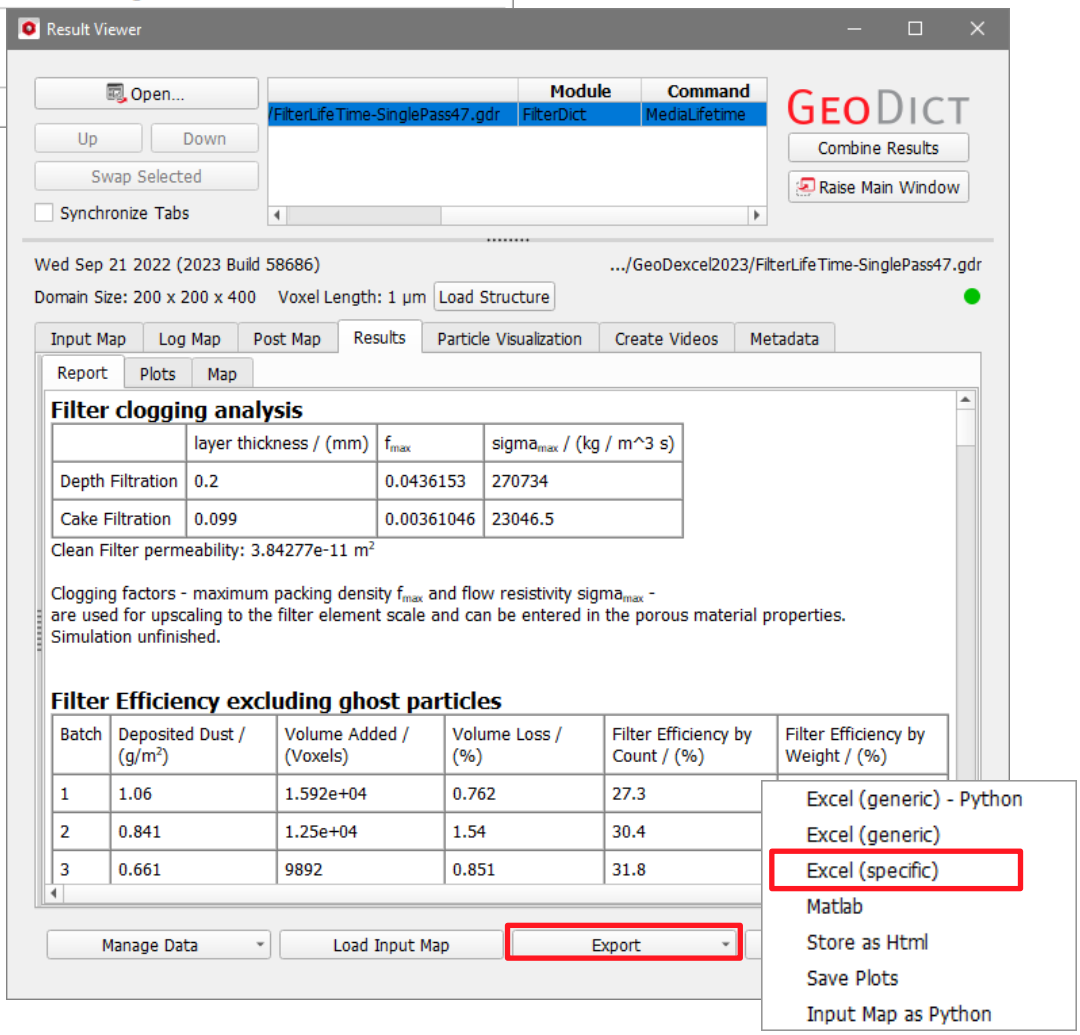
To load the simulation data from a GDR file into GeoDexcel there are three options:

From the Result Viewer of GDR



Start GeoDict. Open the Result Viewer of the GDR file by selecting **File → Open Results (*.gdr)...** in the menu bar. Select the GDR file to open.

At the bottom of the **Result Viewer**, click on **Export** and choose **Excel (specific)** for the **Specific** import, **Excel (generic)** for **Generic** import (see page 1) or **Excel(generic)-Python** for python-based Excel export, available since GeoDict 2022. The **Excel (specific)** button is not available if specific import is not supported from the **Result Viewer**.

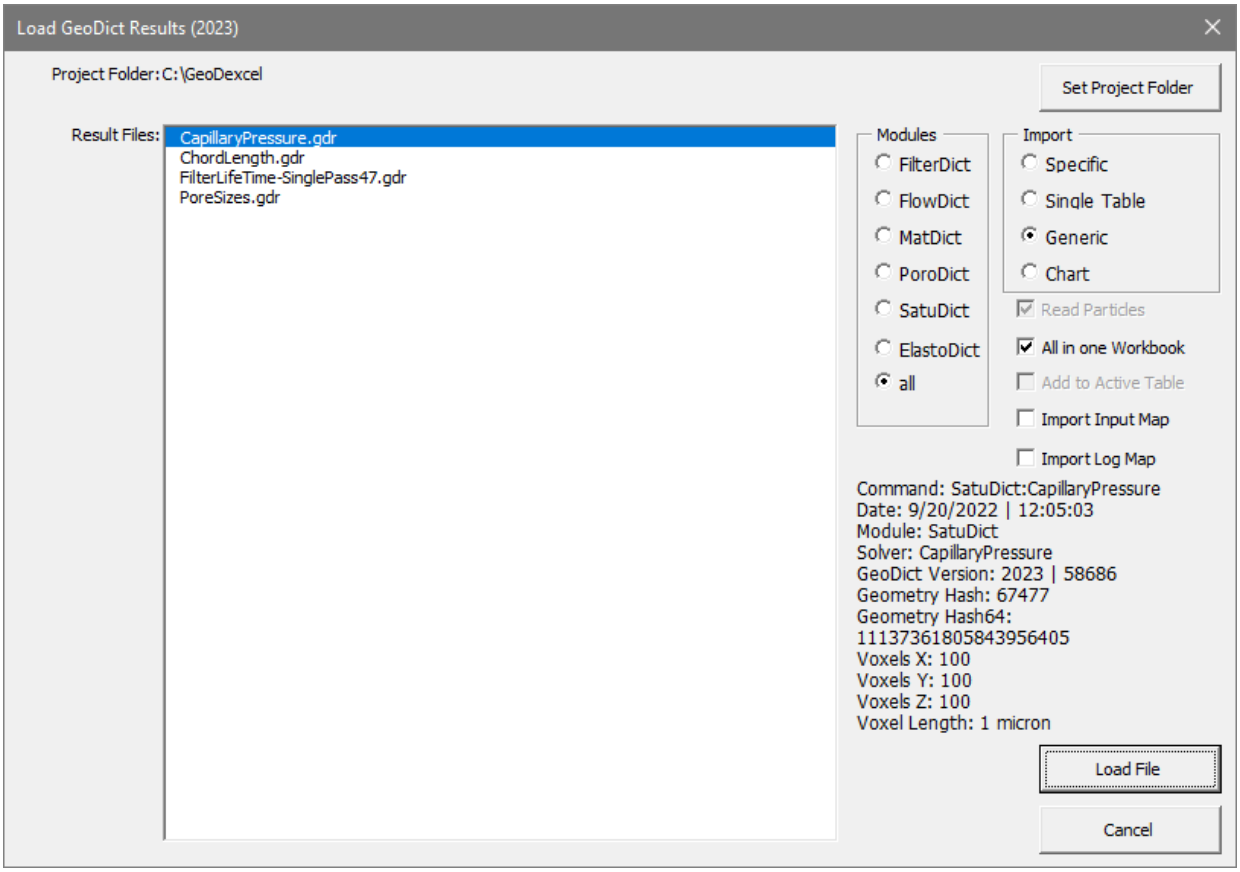


If an export option from the Result Viewer is used, GeoDexcel opens with the information from the result file(s), and the information is already saved to an .xlsx file with the same file name as the .gdr file.

