



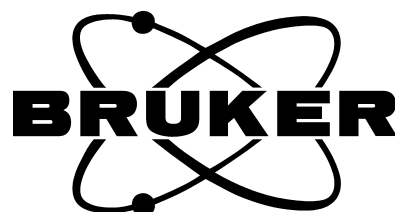
OPUS

Spectroscopy Software

Version 6

User Manual

DATABASE



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This manual is the original documentation for the OPUS spectroscopic software.

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Introduction

OPUS DATABASE allows to get access to spectra files and spectra parameters stored on a Microsoft SQL (Structured Query Language) database which is located on a network server. The software uses the standard SQL (computer language to

- retrieve data from the database
- execute queries against the database
- update records in the database

The database contains tables which are identified by an appropriate name. Each table includes different data records.

	Spectrum_Path	Spectrum_Name	Data_Block	Method_ID	Da
1	D:\Projekte\OPUS\Debug\OpusLab\	44243_001.0	AB/Report	1	2001
2	D:\Projekte\OPUS\Debug\OpusLab\	44243_002.0	AB/Report	1	2001
3	D:\Projekte\OPUS\Debug\OpusLab\	44243_003.0	AB/Report	1	2001

Figure 1: Example of table records

Different criteria can be used to query against a database and have a result set accordingly. The criteria comprise time, text and number (real, integer) items.

User Rights

OPUS DATABASE distinguishes between two types of users:

- 1) **Administrator**: users defined as *Administrator* or *LAB Manager* in OPUS have access to the entire program functionality (creating database tables, general settings concerning measurement and setup functions).
- 2) **Operator**: users defined as *Operator* in OPUS can load database spectra files, evaluate these files and execute queries against the database.

The user rights are defined by the *User settings* function in the OPUS *Setup* menu. The *Administrator* has to ensure that the *Operator* has only access to special functions within the OPUS workspace assigned to the *Operator*.

1

Registering Database

To be able to use OPUS DATABASE you first have to register the database on a particular network server by means of the Microsoft Windows operating system. This server has first to be set up by the SQL server database administrator.

The registering procedure has to be separately performed for each computer participating in OPUS DATABASE.

Use the Windows *Start* menu and click on the *Settings* command.



Figure 1: Windows start menu

Select *System Control and Administration*. Click on the *Data Source (ODBC)*¹ icon. The following dialog opens:

1. Open Database Connectivity: a standardized database interface

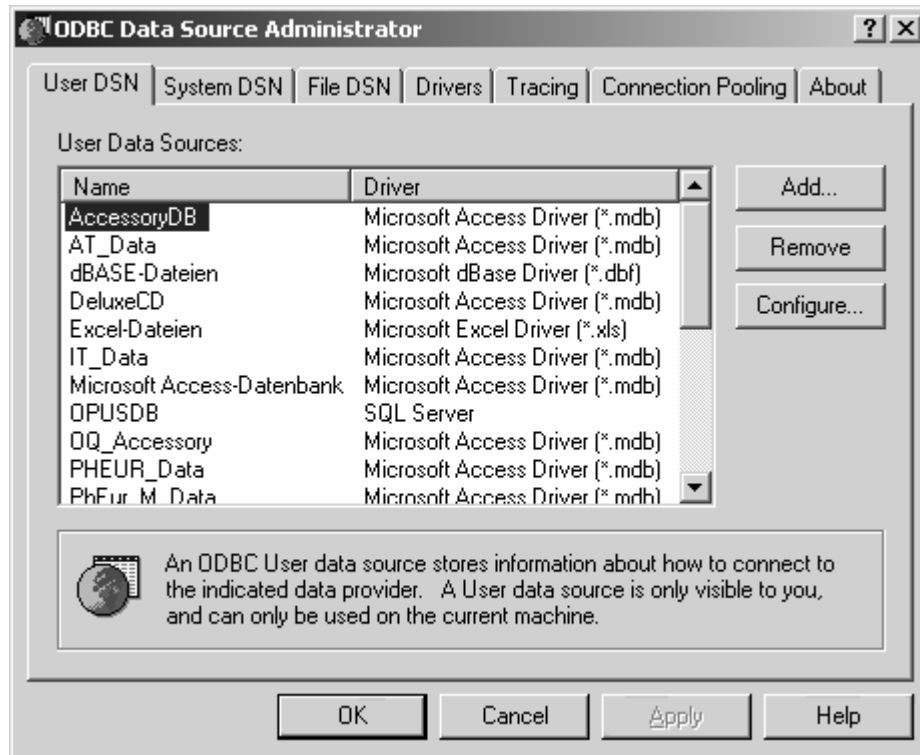


Figure 2: ODBC Data Source - User DSN tab

Click on the *Add* button.

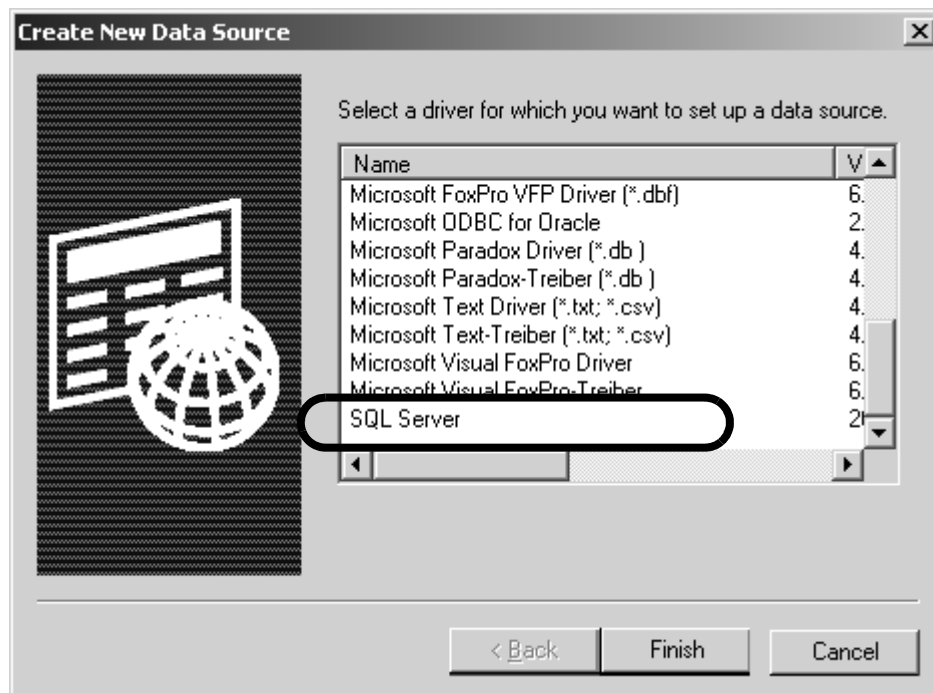


Figure 3: Create New Data Source

Scroll down to the *SQL Server* in the list box and click on the *Finish* button.

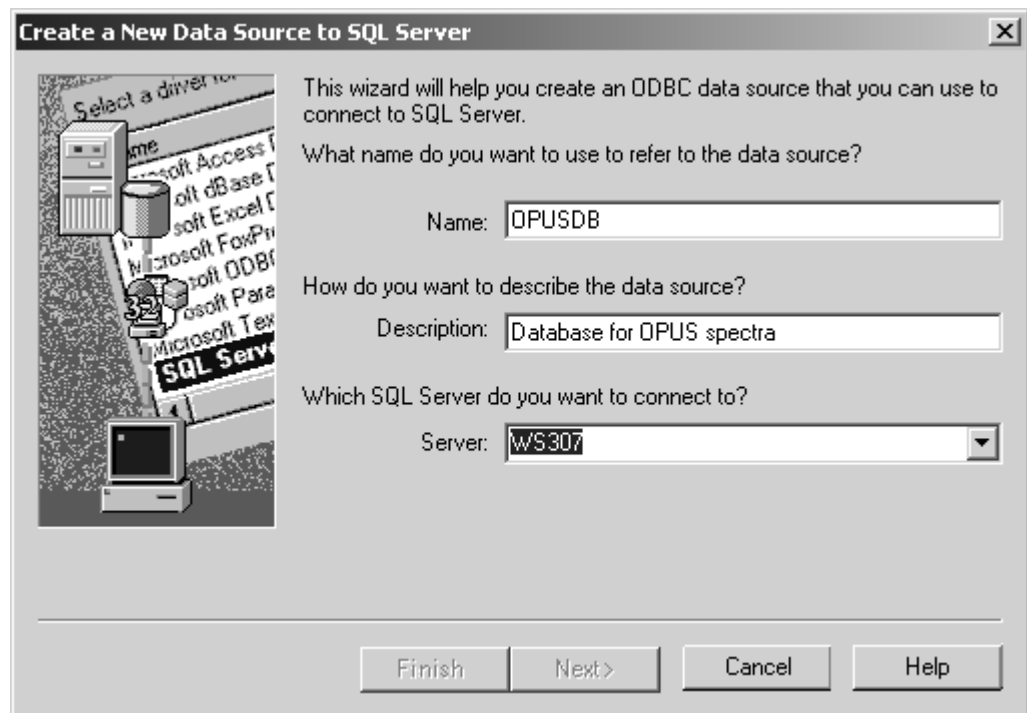


Figure 4: Data Source to SQL Server

Enter a reasonable name for the data source, which you also have to indicate later in OPUS. Optionally, you can define a short description of the data source.

Select the SQL server which the database is located on, from the drop-down list. Click on the *Next* button to continue.

