

The Agilent WinGPC Column Database

Introduction

The Agilent WinGPC Column Database is one of the functionalities featured in Agilent WinGPC 1.0. The database collects and summarizes information on every column from available WinGPC projects, enabling users to retrace the entire column history at any time. Stored information includes which eluents were used, how many injections were run, which samples and substances were analyzed, and details of system tests with their plate count. This technical overview presents the column database and all its features.

Experimental

To start using the column database, it must be initialized or indexed. Usually, this step is performed during WinGPC installation. WinGPC analyzes all projects already present and assembles the data in the column database. The search includes all local and connected network drives and so may take a long time. For this reason, an overnight initialization is recommended. Indexing only needs to be performed once; all future entries are generated and added automatically. The column database is essentially ordered by the column serial number and can only work correctly if a distinct serial number is assigned to each column.

Click the information icon beside the columns in the WinGPC Method window to access the column database. In the Column Information window, all the information that could be found in the database for the current column in the WinGPC method is displayed (Figure 1). The current system test (= system suitability test, SST) is shown in the upper panel with information such as the plate count and pressure at injection time. The complete history of system tests can be toggled by clicking **Show All SST**. The lower panel presents a summary of column use, including the number of injections, overall volume of eluent flushed through the column, and number of eluents.

The screenshot shows the Agilent WinGPC software interface. The main window displays method parameters for 'Vial 96: Poly(styrene) ps2'. The 'Column Information' window is open, showing details for the selected column: PSS EasyValid organic Version 03a, SN: 230420H02, 300 x 8. The window is divided into two main sections: System Tests and Usage Summary.

System Tests:

Test	Date	Pressure [bar]	Plate count [1/m]	Asymmetry	Resolution
First	2023-06-09 16:46:14	30.692	12,523	0.571	66.697
Current	2023-06-09 16:46:14	30.692	12,523	0.571	66.697

Usage summary (only measurements are counted):

Injections	Volume [ml]	Column Wear	Eluents	Substances	Systems	Operators
22	368	0	1	1	1	1

Figure 1. Column Information window

Click **Config** to access (re)indexing. Here, a complete search can be performed on all drives (e.g., if local indexing was performed first and the network was connected to later), or WinGPC can check known projects again (Figure 2). Specific network drives and paths can be selected, thus constraining the scope of indexing.

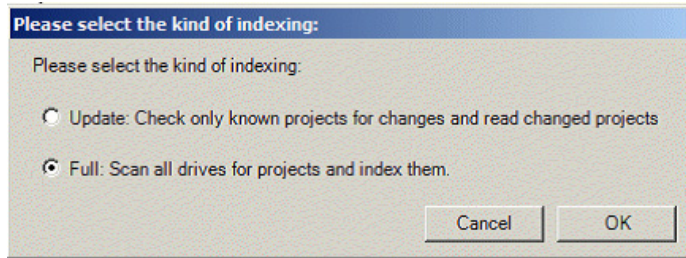


Figure 2. Indexing window, offering the choice between running an update or a full scan of all drives

Column Details can be reached by clicking **Detailed View** (Figure 3). A list of all columns found in the database is shown on the left, sorted by serial numbers. Click the relevant column header and sort by parameters such as column name. On the right, eluents and injected samples are listed for the current column. Combination refers to columns that have been run in a column set together with the current column.

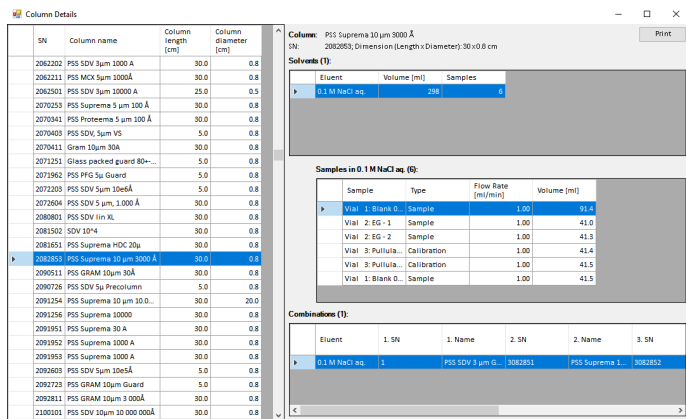


Figure 3. Column Details window

Conclusion

The Agilent WinGPC Column Database provides all available information about a specific column and enables review of the entire column history to assess current performance. The database is a completely standalone, background process and cultivates itself once it has been initialized. For this reason, it is important to assign meaningful serial numbers to all columns and to use all WinGPC method and sample parameters, including specific substance characteristics listed in the sample editor.