FROM GEODEXCEL ADD-IN TOOLBAR

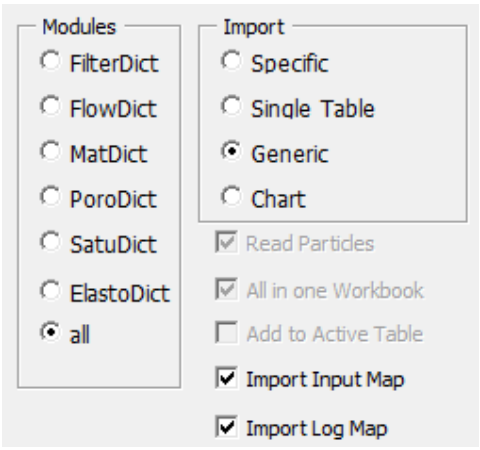
Start GeoDexcel. Click the **M2M** tab and then, the **Load GeoDict result file (.gdr)** icon, as described in page 3.

To load data from a GeoDict result file, click the **Set Project Folder** button and find the folder where the result file(s) in GDR format from the simulation(s) of interest were saved. The path to the current folder (**Project Folder**) is shown at the top left of the **Load GeoDict Results** dialog box.



In the **Import** panel, on the right, check the type of file import.

- Specific
- Single Table
- Generic
- Chart



The options that can be checked underneath the **Import** panel (**Read Particles**, **All in one Workbook**, etc.), change with the selected import type and module. These options are described below for each of the import types, starting on page 8.

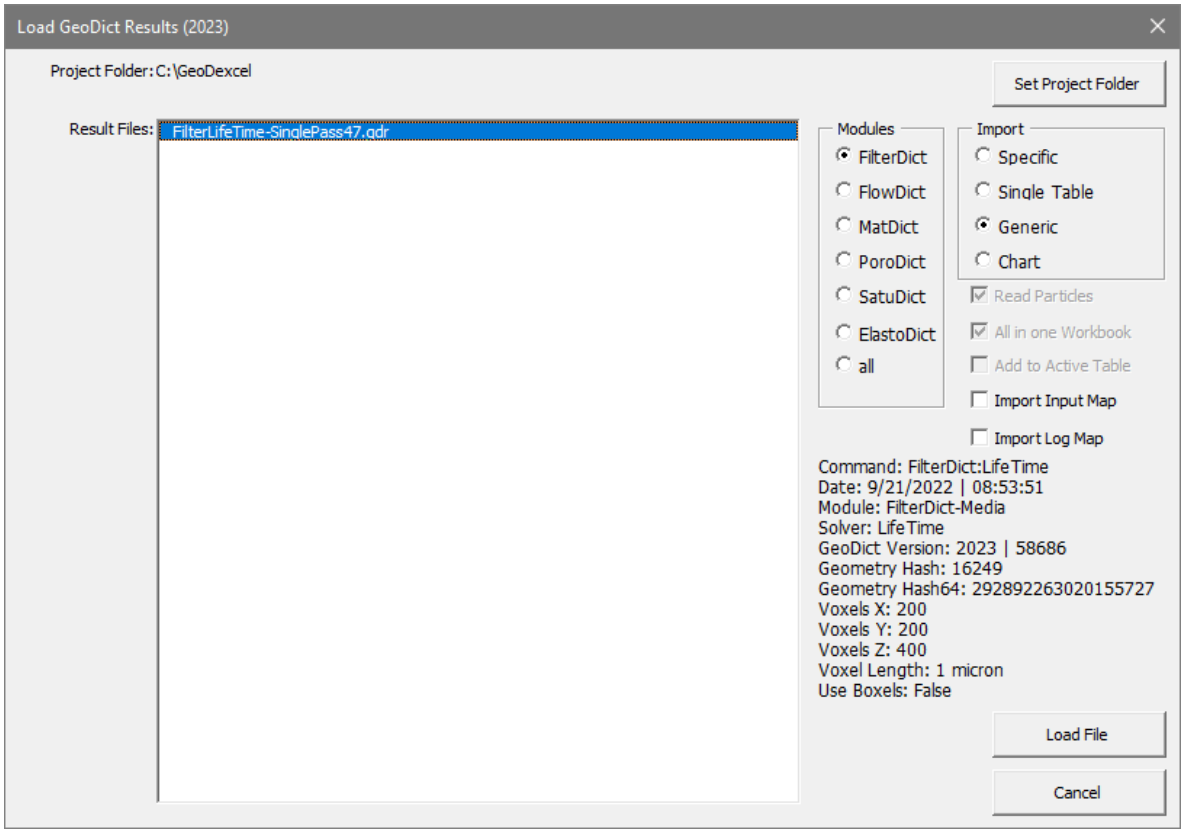
In the **Modules** panel, check the name of the GeoDict module that produced the GDR file of the results of interest: FilterDict, FlowDict, MatDict, PoroDict, SatuDict, or ElastoDict.

Check **all** to load result files produced by other GeoDict modules with **Single Table**, **Generic** or **Chart** import type.

After choosing one of the modules, the **Result Files** field on the left contains the list of the GDR files obtained with the selected module, residing in the current project folder. Only the GDR files for which the import type chosen is available are shown in the field.

Note that for the **Specific** import of the modules FlowDict, MatDict, PoroDict and ElastoDict as well as for the **Single Table** import, the import of GeoDict 2023 files still works in GeoDexcel 2023, even if the specific export to GeoDexcel for these modules and the single table export is removed from the GeoDict Result Viewer. For SatuDict the **Specific** import is not supported in GeoDexcel 2023 anymore, therefore no GDR files are shown in the **Result Files** field on the left in this case.

Multiple files can be selected by clicking the name of the files while holding down the CTRL key.



If the user checks **all**, all GDR files for which the import type chosen is available are shown in the **Result Files** field.

After selecting one result file from the list, the information from the result file header is displayed below the **Modules** and the **Import** panels. This information cannot be shown when more than one result file has been selected.

Clicking **Load File(s)** starts the loading of the result file(s) data into the Excel spreadsheet.

From a (Python) macro:

Load GeoDict simulation results via macro by using the following commands in a Python macro:

```
LoadGDRToExcel_args_1 = {
   'ResultFileName'      : 'EJStokesResult.gdr',
   'ExcelMode'           : 'Generic',
   'SaveExcelFile'       : False,
   'ExcelFileName'       : 'gdrFile.xlsx',
   'LoadInputMap'        : False,
   'UseGhostParticles'   : True,
   'AddToActiveWorkbook' : False,
   'CloseExcelWorkbook'  : False,
   'CloseExcel'          : False,
   }
gd.runCmd("GeoDict:LoadGDRToExcel", LoadGDRToExcel_args_1, Header['Release'])
```

Further information about using GeoDict macros can be found in the Automation handbook of the GeoDict User Guide.

The key `ResultFileName` defines the GeoDict result file to be loaded. The key `ExcelMode` defines the type of file import (**SingleTable**, **Specific**, **Generic** or **GenericPy**).

To save the resulting Excel file, `SaveExcelFile` must be set to true. The key `ExcelFileName` specifies the name of the saved file in format *.csv or *.xlsx.

For **Generic** import, the input and log map of the GeoDict result file can be loaded into the Excel file by setting `LoadInputMap` to true. The key has no effect for **Specific**, **SingleTable** or **GenericPy**.

When loading a result from FilterDict, it is possible to take ghost particles into account for the efficiency results by setting the key `UseGhostParticles` to true. The key has no effect on results from other modules.

Setting the key `CloseExcelWorkbook` to true determines that the Excel file is closed after the GeoDict result file is loaded. This key set to false keeps the workbook open, to repeat the macro block and add several GeoDict result files to one single Excel workbook. In the same way, the key `CloseExcel` defines whether Excel is closed or kept open after reading the file.

SPECIFIC IMPORT

The **Specific** import includes a predefined, specific analysis for a certain module. The specific import provides access to plotting predefined charts.

For example, the change of the pressure drop over time in a filter life time simulation, which can additionally be plotted for different simulations in one graph to compare different results. In this fashion, the user can plot the results of a parameter study of a single geometry or compare different geometries in one figure.

The **Specific** import for FilterDict results can be started directly from the GeoDict GUI by clicking **Export** → **Excel (specific)** in the **Result Viewer** of the GDR file.