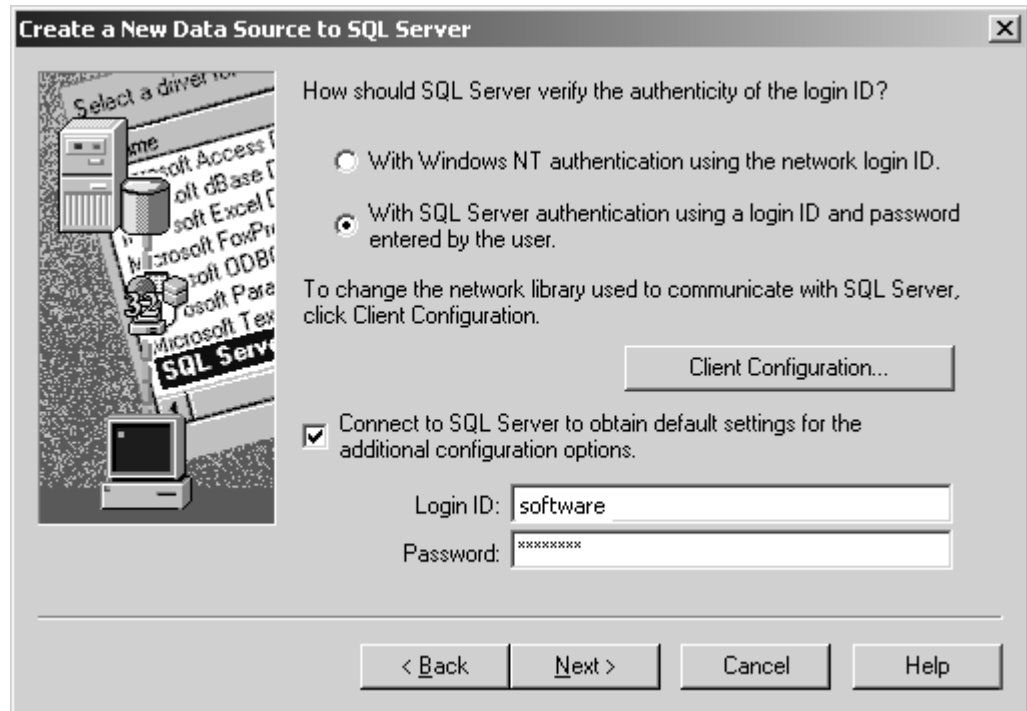
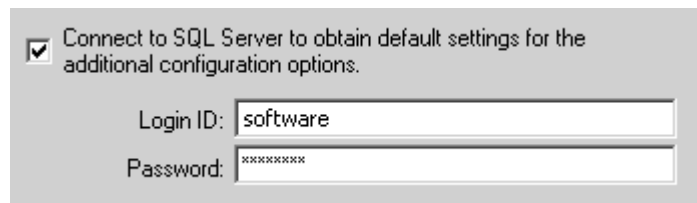


Figure 5: Database login

The SQL server database administrator has two possibilities to specify the method of authentication, i.e. the way of database login. If the administrator selects the Windows authentication, a secure connection to an SQL server running on Windows is requested, using the network login ID. In this case the password used for the Windows login is also used for the database. No separate ID can be defined.

It is recommended to activate the *With SQL Server authentication...* option button (figure 5). In this case, the database administrator first has to allocate a login ID and password for all connection requests. The *Login ID* and *Password* entry field will be enabled.



By means of this kind of authentication you can get access to the database from any computer connected to the SQL server. If you start OPUS, the *SQL Server Login* dialog is displayed and prompts you to enter the correct password.

Activate the *Connect to SQL Server...* check box, enter the login ID and password, and click on the *Next* button.

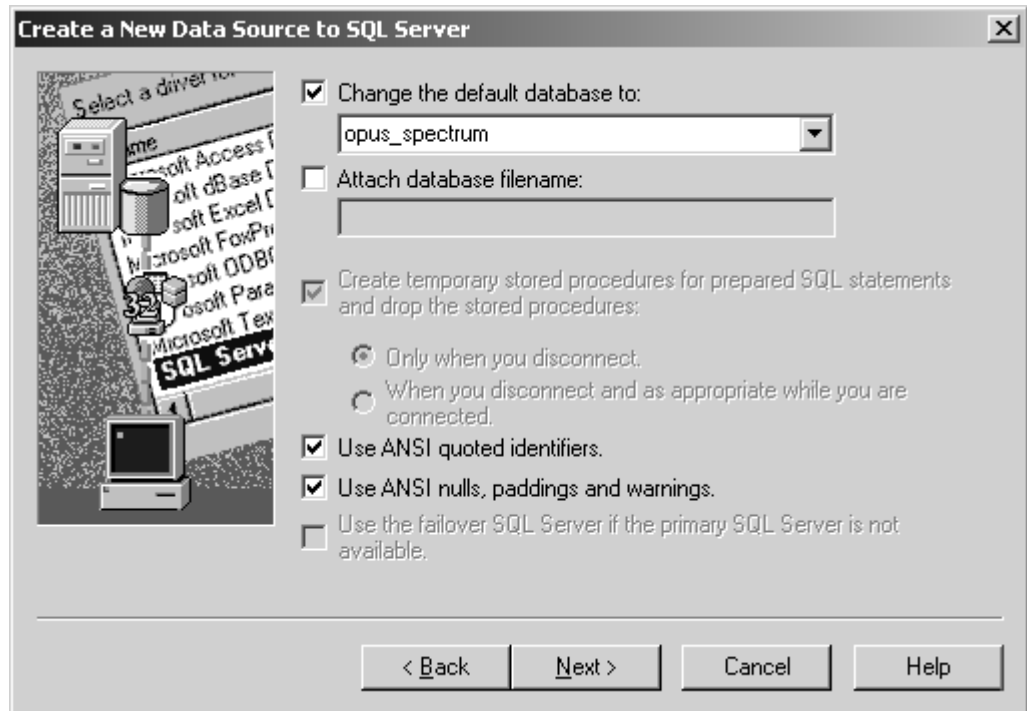


Figure 6: Defining default database

Activate the *Change the default database to* check box and select the correct default database from the drop-down list. The database applies for any connection made using this data source.

Do not change the other default settings of this dialog and click on the *Next* button.

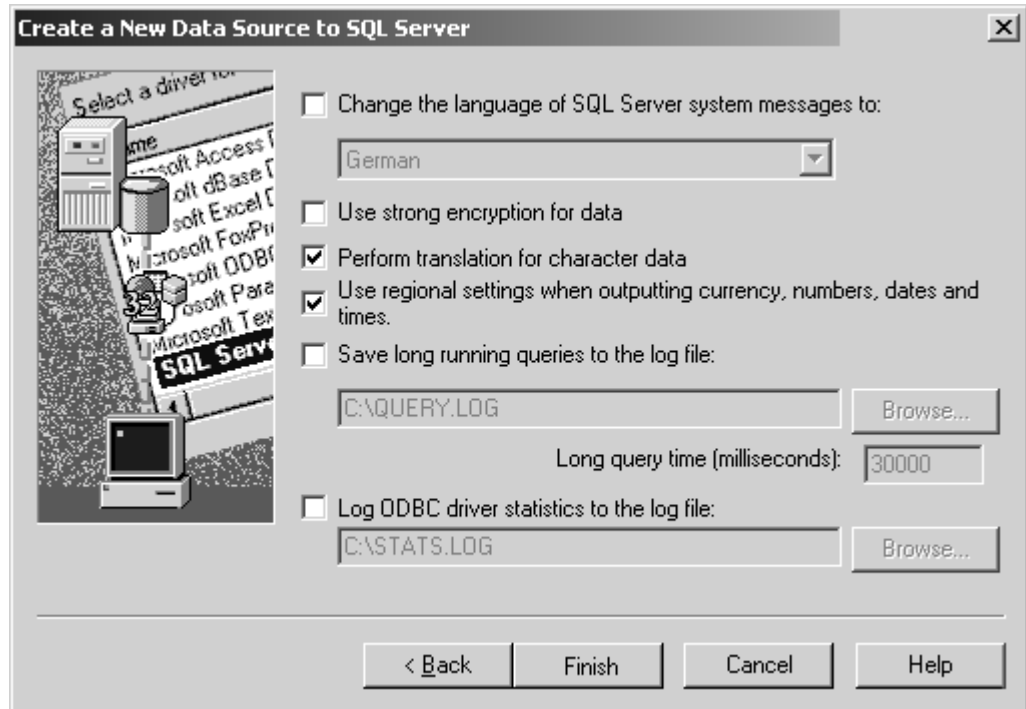


Figure 7: Defining regional settings

Select the correct language of the SQL server system and activate the *Perform translation for character data* check box. In this case the extended characters in ANSI¹ character strings are translated when sent between the client application and the server. This may be helpful if the client computer is using an ANSI code page different from the SQL server code page, to avoid misinterpreting extended characters in ANSI character strings.

Activate the *Use regional settings...* check box. In this case local settings of the client computer for formatting currency, numbers, dates, and times in character output strings are used.

If you click on the *Finish* button, the following dialog opens:

1. A particular group of character sets based on ASCII.



Figure 8: ODBC data source configuration

The dialog shows the ODBC data source to be created including all configuration elements. To see the test result click on the *Test Data Source* button.

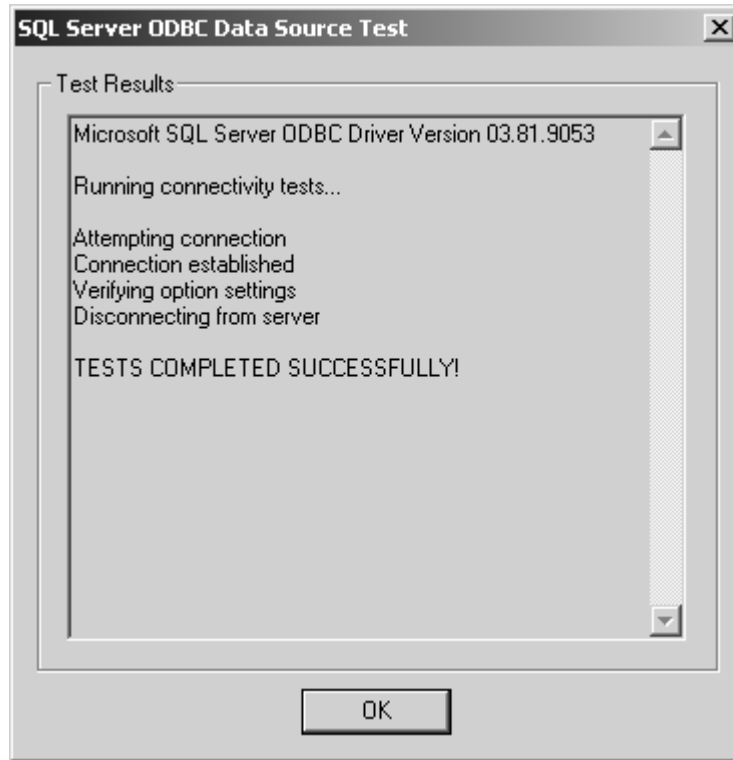


Figure 9: Data source test results

Click on the *OK* button. The first page is displayed again. Check whether the list box includes the newly registered database.

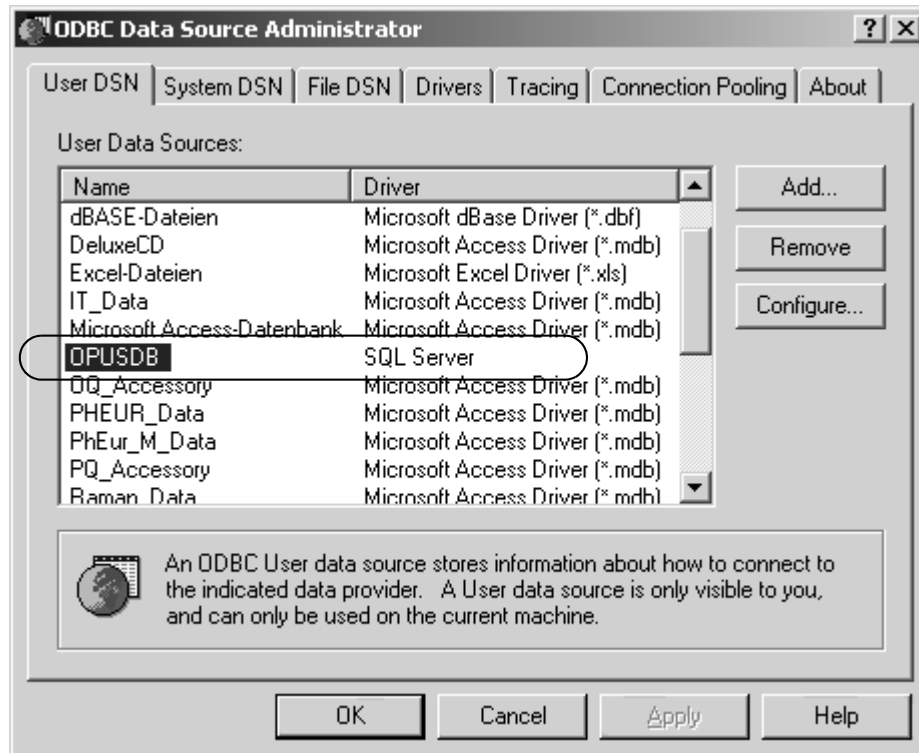


Figure 10: Newly created database

2 Connecting Database

After registering the database on the SQL server you have to connect this database to OPUS. Select the *Connect ODBC Database* command from the *OPUS Setup* menu.

Note: If the connection has been completed successfully, you first have to create the tables by clicking on the *Create Database Tables* (see below). This has to be done only once.

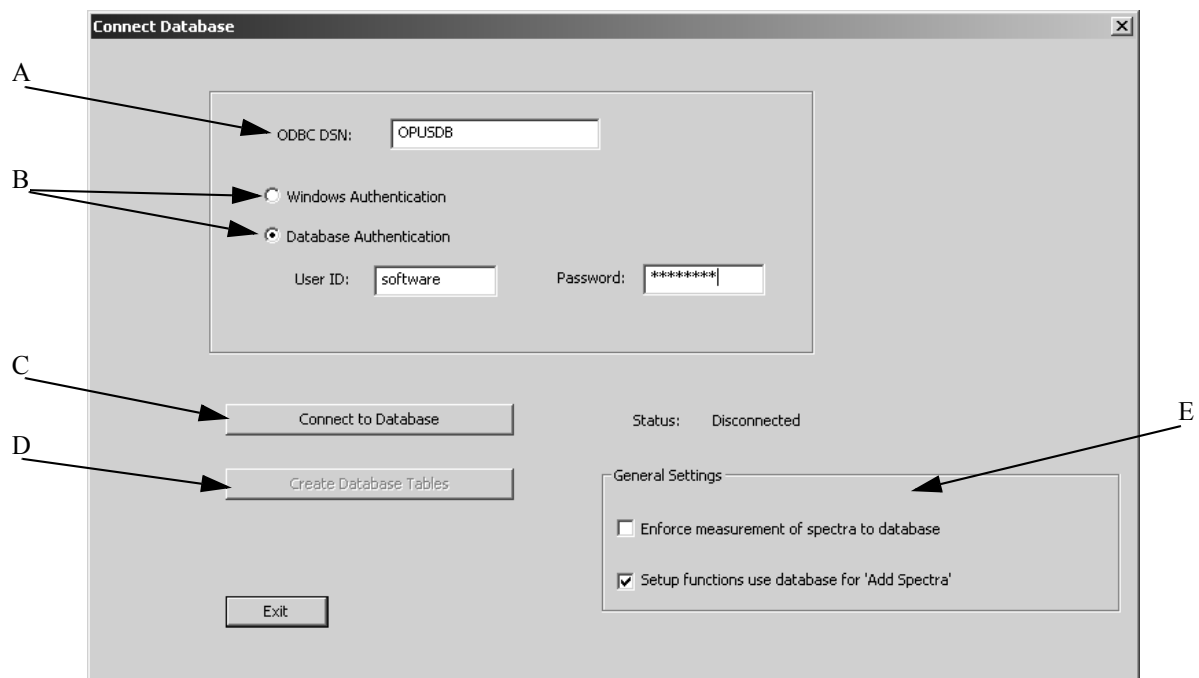
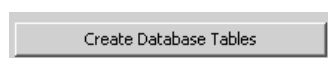


Figure 11: Connecting Database

- A) Shows the name of the database registered on the SQL server.
- B) Select the authentication method. Activate the *Database Authentication* button and enter the user ID and the password. For details on these two methods, see chapter 1.
- C) Click on this button to connect the database to OPUS. If the connection has been successfully completed, the status next to the button reads *Connected*. The button is disabled.



- D) This button is enabled as soon as the status reads *Connected*.



Click on this button to create the database tables. If the database is empty the tables will be immediately created. If the database already contains a particular table, a respective message pops up which you can skip by clicking on the *OK* button.

E) These settings are optional. If you activate the *Enforce measurement...* check box, all spectra files created during measurement will directly be stored on the database. Otherwise, the spectra files will be stored either on database or hard disk.

In case of spectra which are used to create method files, e.g. for QUANT or IDENT, you can specify that this kind of spectra are always retrieved from database. To do so, activate the *Setup functions use...* check box. If you deactivate this check box, the spectra for method files are still retrieved from hard disk.

Click on the *Exit* button and close the OPUS program.

3 OPUS Settings

The connection between the database and OPUS also requires a change in the OPUS command line. Therefore, right click on the OPUS icon of the Windows Start menu and select the *Properties* command. Enter the name of the database specified before (see figure 4 on page 5) into the *Target* entry field:

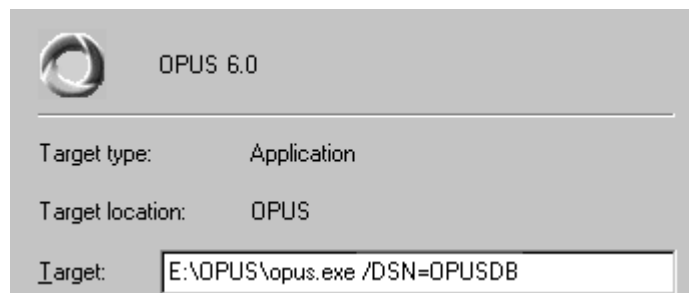


Figure 12: Command line parameters

3.1 Starting OPUS

When starting OPUS the *SQL Server Login* dialog pops up, provided the database authentication (see chapter 2) has been selected.

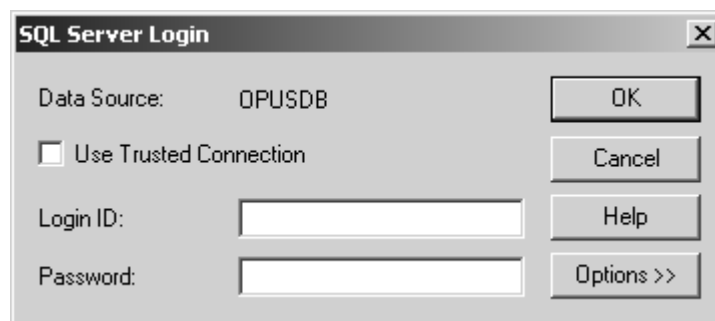


Figure 13: SQL server login

Have the *Use Trusted Connection* check box deactivated. Otherwise the entry fields for the login ID and password will be disabled.

Enter the login ID and the password.

4 Measuring Spectra

Before being able to work with spectra files from the database you have to measure spectra which are to be stored on the database.

Connect the spectrometer to the PC by means of the *Optic Setup and Service* command from the *Measure* menu. Specify the configuration on the *Optic Bench* tab and save the settings.