With **Load GeoDict result file (.gdr)** after starting GeoDexcel from the desktop icon, it is also still available for the modules FlowDict, MatDict, PoroDict and ElastoDict. This functionality is already explained in the GeoDexcel 2022 handbook of this User Guide.

In GeoDict 2023, all plots from the specific import are available in the **Generic** import and as plots in the **Result Viewer** as well. For SatuDict, the specific import is therefore not supported in GeoDexcel 2023 anymore, and it will be removed for FlowDict, MatDict, PoroDict and ElastoDict in future GeoDict versions as well.

The third possibility to start the specific import for FilterDict, FlowDict, MatDict, PoroDict and ElastoDict, is through the macro command `LoadGDRToExcel` with `ExcelMode` set to **Specific**.

SPECIFIC IMPORT FOR FILTERDICT

Specific import can be used for FilterDict results to obtain predefined charts and to combine several result files in one plot.

The data obtained with the calculations **Filter Media - Filter Efficiency**, **Filter Media** - **Filter Lifetime** and **Filter Element - Element Lifetime** can be analyzed and plotted in GeoDexcel. The data sheet layout for them contains the complete information gathered in the simulations and is very similar.

Start GeoDexcel, click the **M2M** tab in the menu bar, and then the **Load GeoDict result file (.gdr)** icon as described above in page 3.

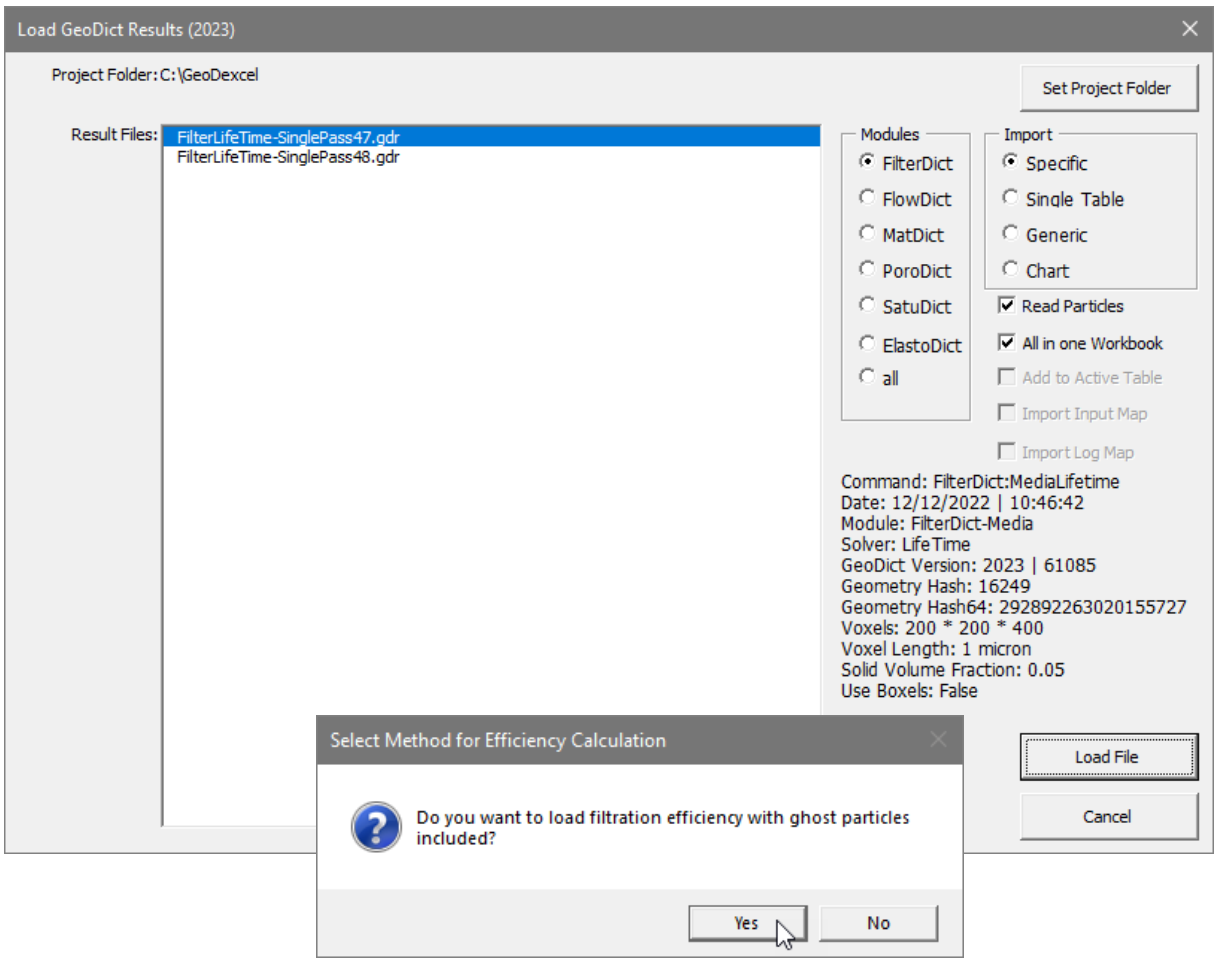
In the opening dialog, click **Set Project Folder** (top right) and navigate to the result folder. Make sure **Specific** is checked as **Import** type and FilterDict is checked in **Modules**.

Check **Read Particles** to import also the particle information from the simulation, which is contained in the result file. Failure to do so excludes essential data needed for several automatically generated plots. See page 12.

All in one Workbook is checked by default, if two or more GDR files are selected. They are loaded into the same workbook and an automated comparison can proceed.

Highlight the file to load (here FilterLifeTime-SinglePass47.gdr) and click **Load File**.

The user is asked if the ghost particles should be included when loading the filtration efficiency results:



If the user decides to load efficiency results including ghost particles, all loaded efficiency results are computed with ghost particles.

Total Filtration Efficiency by Count (ghost particles included)	Total Filtration Efficiency by Weight (ghost particles included)	Deposited Dust	Undefined Particles	Particle Volume Added	Particle Volume Lost	0.67 micron	0.72 micron	0.771 micron	0.846 micron
27.13 %	84.53 %	1.0626 g/m^2	0	15917.6 micron^3	0.76 %	11.27 %	14.10 %	15.85 %	20.00 %
30.46 %	85.73 %	0.8407 g/m^2	0	12500.9 micron^3	1.54 %	17.71 %	15.57 %	19.47 %	19.91 %
32.26 %	86.51 %	0.6606 g/m^2	0	9891.9 micron^3	0.85 %	18.34 %	18.42 %	20.15 %	20.56 %

If the user decides to load efficiency results without ghost particles, all loaded efficiency results are computed without ghost particles.

Total Filtration Efficiency by Count	Total Filtration Efficiency by Weight	Deposited Dust	Undefined Particles	Particle Volume Added	Particle Volume Lost	0.67 micron	0.72 micron	0.771 micron	0.846 micron
27.26 %	87.16 %	1.0626 g/m^2	0	15917.6 micron^3	0.76 %	11.27 %	14.10 %	15.85 %	20.00 %
30.41 %	86.16 %	0.8407 g/m^2	0	12500.9 micron^3	1.54 %	17.71 %	15.57 %	19.47 %	19.91 %
31.81 %	83.02 %	0.6606 g/m^2	0	9891.9 micron^3	0.85 %	18.34 %	18.42 %	20.15 %	20.56 %

The differences can be seen for the total filtration efficiencies. For the fractional efficiencies, the ghost particles are more important for particles with larger diameters which have a small count probability. More information on ghost particles can be found in the FilterDict handbook of the GeoDict User Guide.

A window informs the user that the file is loaded and gives information on the file, such as location of the result files, number of batches, number of time steps, and particle volume loss.

After clicking **OK**, the file opens in an Excel workbook.

The filtration simulation results shown here as an example, were obtained for the filtration of 30 batches with 36 particle sizes. To improve clarification, cells in the spreadsheet have been shaded in red, blue, dark green, yellow, orange, grey, violet, dark grey, cyan, and green.