Select the *Advanced Measurement* tab from the *Measure* menu. For details on the different measurement options refer to the OPUS Reference Manual. To be able to store the measured spectra on the database you have to define the path accordingly. Click on the *Advanced* tab and enter an asterisk (*) in front of the path name.

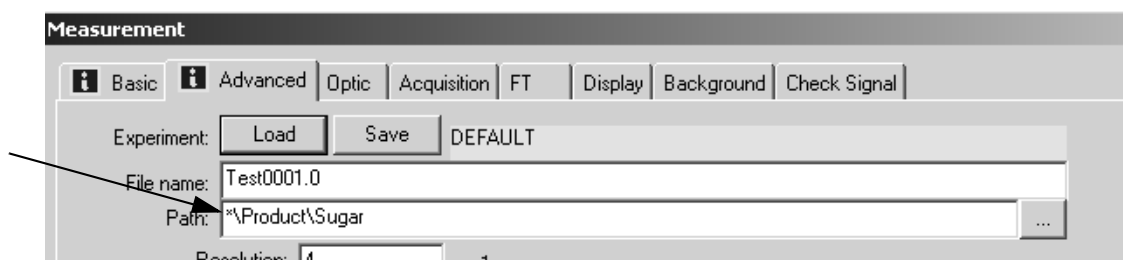


Figure 14: Defining path on database

The asterisk indicates that the measured spectra will be stored on the database.

If you have finished all the measurement settings, click on the *Basic* tab to start the background single channel measurement, and afterwards the sample single channel.

Note: If the *Enforce measurement of spectra to database* check box (see figure 11 on page 11) has been activated, the spectra measured are automatically stored on the database. Even if the specified path name starts with a drive letter, e.g. *C:\Data*, in the *Measurement* dialog. In this particular case, the path name displayed in the database table will automatically be preceded by an asterisk.

4.1 Loading Spectra Files from Database

Select the *Load File from Database* command from the *File* menu to open the following dialog.

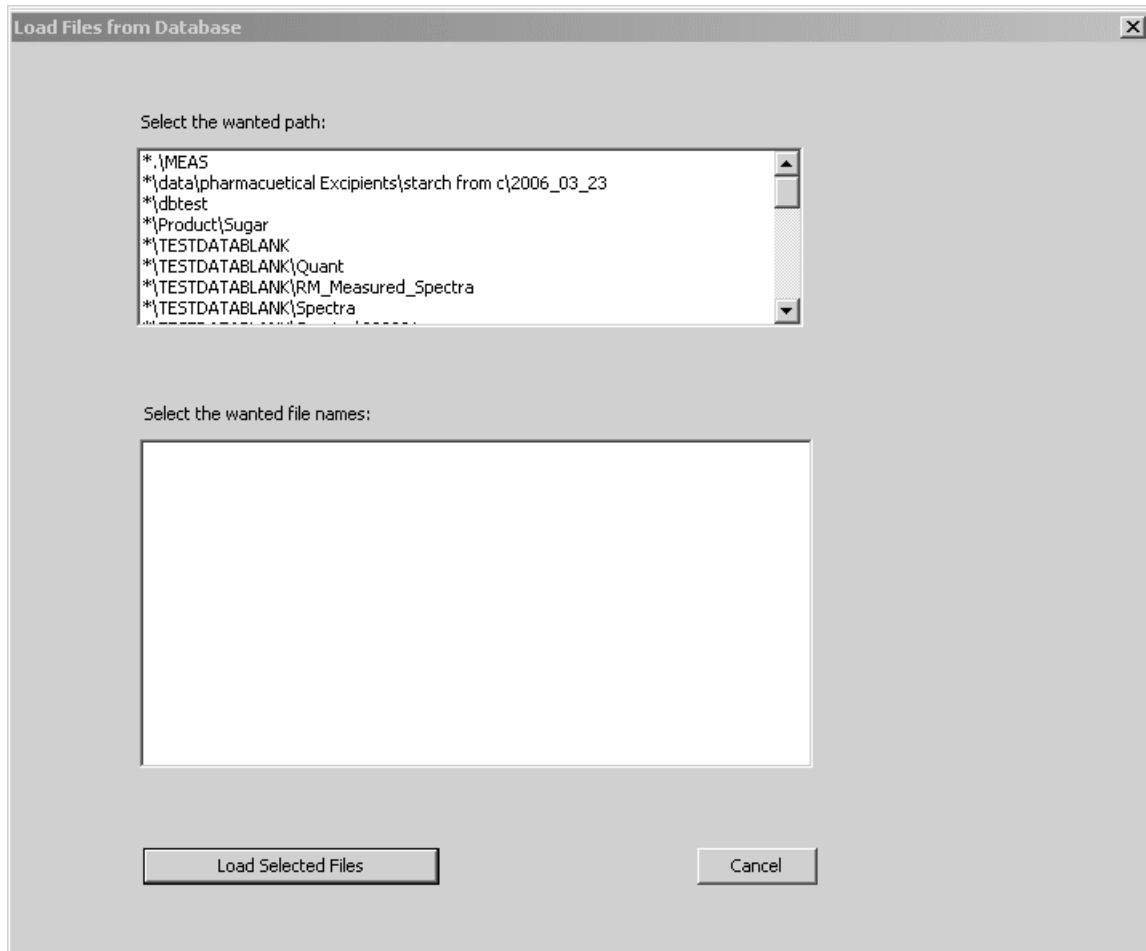


Figure 15: Load files from database

First, select the desired path of the database from the list box. If a path has been specified, the corresponding data files are displayed and can be selected.

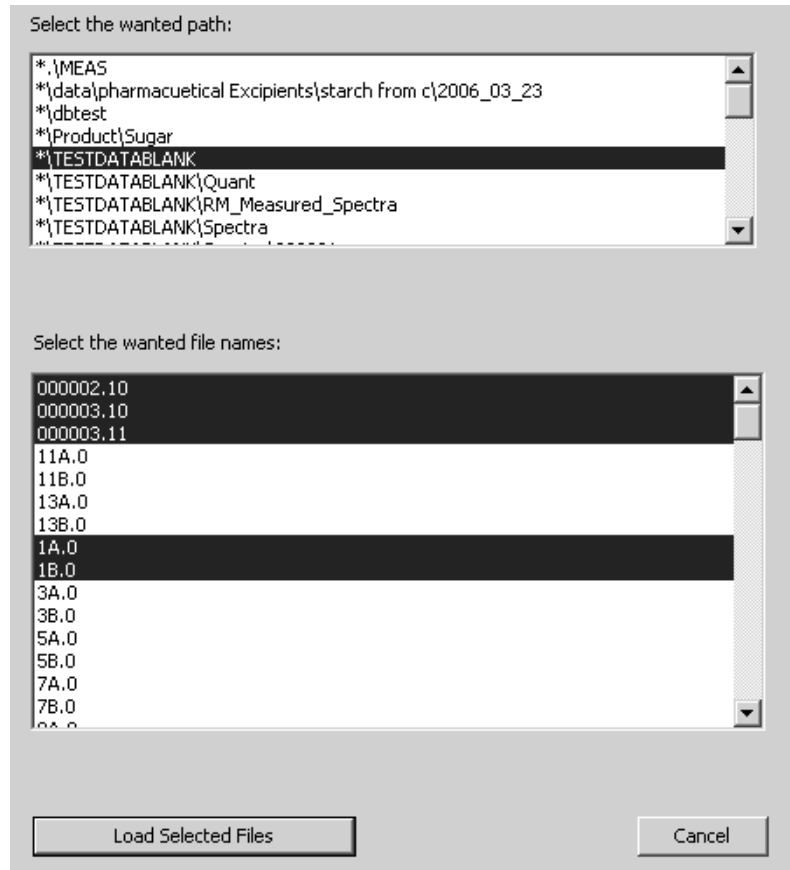


Figure 16: Selecting files from database

Click on the *Load Selected Files* button to have the spectra displayed in the OPUS spectrum window.

When creating method files, e.g. QUANT or IDENT, the reference spectra to be added are also retrieved from the database. If you click on the *Add Spectra...* button of the respective setup method dialog, the same selection fields as displayed in figure 15 are shown with all the path names preceded by an asterisk (*). This requires, however, the *Setup function for...* check box (see figure 11 on page 11) to be activated first.

5 Database Tables

OPUS DATABASE allows to evaluate database tables, i.e. retrieve data from the database and execute queries against the database.