After the information from the result file header, the next cells in the spreadsheet contain the description of the structure model and the process settings.

	A	B	C	D	E	F	G
1	Module	FilterDict-Media					
2	Solver	LifeTime					
3	Version	2023 | 61085					
4	File	C:\GeoDexcel\FilterLifeTime-SinglePass47.gdr					
5	Date of Run	12/12/2022 | 10:46:42					
6	User	streit					
7	AddIn	GeoDexcel 2023 : 2022-12-21 17:27:24					
10	Legend	FilterLifeTime-SinglePass47					
11							
12	**Geometry:**						
13	Hash	16249					
14	Hash64	292892263020155727					
15	File Name	Structure.gdt					
16	NX	200					
17	NY	200					
18	NZ	400					
19	Use Boxels	false					
20	Voxel Length	0.000001 m					
21	Solid Volume Fraction	0.05					
22	Macro Parameter:						
23	ExpertSettings						
24		FlowSolver					
25			EJ				
26			SimpleFFT				
27			LIR				
28	StructureDescription	FilterLifeTime-SinglePass47					
29	StructureFile	Structure.gdt					
31	Direction	Flowdirection				Batches:	30
32	X	0				Total Lost Volume:	1.49 %
33	Y	0				Particle Types:	36
34	Z	1				Layers in Flow direction:	400

Next is the general batch table, containing the data on the total filtration efficiency, the deposited dust, the added particle volume, the volume lost, and the fractional filtration efficiency for each particle size.

	A	B	C	D	E	F	G	H	I	J	K	L
36	Batch	Time	Legend	Total Filtration Efficiency by Count	Total Filtration Efficiency by Weight	Deposited Dust	Undefined Particles	Particle Volume Added	Particle Volume Lost	0.67 micron	0.72 micron	0.771 micron
37	1	5 s	FilterLifeTime-SinglePass47 (Batch 1)	27.26 %	87.16 %	1.0626 g/m^2	0	15917.6 micron^3	0.76 %	11.27 %	14.10 %	15.85 %
38	2	15 s	FilterLifeTime-SinglePass47 (Batch 2)	30.41 %	86.16 %	0.8407 g/m^2	0	12500.9 micron^3	1.54 %	17.71 %	15.57 %	19.47 %
39	3	25 s	FilterLifeTime-SinglePass47 (Batch 3)	31.81 %	83.02 %	0.6606 g/m^2	0	9891.9 micron^3	0.85 %	18.34 %	18.42 %	20.15 %
40	4	35 s	FilterLifeTime-SinglePass47 (Batch 4)	34.00 %	86.17 %	0.8025 g/m^2	0	11975.9 micron^3	1.14 %	20.18 %	19.48 %	22.74 %
41	5	45 s	FilterLifeTime-SinglePass47 (Batch 5)	36.54 %	86.48 %	0.7357 g/m^2	0	11009.5 micron^3	0.90 %	22.24 %	22.28 %	20.99 %

In the time step table, the values of pressure drop and the deposited dust between time steps are listed.

	A	B	C	D
68	TimeStep	Time	Pressure Drop	Total Deposited Dust
69	0	0 s	9.545 Pa	0.000 g/m^2
70	1	10 s	9.874 Pa	1.0626 g/m^2
71	2	20 s	10.254 Pa	1.9033 g/m^2
72	3	30 s	10.547 Pa	2.5639 g/m^2
73	4	40 s	10.874 Pa	3.3664 g/m^2
74	5	50 s	11.343 Pa	4.1021 g/m^2
75	6	60 s	11.788 Pa	4.8004 g/m^2

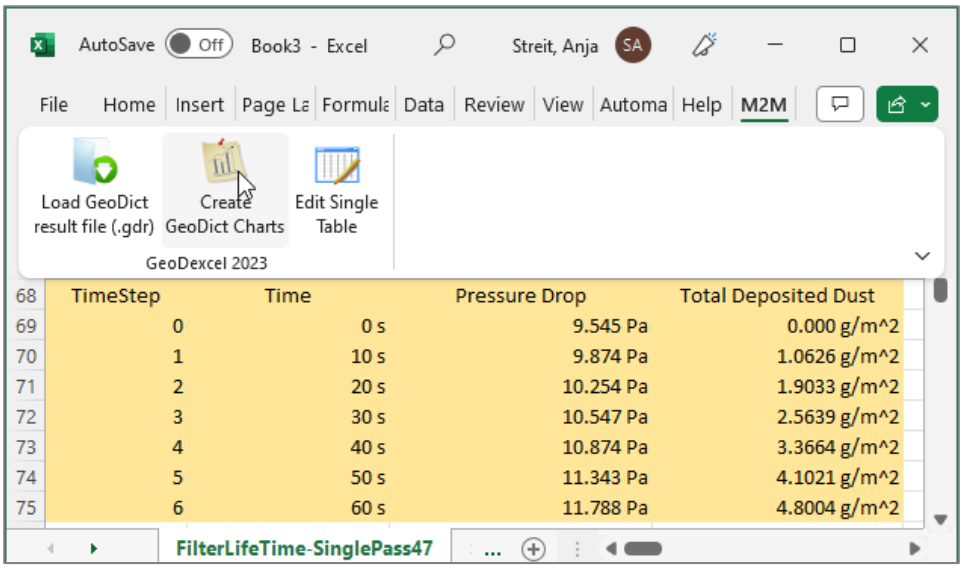
Read Particles was checked when loading the files, and, thus, for each batch (Batch 1, Batch 2, etc.) the number of particles (cumulative) and the total number of particles per batch, the filtered and non-filtered particles, and the corresponding particle volumes are available. Also given are these data for each of the 36 particle sizes.

A	B	C	D	E	F	J	K	L
Batch 2					Particle sizes:	0.67 micron	0.72 micron	0.771 micron
Particles from inflow (cumulative):		12677	2.04764E-12			1242	1194	1073
Deposited particles (cumulative):		6265	2.04042E-12			180	177	189
Outflow particles (cumulative):		6412	7.22177E-15			1062	1017	884
Particles from inflow (batch):				6354	1.02384E-12	621	591	524
Deposited particles (batch):				3215	1.02035E-12	110	92	102
Time-out particles (batch):				0	0	0	0	0
Outflow particles (batch):				3139	3.48314E-15	511	499	422

The data sheet then displays the filtration results per Layer and per particle size and layer for that batch.

Batch 2						Particle sizes:	0.67 micron	0.72 micron	0.771 micron
Layer	Position	Particles (cumulative)	Particlevolume (cumulative)	Particles (batch)	Particlevolume (batch)				
1	1.0 micron	0	0.00E+00 m^3	0	0.00E+00 m^3		0	0	0
2	2.0 micron	0	0.00E+00 m^3	0	0.00E+00 m^3		0	0	0
3	3.0 micron	0	0.00E+00 m^3	0	0.00E+00 m^3		0	0	0
4	4.0 micron	0	0.00E+00 m^3	0	0.00E+00 m^3		0	0	0
5	5.0 micron	0	0.00E+00 m^3	0	0.00E+00 m^3		0	0	0
6	6.0 micron	0	0.00E+00 m^3	0	0.00E+00 m^3		0	0	0

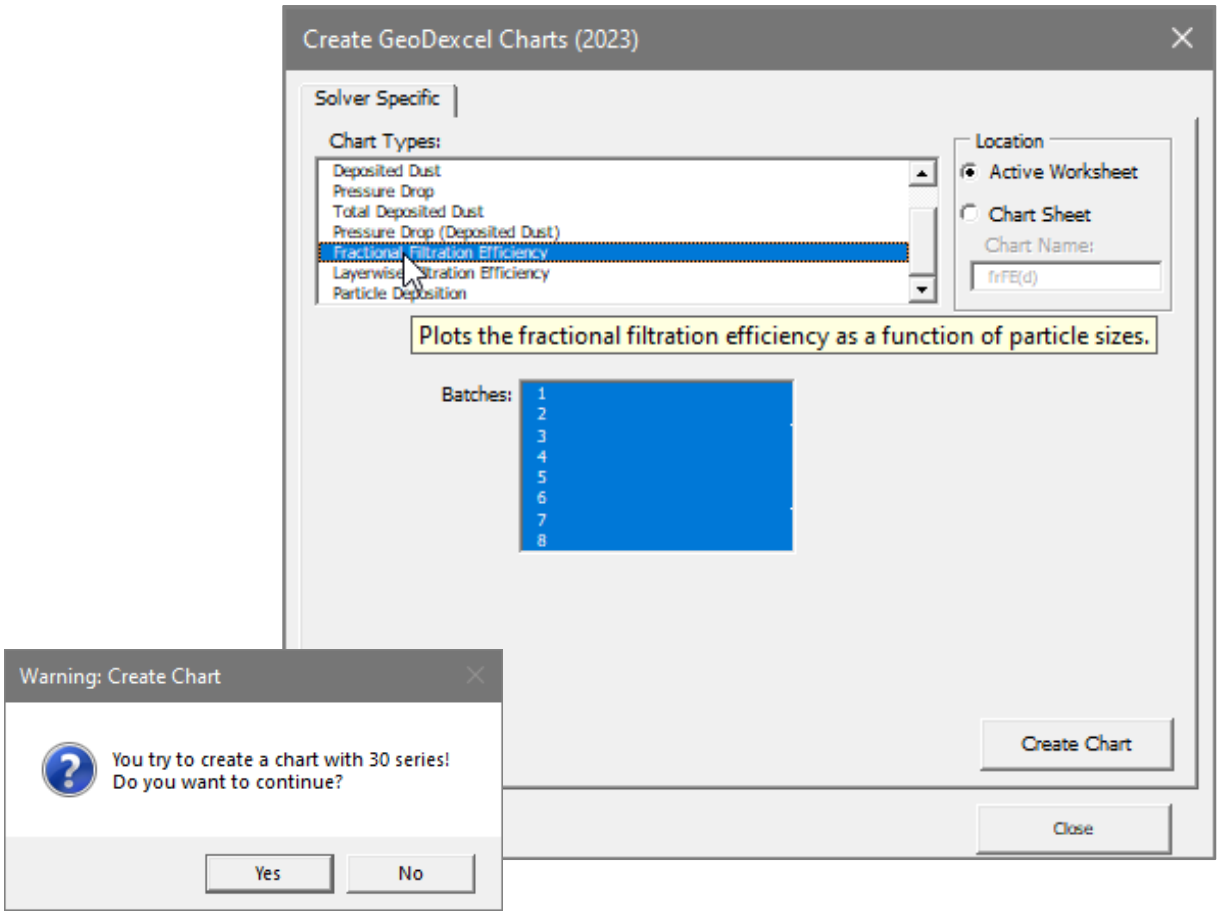
Clicking **Create GeoDict Charts** in the toolbar makes GeoDexcel automatically select ranges of data from the spreadsheets to create a variety of charts.



For FilterDict, several different **Chart Types** are available. A tool tip appears when selecting a **Chart Type** name and describes the data to be plotted.

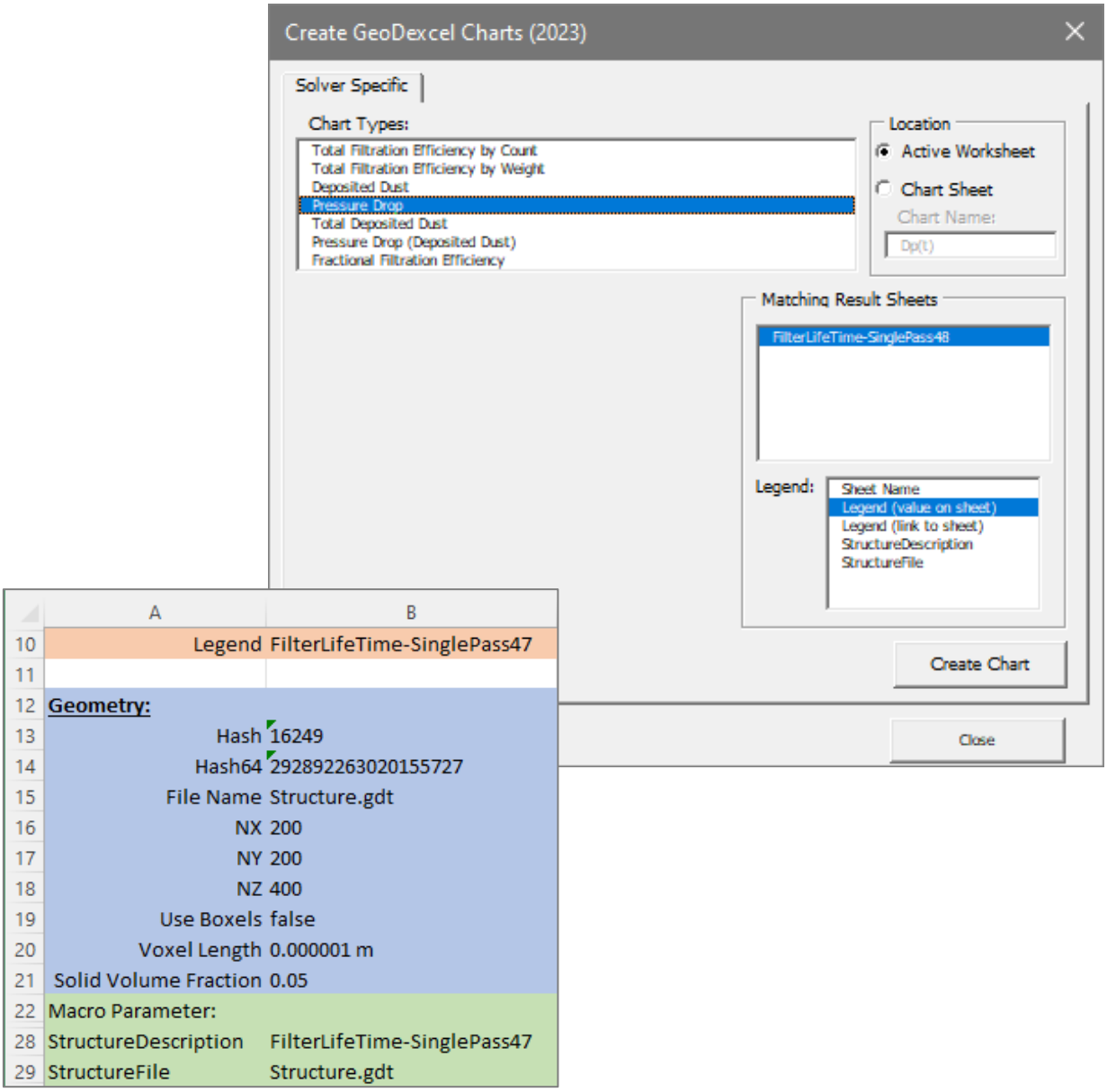
For the last three types (**Fractional Filtration Efficiency**, **Layerwise Filtration Efficiency**, and **Particle Deposition**), the user can choose the batches or particle types of interest.

A warning pops up if the data for plotting in the chart is too large (e.g. too many batches/series). This can happen when trying to plot the **Fractional Filtration Efficiency** for e.g. 30 batches. It is recommended to reduce the selection.