Click on the *Show Database Tables* command from the *Evaluate* menu. The following dialog opens:

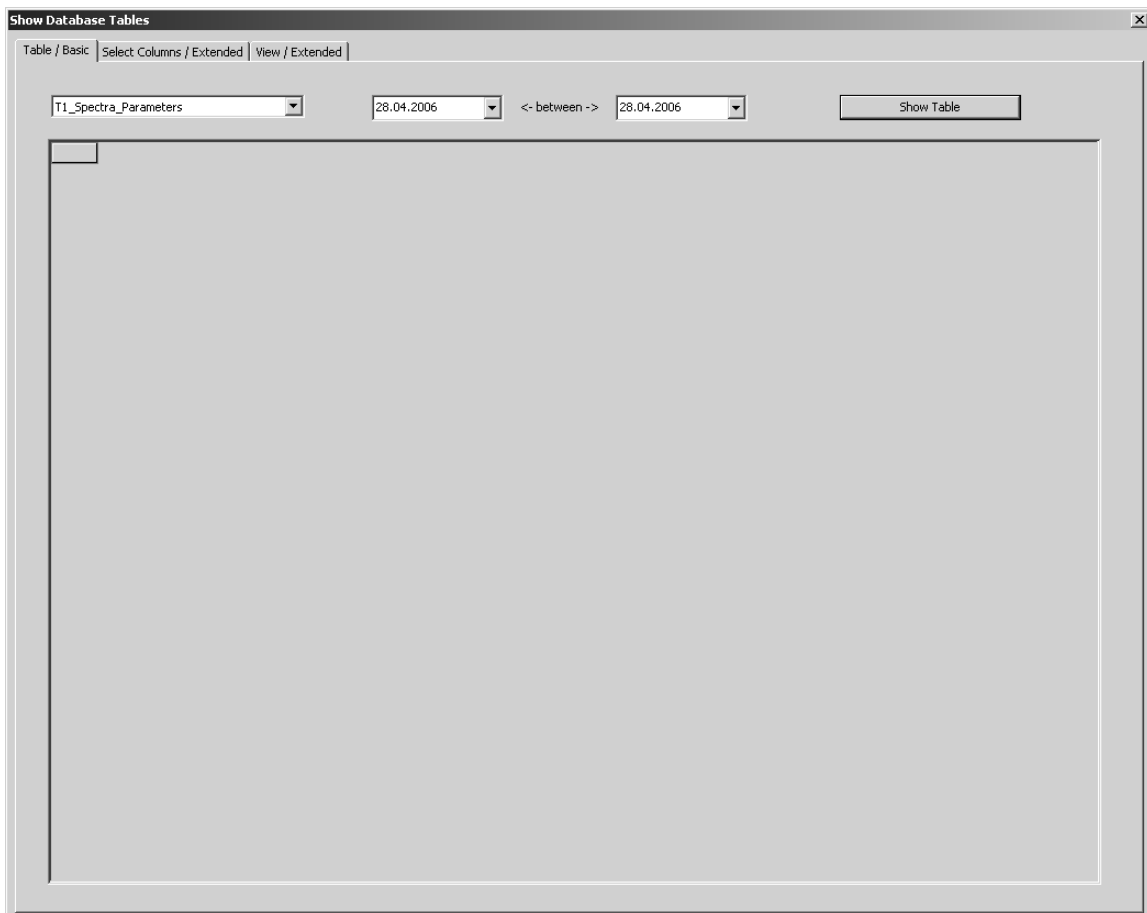


Figure 17: Show Database Tables dialog

OPUS DATABASE provides the following database tables by default:

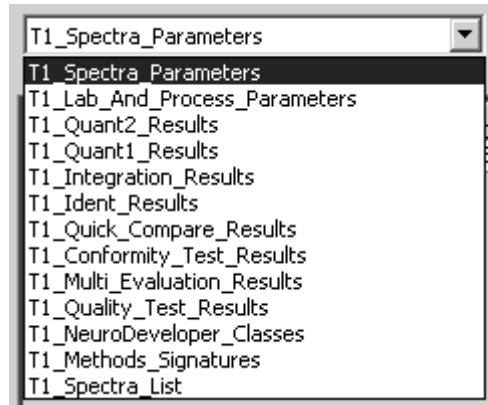



Figure 18: Database tables

Note: If the database is connected to OPUS, evaluation results of spectra files are written to the corresponding database table directly after the evaluation has been performed. This also applies to evaluations performed on spectra files loaded from hard disk.

Select the appropriate database table from the drop-down list and specify the time interval. There are two possibilities to define the start and end time of an entry. Either click on the date, month or year and manually modify the respective item, or use the arrows (). In the latter case a small month panel pops up from which you can select the desired day for the respective entry.

Note: If the start and end time are identical, the data records for the day specified are based on a 24-hour format.

Click on the *Show Table* button to have the database table displayed.

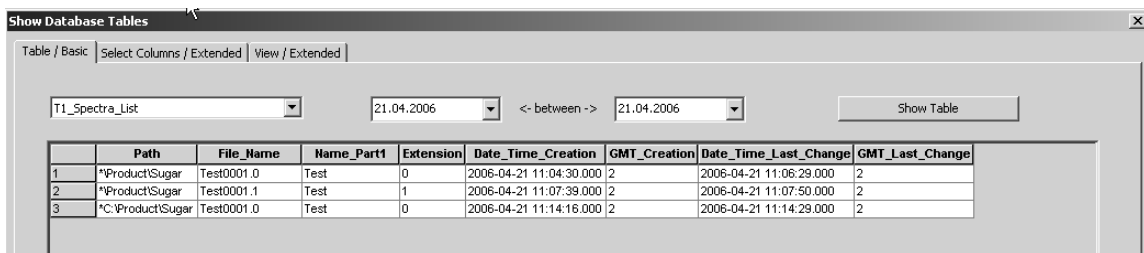


Figure 19: Database table parameters

To further itemize the query click on the *Select Columns/Extended* tab.

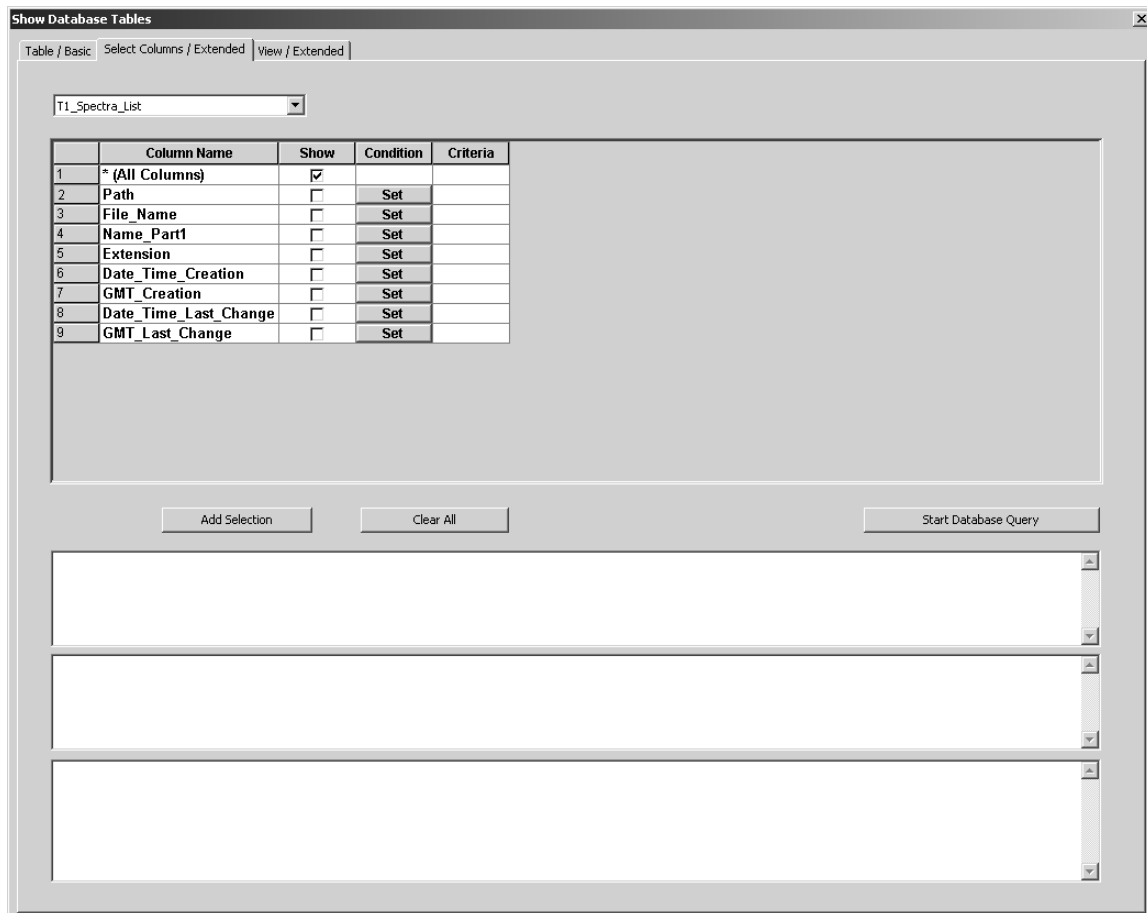


Figure 20: Extended query options

The column names are all shown by default. Deactivate the *Show All Columns* check box if only a few single column names, which you have to activate, are to be displayed.

5.1 Executing Queries

In principle, you can execute a query for each column available in a particular database table. For the queries you can use the following criteria:

- Time: specifies time intervals
- Text: specifies e.g. file names, data blocks etc.
- Number: specifies either real numbers or integers

To execute a time query against the database first select the appropriate database table from the drop-down list on the *Select Columns/Extended* tab. Click on the *Set* button of the column name used for the query. Figure 21 exemplifies a time query.