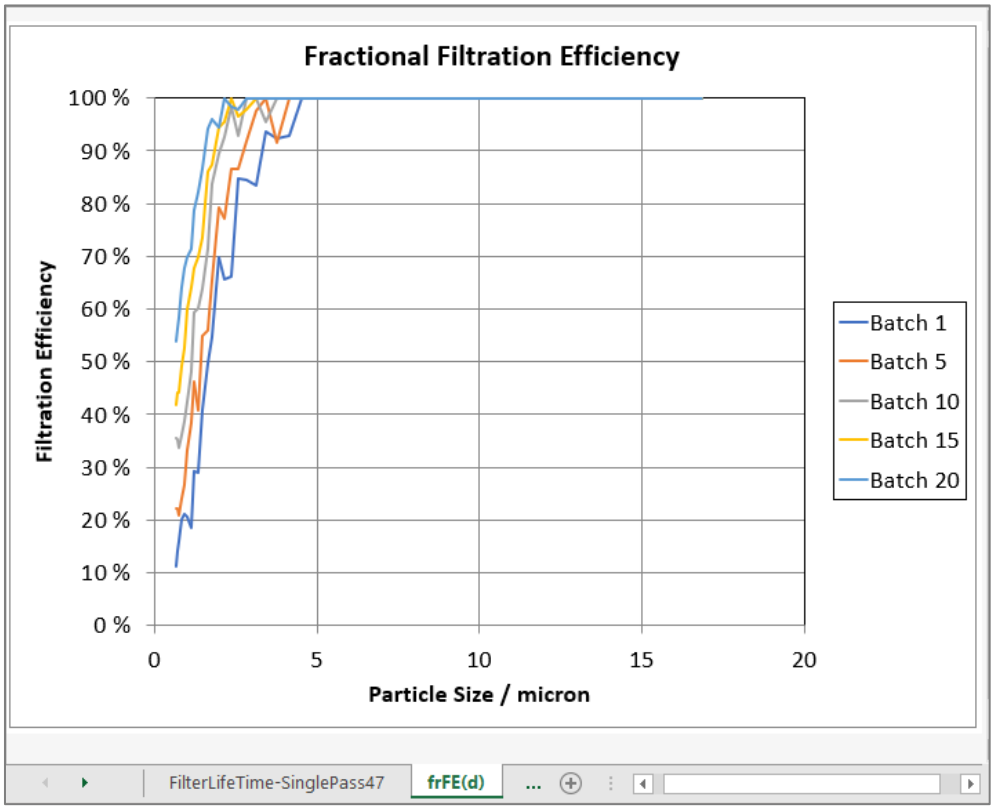
On the top right side of the dialog, in the **Location** panel, decide if the chart should be plotted in the **Active Worksheet** or in an extra **Chart Sheet** with the entered **Chart Name**. In this case, an extra sheet with the name frFE(d) is created in the same workbook. If the choice is **Active Worksheet**, the chart is created on top of the spreadsheet, superimposing the data and, when there is more than one chart, overlaying each other. However, charts can be moved and arranged manually.

If more than one GeoDict result file was loaded into the workbook, there is the possibility to select the result sheets that should be plotted together with the current ones in the **Matching Result Sheets**.



In the **Legend** box, choose the legend entries for the plot. For example, when choosing **Legend (link to sheet)**, the plot legend can be changed by modifying the cell legend (here B10) even after the chart has been created.

When clicking **Create Chart** the corresponding plot is created and can be modified with the Excel chart tools.



The **Create GeoDexcel Charts** dialog box remains open after creating the chart. This way, the user can choose to create other charts right away and compare them.

GENERIC IMPORT

The **Generic** import reads the complete result map and, if chosen in **Load GeoDict result file (.gdr)** after starting GeoDexcel, the input and the log map of a single GeoDict result file in one Excel sheet. Here, all parameters / result values are accessible for the user's own analysis. **Generic** import is available for all modules.

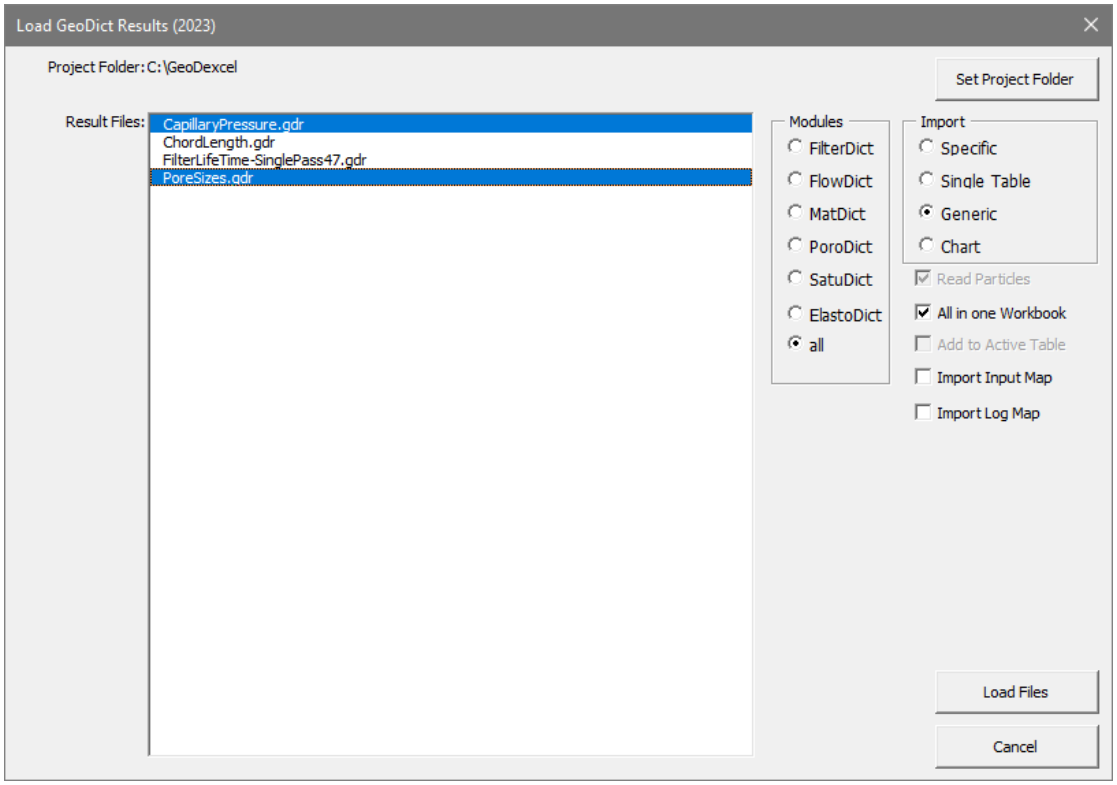
The **Generic** import can be also started directly from GeoDict by clicking **Export → Excel (generic)** in the **Result Viewer** of the GDR file. In this case, input map and log map are always imported. The **Generic** import can be started as well through the macro command `LoadGDRToExcel` with `ExcelMode` set to `'Generic'` . In this case, set the key `LoadInputMap` to `True`, for additional import of input and log map.

Since GeoDict 2022, additionally a python-based version of the generic export is available in the **Result Viewer**. Click **Export → Excel (generic) - Python** to use this feature. It allows to export results in Excel format, even if no Excel installation is available on the machine, e.g. on Linux systems. The excel file created is the same as using the Excel based **Export → Excel (generic)**.

Start GeoDexcel, click the **M2M** tab in the menu bar, and then, the **Load GeoDict result file (.gdr)** icon as described above in page 3. Multiple files can be selected by clicking the name of the files while holding down the CTRL or the SHIFT key. Check **All in one Workbook**, to load two or more GDR files into the same workbook and an automated comparison can proceed. Uncheck it to load the files into several workbooks.

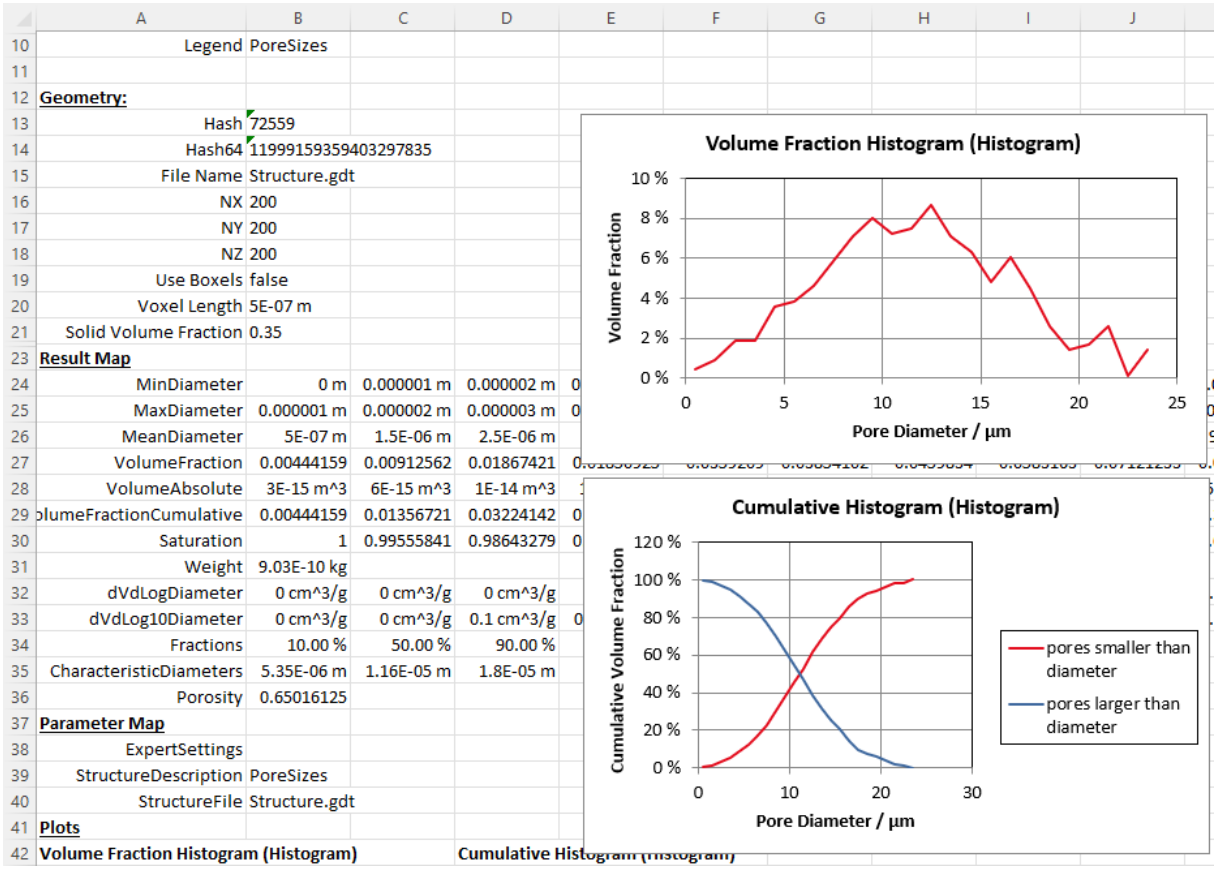
When checking **Import Input Map,** the input map contained in the result file(s) is loaded in addition to the result map.

Select **Import Log Map** to load additionally the information of the log map, i.e. system information and the runtime of the computation. Since GeoDict 2022, input map and log map are loaded at the end of the Excel file.



Of course, results in the GeoDict files can also be plotted after loading them with **Generic** import. The user can manually select the data to be taken for the charts.

If a result file is opened with the **Generic** import, the plots already available in the **Result Viewer** of the result file (through **Results** tab → **Plots** subtab) are created automatically in the GeoDexcel spreadsheet.

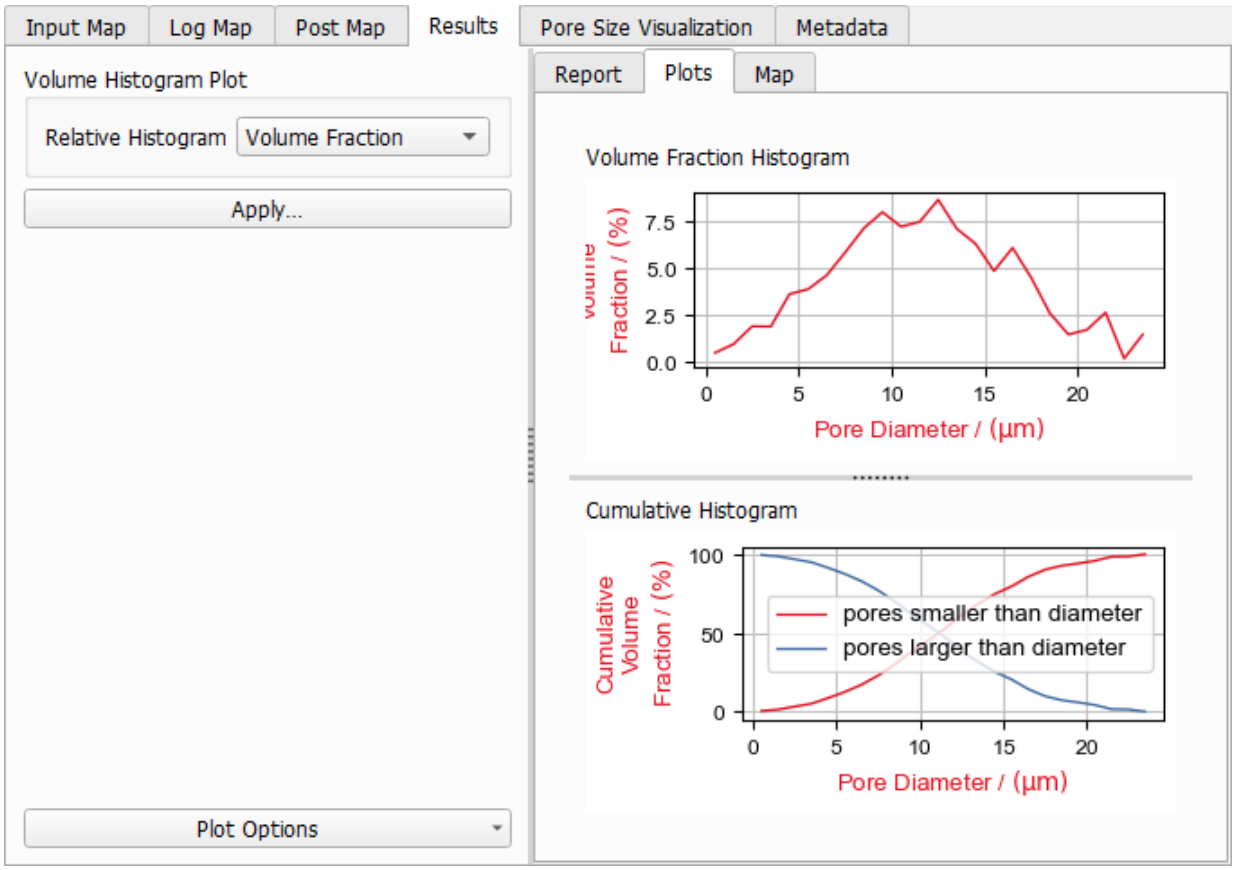


	A	B	C	D
10	Legend	PoreSizes		
11				
12	**Geometry:**			
13	Hash	72559		
14	Hash64	11999159359403297835		
15	File Name	Structure.gdt		
16	NX	200		
17	NY	200		
18	NZ	200		
19	Use Boxels	false		
20	Voxel Length	5E-07 m		
21	Solid Volume Fraction	0.35		
23	**Result Map**			
24	MinDiameter	0 m	0.000001 m	0.000002 m
25	MaxDiameter	0.000001 m	0.000002 m	0.000003 m
26	MeanDiameter	5E-07 m	1.5E-06 m	2.5E-06 m
27	VolumeFraction	0.00444159	0.00912562	0.01867421
28	VolumeAbsolute	3E-15 m^3	6E-15 m^3	1E-14 m^3
29	olumeFractionCumulative	0.00444159	0.01356721	0.03224142
30	Saturation	1	0.99555841	0.98643279
31	Weight	9.03E-10 kg		
32	dVdLogDiameter	0 cm^3/g	0 cm^3/g	0 cm^3/g
33	dVdLog10Diameter	0 cm^3/g	0 cm^3/g	0.1 cm^3/g
34	Fractions	10.00 %	50.00 %	90.00 %
35	CharacteristicDiameters	5.35E-06 m	1.16E-05 m	1.8E-05 m
36	Porosity	0.65016125		
37	**Parameter Map**			
38	ExpertSettings			
39	StructureDescription	PoreSizes		
40	StructureFile	Structure.gdt		
41	**Plots**			
42	**Volume Fraction Histogram (Histogram)**			**Cumulative Histogram (Histogram)**

Like it is for the **Chart** import (see below), modifications of the plots made in the **Result Viewer** are transferred through the **Generic** Import to the spreadsheet the next time the result file is opened in GeoDexcel.