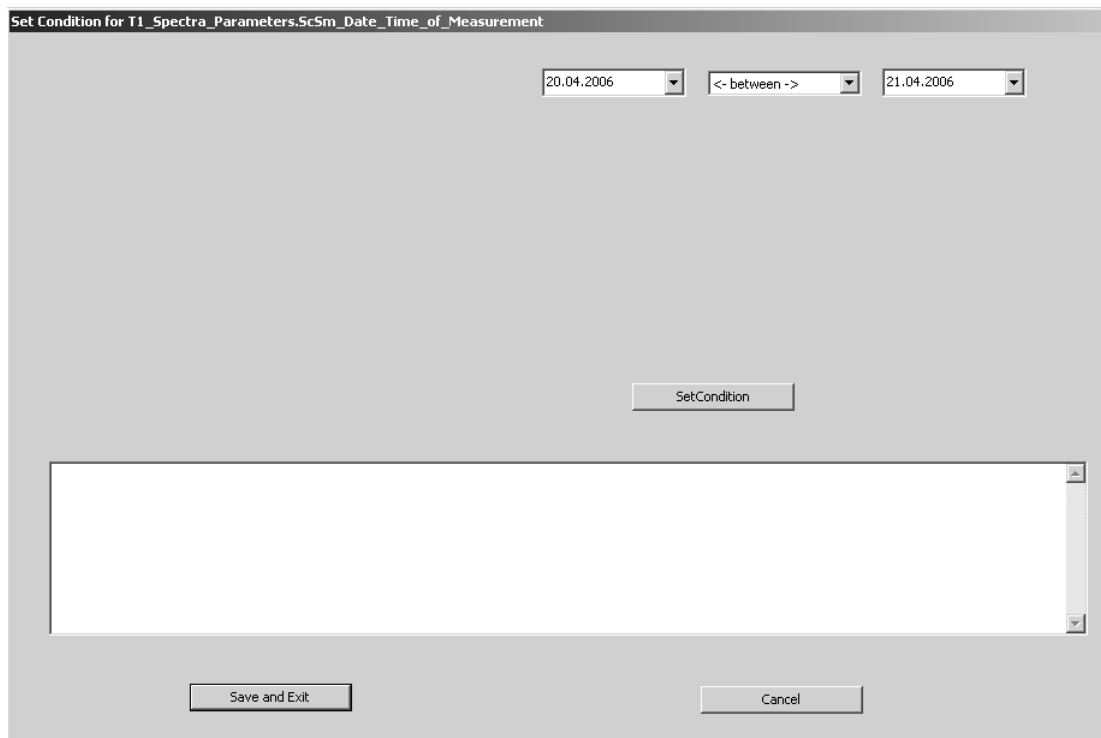
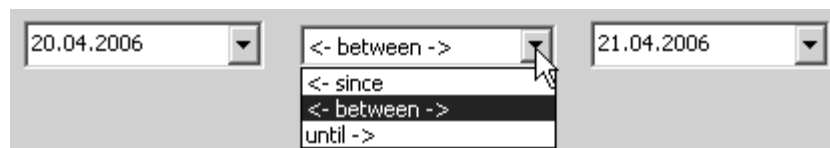


Figure 21: Time query

Specify the time interval by means of the list box.



Click on the *Set Condition* button. The condition specified is shown in the lower selection field.

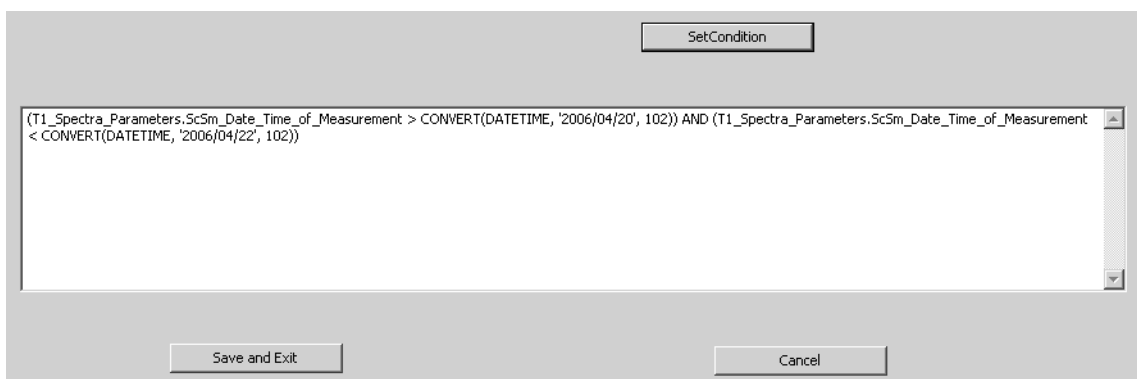


Figure 22: Time condition parameter

Click on the *Save and Exit* button.

The time query criteria is now shown in the *Criteria* column of the *Select Columns/Extended* tab.

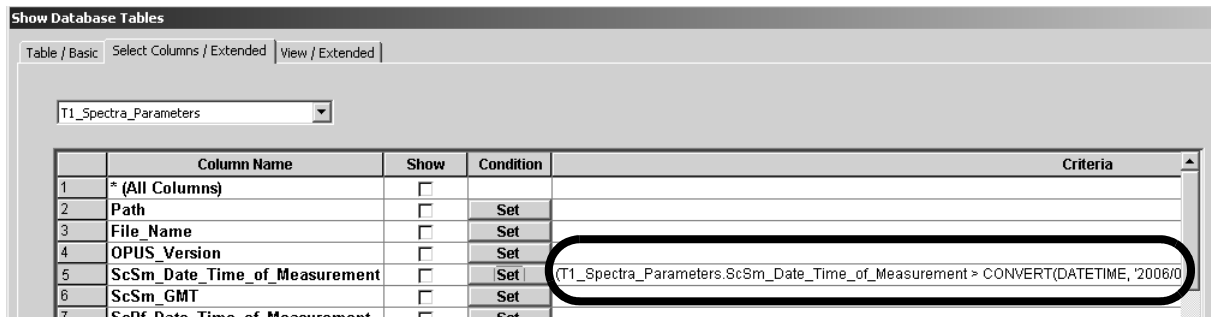


Figure 23: Time query criteria

Before you can start the database table query you have to click on the *Add Selection* button. The complete query is listed in the lower selection fields. To undo the settings click on the *Clear All* button, to undo the criteria items, click into the line and delete the settings manually.

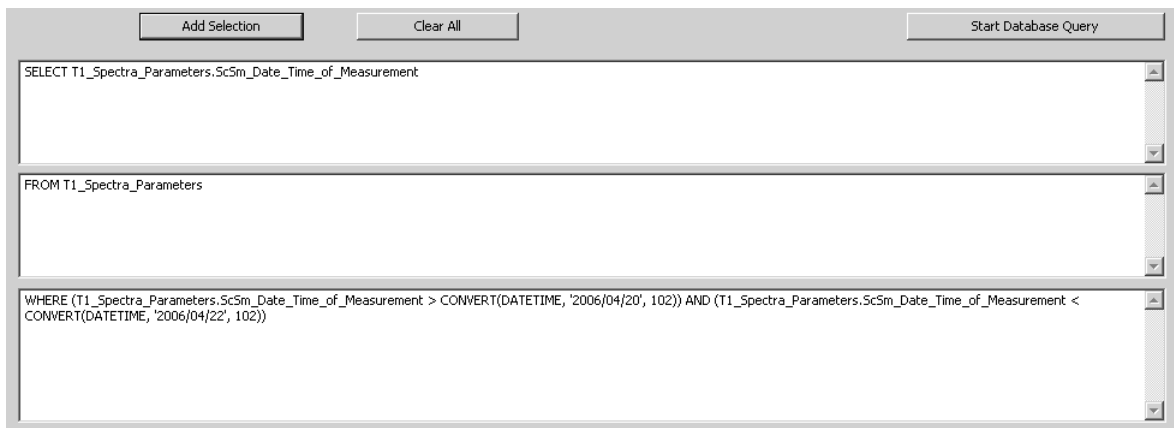


Figure 24: Time query parameters

The procedure described above also applies to text or number queries. In case of text or number queries the *Set Condition for...* dialog is quite different.

You can optionally click on the *Show Distinct* button on top of the dialog. Now, the selection field below the button shows all items available for the particular condition.

On the right you define between which items you want to set the condition. As soon as you click on an item from the selection field the name of this item is displayed in the *=or BETWEEN* or *> (greater than)* field. Activate the check mark and select a different item from the selection field, which name is displayed in the *AND* or *< (less than)* field (see figure 25 to 27).

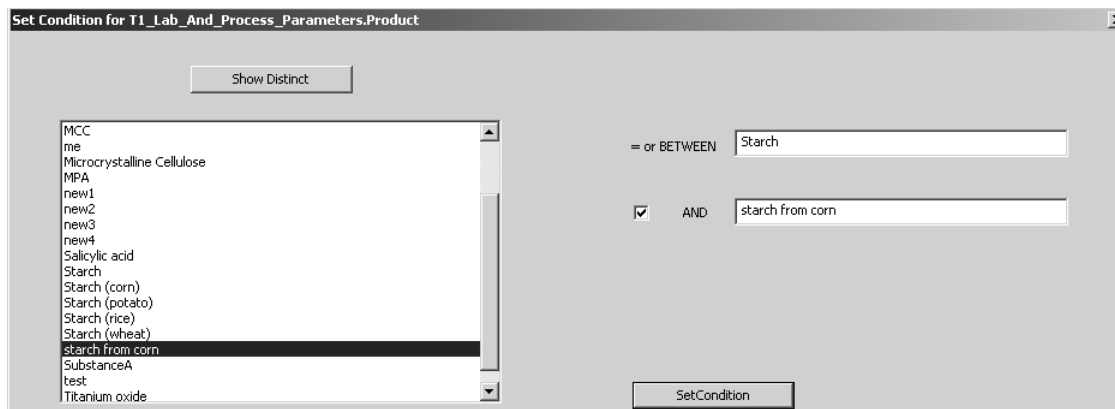


Figure 25: Example of text query

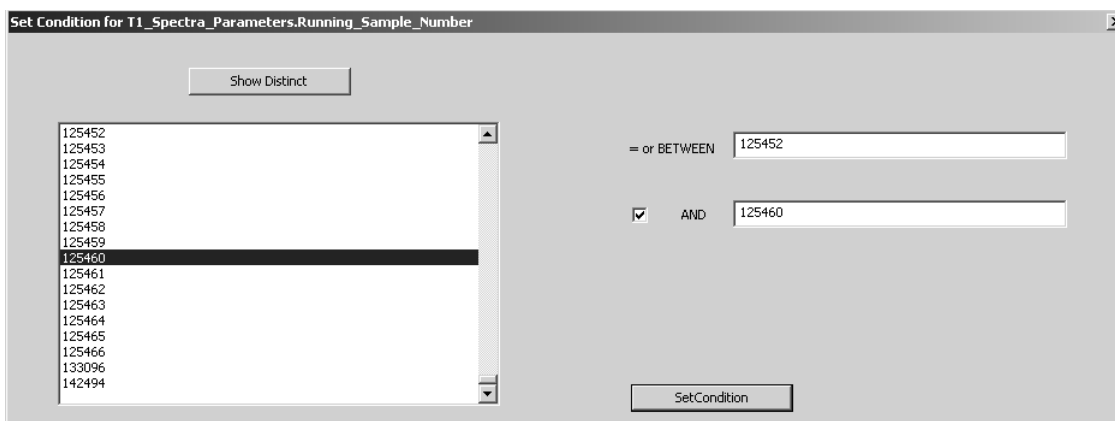


Figure 26: Example of number query (integer)