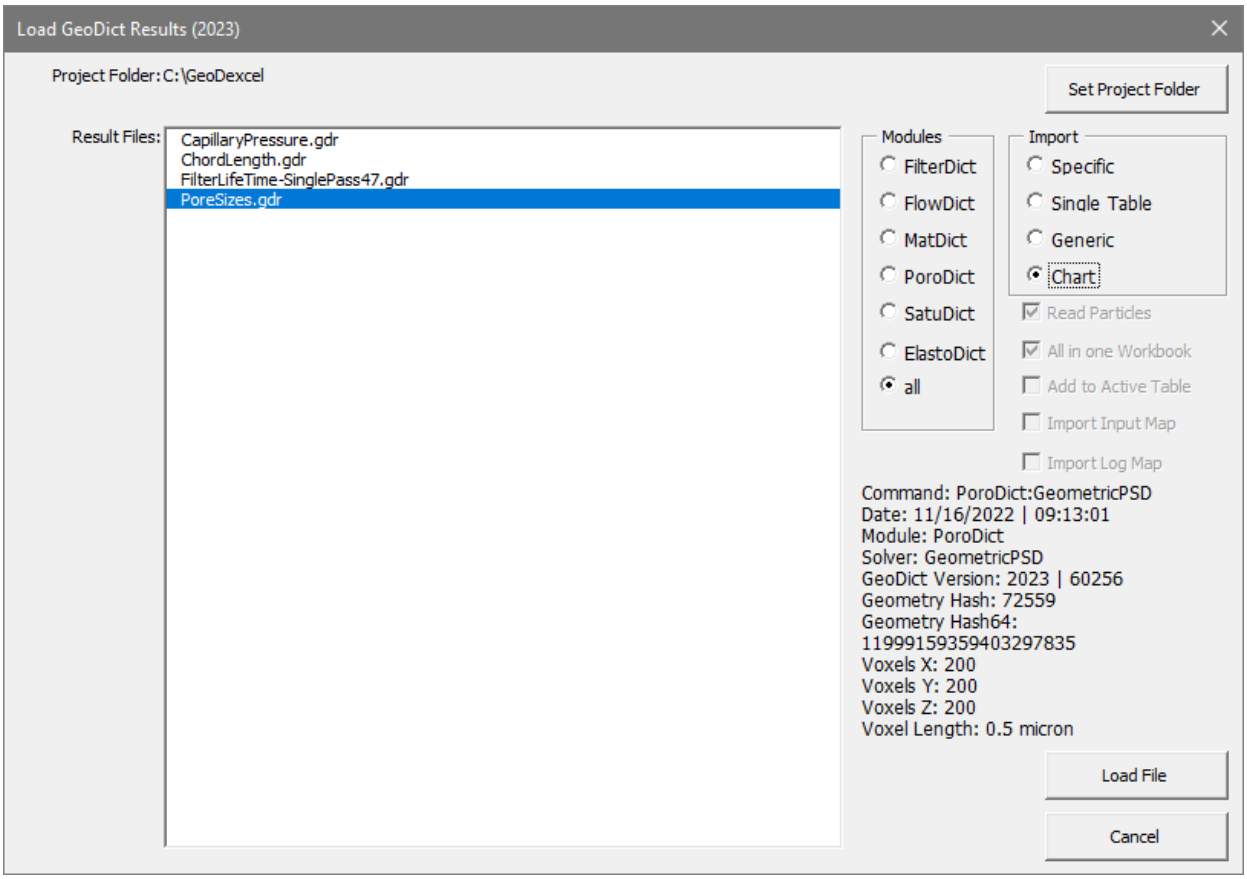
CHART IMPORT

The **Chart** import imports the data of plots contained in the GeoDict result file. These plots displayed under the **Results** tab → **Plots** subtab in the **Result Viewer** when the result file is opened from within GeoDict.



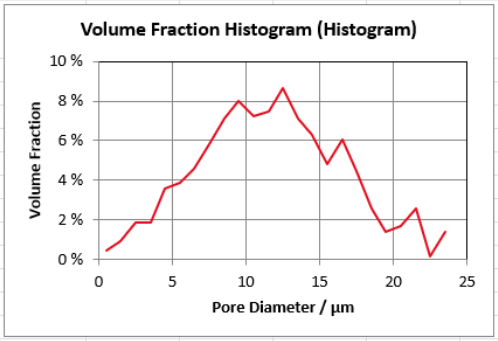
When plots are modified in the Result Viewer and the **Apply** button is clicked to save these changes in the result file, these modifications are also transferred to the Excel spreadsheet the next time the file is opened in GeoDexcel.

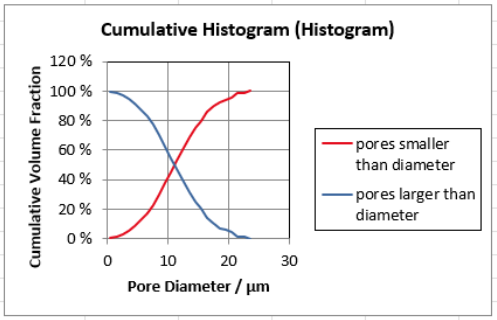
Start GeoDexcel, click the **M2M** tab in the menu bar, and then, the **Load GeoDict result file (.gdr)** icon as described above in page 3. Select **Chart** as Import type, select one or several files, and click **Load File(s)**.



Only the charts and the data to create them are imported to the Excel spreadsheet.

Volume Fraction Histogram (Histogram)		Cumulative Histogram (Histogram)			
Pore Diameter	pore diameter	Pore Diameter	pores smaller than diameter	Pore Diameter	pores larger than diameter
0.5 µm	0.44 %	0.5 µm	0.44 %	0.5 µm	99.56 %
1.5 µm	0.91 %	1.5 µm	1.36 %	1.5 µm	98.64 %
2.5 µm	1.87 %	2.5 µm	3.22 %	2.5 µm	96.78 %
3.5 µm	1.85 %	3.5 µm	5.08 %	3.5 µm	94.92 %
4.5 µm	3.59 %	4.5 µm	8.67 %	4.5 µm	91.33 %
5.5 µm	3.85 %	5.5 µm	12.52 %	5.5 µm	87.48 %
6.5 µm	4.60 %	6.5 µm	17.12 %	6.5 µm	82.88 %
7.5 µm	5.83 %	7.5 µm	22.95 %	7.5 µm	77.05 %
8.5 µm	7.12 %	8.5 µm	30.07 %	8.5 µm	69.93 %
9.5 µm	7.99 %	9.5 µm	38.06 %	9.5 µm	61.94 %
10.5 µm	7.21 %	10.5 µm	45.27 %	10.5 µm	54.73 %
11.5 µm	7.46 %	11.5 µm	52.73 %	11.5 µm	47.27 %
12.5 µm	8.65 %	12.5 µm	61.39 %	12.5 µm	38.61 %
13.5 µm	7.09 %	13.5 µm	68.48 %	13.5 µm	31.52 %
14.5 µm	6.29 %	14.5 µm	74.77 %	14.5 µm	25.23 %
15.5 µm	4.83 %	15.5 µm	79.61 %	15.5 µm	20.39 %
16.5 µm	6.07 %	16.5 µm	85.68 %	16.5 µm	14.32 %
17.5 µm	4.47 %	17.5 µm	90.15 %	17.5 µm	9.85 %
18.5 µm	2.57 %	18.5 µm	92.72 %	18.5 µm	7.28 %
19.5 µm	1.42 %	19.5 µm	94.15 %	19.5 µm	5.85 %
20.5 µm	1.68 %	20.5 µm	95.83 %	20.5 µm	4.17 %
21.5 µm	2.61 %	21.5 µm	98.43 %	21.5 µm	1.57 %
22.5 µm	0.14 %	22.5 µm	98.57 %	22.5 µm	1.43 %
23.5 µm	1.43 %	23.5 µm	100.00 %	23.5 µm	0.00 %





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