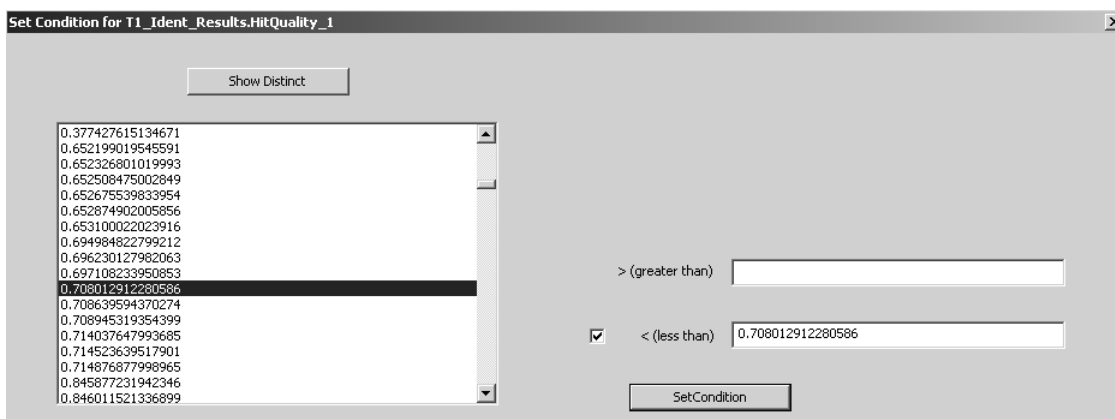


Figure 27: Example of number query (real number)

If all conditions have been set, first click on the *Set Condition* button and then on the *Save and Exit* button. Before starting the query click on the *Add Selection* button on the *Select Columns/Extended* page.

5.1.1 Showing Query Results

The query results are displayed on the *View/Extended* page. Double clicking on a column allows to sort the column in ascending or descending order. To reposition single columns click on the column header, which selects the complete column. Press the left mouse button and move the column to the left or right. A red help line indicates the beginning of the next column. If you leave the mouse button, the column will be repositioned.

	Spectrum_Path	Spectrum_Name	Method_ID	Date_Time_Analysis	Library_Name	Analysis_Result	Analysis_R	Found_Referen
1	*.WEAS	MCCsmileANGlstest	30	2006-03-23 15:41:12.000	Main Library	IDENTIFIED AS Microcrystalline Cellulose	1	Microcrystalline Cellulos
2	*C:\Data\Pharmaceutical e	Microcrystalline Cellu	30	2006-03-23 16:32:16.000	Main Library	IDENTIFIED AS Microcrystalline Cellulose	1	Microcrystalline Cellulos
3	*C:\Data\Pharmaceutical e	Microcrystalline Cellu	30	2006-03-23 16:36:35.000	Main Library	IDENTIFIED AS Microcrystalline Cellulose	1	Microcrystalline Cellulos
4	*C:\Data\Pharmaceutical e	Microcrystalline Cellu	30	2006-03-23 16:45:52.000	Main Library	IDENTIFIED AS Microcrystalline Cellulose	1	Microcrystalline Cellulos
5	*C:\Data\Pharmaceutical e	Microcrystalline Cellu	30	2006-03-23 16:47:02.000	Main Library	IDENTIFIED AS Microcrystalline Cellulose	1	Microcrystalline Cellulos
6	*C:\Data\Pharmaceutical e	Microcrystalline Cellu	30	2006-03-23 16:49:06.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
7	*C:\Data\Pharmaceutical e	Microcrystalline Cellu	30	2006-03-23 16:50:37.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
8	*C:\Data\Pharmaceutical e	Microcrystalline Cellu	30	2006-03-23 16:56:25.000	Main Library	IDENTIFIED AS Microcrystalline Cellulose	1	Microcrystalline Cellulos
9	*C:\Data\Pharmaceutical e	Microcrystalline Cellu	30	2006-03-23 17:03:03.000	Main Library	IDENTIFIED AS Microcrystalline Cellulose	1	Microcrystalline Cellulos
10	C:\Daten\ANGlexc\MCC	MCC_1_1_0	30	2006-04-07 12:55:56.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
11	C:\Daten\ANGlexc\MCC	MCC_1_1_1	30	2006-04-07 12:55:56.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
12	C:\Daten\ANGlexc\MCC	MCC_1_1_2	30	2006-04-07 12:55:57.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
13	C:\Daten\ANGlexc\MCC	MCC_1_1_3	30	2006-04-07 12:55:57.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
14	C:\Daten\ANGlexc\MCC	MCC_1_1_4	30	2006-04-07 12:55:57.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
15	C:\Daten\Excipients library	MCC_060502001.0	83	2006-05-02 15:01:14.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
16	C:\Daten\Excipients library	MCC_060502001.1	83	2006-05-02 15:01:25.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
17	C:\Daten\Excipients library	Avicel pH102_NF_60	84	2006-05-03 13:46:14.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
18	C:\Daten\Excipients library	Avicel PH101_60054	84	2006-05-03 13:46:11.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
19	C:\Daten\Excipients library	Avicel PH101_60054	84	2006-05-03 13:46:11.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
20	C:\Daten\Excipients library	Avicel PH101_60054	84	2006-05-03 13:46:11.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
21	C:\Daten\Excipients library	Avicel PH101_A0040	84	2006-05-03 13:46:12.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
22	C:\Daten\Excipients library	Avicel PH101_A0040	84	2006-05-03 13:46:12.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
23	C:\Daten\Excipients library	Avicel PH101_A0040	84	2006-05-03 13:46:13.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
24	C:\Daten\Excipients library	Avicel PH101_A0040	84	2006-05-03 13:46:13.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
25	C:\Daten\Excipients library	Avicel PH101_A0040	84	2006-05-03 13:46:13.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
26	C:\Daten\Excipients library	Avicel PH101_A0040	84	2006-05-03 13:46:14.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
27	C:\Daten\Excipients library	Avicel PH101_A0501	84	2006-05-03 13:46:14.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
28	C:\Daten\Excipients library	Avicel pH102_20087	84	2006-05-03 13:46:16.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
29	C:\Daten\Excipients library	Avicel pH102_20087	84	2006-05-03 13:46:16.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
30	C:\Daten\Excipients library	Avicel pH102_7145C	84	2006-05-03 13:46:15.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
31	C:\Daten\Excipients library	Avicel pH102_7444C	84	2006-05-03 13:46:15.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
32	C:\Daten\Excipients library	Avicel pH102_A0201	84	2006-05-03 13:46:17.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
33	C:\Daten\Excipients library	Avicel pH102_A0201	84	2006-05-03 13:46:17.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
34	C:\Daten\Excipients library	Avicel pH102_A0503	84	2006-05-03 13:46:18.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
35	C:\Daten\Excipients library	Avicel pH102_A0A2	84	2006-05-03 13:46:16.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
36	C:\Daten\Excipients library	Avicel PH200_37752	84	2006-05-03 13:46:18.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
37	C:\Daten\Excipients library	Avicel PH200_37752	84	2006-05-03 13:46:18.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
38	C:\Daten\Excipients library	Avicel PH200_37752	84	2006-05-03 13:46:19.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
39	C:\Daten\Excipients library	Avicel PH200_37752	84	2006-05-03 13:46:19.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos
40	C:\Daten\Excipients library	Avicel PH200_37752	84	2006-05-03 13:46:19.000	Main Library	IDENTICAL TO: Microcrystalline Cellulos	1	Microcrystalline Cellulos

Figure 28: Query results

5.1.2 Combining Database Tables

It is also possible to combine different database tables for query purposes and have the results displayed, accordingly. When combining different database tables the query parameters defined for one database table are added to the query parameters of a second database table.

Example:

Select the appropriate database table. For our example use the *T1_Ident_Result* database table.

Further itemize the database table by clicking on the *Select Columns/Extended* tab and activate (check) the columns to be displayed later in the table.

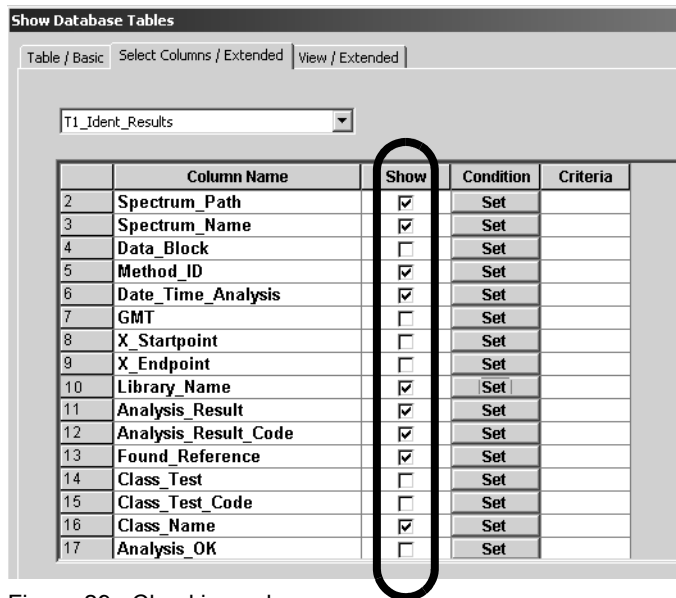


Figure 29: Checking columns

In our example, we set a condition for the *Analysis_Result_Code*. To set a condition to a particular column click on the *Set* button. A new dialog opens. Either define the values manually or click on the *Show Distinct* button. We select *1* and click on the *Set Condition* button.

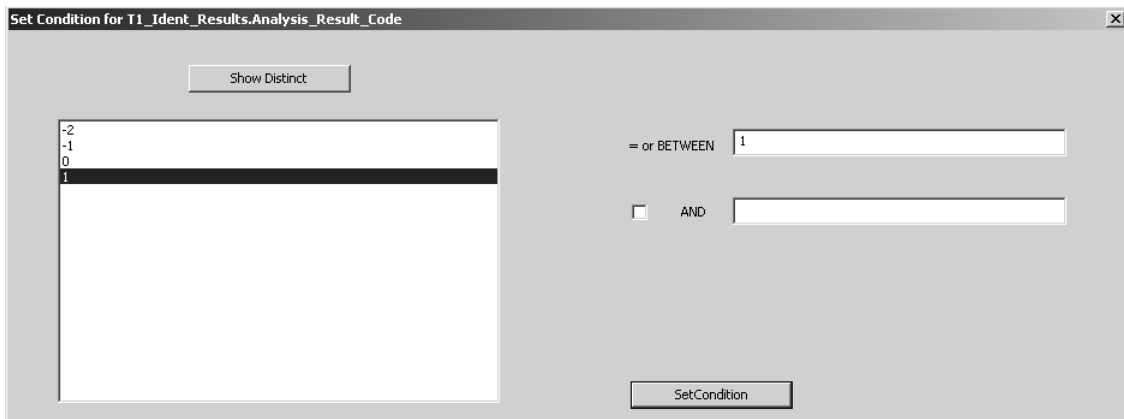


Figure 30: Example of number query

The current condition is shown in the lower selection field.



Figure 31: Example of condition

Click on the *Save and Exit* button. The *Show Database Tables* dialog opens and displays the criteria defined.

	Column Name	Show	Condition	Criteria
10	Library_Name	<input checked="" type="checkbox"/>	Set	
11	Analysis_Result	<input checked="" type="checkbox"/>	Set	
12	Analysis_Result_Code	<input checked="" type="checkbox"/>	Set	(T1_Ident_Results.Analysis_Result_Code = '1')
13	Found_Reference	<input checked="" type="checkbox"/>	Set	

Figure 32: Example of criteria defined

We set a second condition for the hit quality. The procedure is the same as described above.

Click on the *Add Selection* button to have the complete query for this database table listed in the lower selection field.

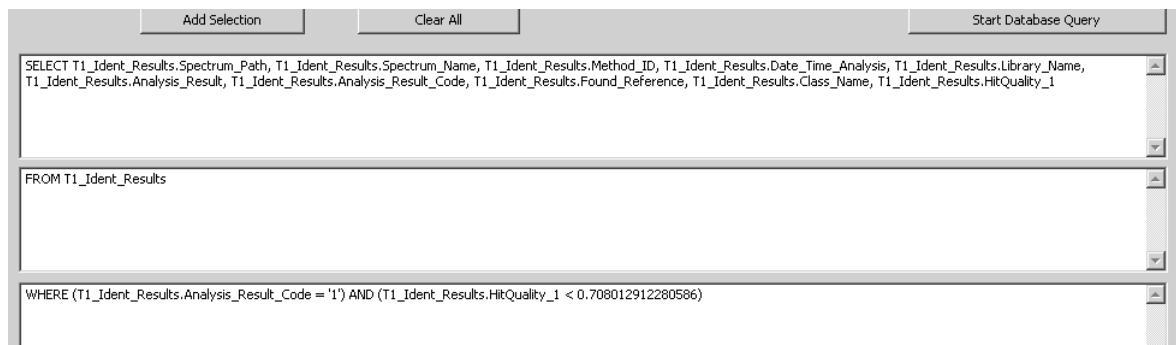


Figure 33: Example of query parameters

Before starting the query, select the second database table using the same dialog, without deleting any settings made so far. In our example, we select the *T1_Lab_And_Process_Parameters* database table.

First, activate (check) the columns to be displayed later in the table, and set a condition. In our example, we set a condition for the *Product_Group* column. Click on the *Set* button and define the condition.

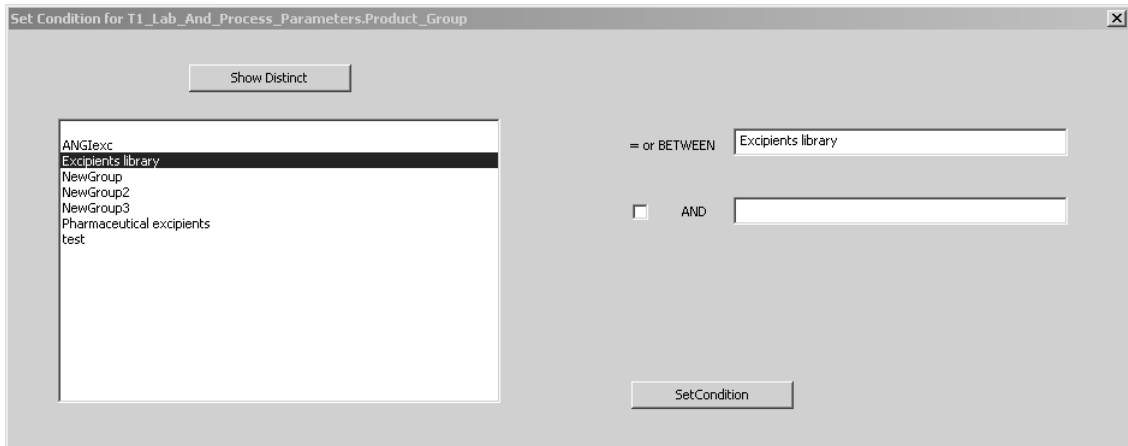


Figure 34: Example of condition

Click on the *Set Condition* button.

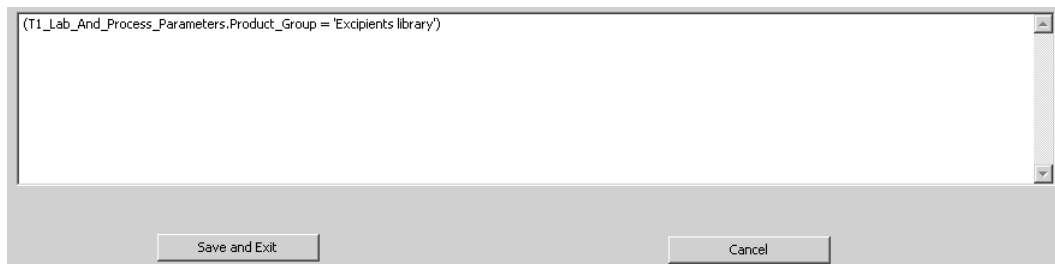


Figure 35: Example of condition parameter

Click on the *Save and Exit* button. Now, add these new settings to the settings made so far for the first database table by clicking on the *Add Selection* button. The lower selection field on the *Select Columns/Extended* tab automatically indicates the combination by the *INNER JOIN* item (see figure 36).

Table / Basic | Select Columns / Extended | View / Extended

T1_Lab_And_Process_Parameters

	Column Name	Show	Condition	Criteria
1	*(All Columns)	<input type="checkbox"/>		
2	Path	<input checked="" type="checkbox"/>	Set	
3	File Name	<input checked="" type="checkbox"/>	Set	
4	Scenario Name	<input type="checkbox"/>	Set	
5	Measuring Point Name	<input type="checkbox"/>	Set	
6	Recipe	<input type="checkbox"/>	Set	
7	Batch Number	<input type="checkbox"/>	Set	
8	Product Group	<input checked="" type="checkbox"/>	Set	(T1_Lab_And_Process_Parameters.Product_Group = 'Excipients library')
9	Product	<input type="checkbox"/>	Set	
10	Label Product Info 1	<input type="checkbox"/>	Set	
11	Value Product Info 1	<input type="checkbox"/>	Set	
12	Label Product Info 2	<input type="checkbox"/>	Set	
13	Value Product Info 2	<input type="checkbox"/>	Set	
14	Label Product Info 3	<input type="checkbox"/>	Set	
15	Value Product Info 3	<input type="checkbox"/>	Set	
16	Label Product Info 4	<input type="checkbox"/>	Set	

Add Selection | Clear All | Start Database Query

```
SELECT T1_Ident_Results.Spectrum_Path, T1_Ident_Results.Spectrum_Name, T1_Ident_Results.Method_ID, T1_Ident_Results.Date_Time_Analysis, T1_Ident_Results.Library_Name,
T1_Ident_Results.Analysis_Result, T1_Ident_Results.Analysis_Result_Code, T1_Ident_Results.Found_Reference, T1_Ident_Results.Class_Name, T1_Ident_Results.HitQuality_1,
T1_Lab_And_Process_Parameters.Path, T1_Lab_And_Process_Parameters.File_Name, T1_Lab_And_Process_Parameters.Product_Group

FROM T1_Ident_Results INNER JOIN T1_Lab_And_Process_Parameters ON T1_Ident_Results.Spectrum_Path = T1_Lab_And_Process_Parameters.Path AND T1_Ident_Results.Spectrum_Name
= T1_Lab_And_Process_Parameters.File_Name

WHERE (T1_Ident_Results.Analysis_Result_Code = '1') AND (T1_Ident_Results.HitQuality_1 < 0.708012912280586) AND (T1_Lab_And_Process_Parameters.Product_Group = 'Excipients
library')
```

Figure 36: Selection field when combining database tables

To have the query result displayed click on the *Start Database Query* button.

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