OPUS 4.2 Instrument Test

Notes on some items

1. Installation

The Instrument Test is installed during the OPUS-installation. On the page *Select Components* the item *Instrument test* must be checked (default setting).

Select Components		×
	Select the components you want to install, clear the components you do not want to install. Components ✓ OPUS Workstation 72310 K ✓ Optics 4182 K ✓ Example Files 4508 K ✓ Instrument test 0 K	
	✓ Documentation 58956 K Description Creates OPUS without measurement capabilities. You need this option in any case. If you want to measure spectra, please install "Optics" additionally. Change Space Required: 140277 K Space Available: 4194303 K	
	< Back Next > Cancel	

On the page *Choose one or several configurations for the Instrument Test* first select the Instrument Type in the list *Optic* (e.g. MATRIX-F or TENSOR 27). (The Instrument Test is *not* installed if you select (*No Instrument Test*)). On the right side the available Instrument Test configurations are listed. Click with the mouse on each configuration which you want to install.

The main directory for the Instrument Test is <OPUS Path>\MCIT by default. You can choose another main directory by clicking on the button *Select directory*... . It's not necessary that the files belonging to the Instrument Test are installed in subdirectories of OPUS.

Wählen Sie eine oder mehrere Konfigurationen für den Instrumententest					
	Verzeichnis wählen Optik: (No Instrument Test) VECTOR 22 VECTOR 22/N VECTOR 33 EQUINOX 55 IFS 25 IFS 25 IFS 28 IFS 28 IFS 66 MATRIX-F MATRIX-F TENSOR 27 TENSOR 37	d:\opus_40\MCIT Verfügbare Konfigurationen: MATRIX-F Short Circuit Fibre 1 MATRIX-F Short Circuit Fibre 2 MATRIX-F Short Circuit Fibre 3 MATRIX-F Short Circuit Fibre 4 MATRIX-F Short Circuit Fibre 6 MATRIX-F 1.5 m Solid Probe Fibre 1 MATRIX-F 1.5 m Solid Probe Fibre 2 MATRIX-F 1.5 m Solid Probe Fibre 3 MATRIX-F 1.5 m Solid Probe Fibre 6 MATRIX-F 1.5 m Solid Probe Fibre 6 MATRIX-F 1.5 m Solid Probe Fibre 6 MATRIX-F 2 m Liquid Probe Fibre 1 MATRIX-F 2 m Liquid Probe Fibre 3 MATRIX-F 2 m Liquid Probe Fibre 3 MATRIX-F 2 m Liquid Probe Fibre 3			
		<zurück weiter=""> Abbrechen</zurück>			
	I	IMATRIX-E 2 m Liquid Probe Fibre 3 ✓ Zurück Weiter > Abbrechen			

Target directory	×
Select a target directory for the	Instrument Test
Path:	
c:\	
Directories:	
🗁 c:\ 🔺	ОК
	Cancel
DevStudio	
🛅 Dokumente und Eii	
Drives:	
🖃 c: Programs 💌	Netzwerk
_	

2. Directories

For each selected configuration a subdirectory below the main directory is created which contains the Instrument Test macro files for this configuration (e.g. $d:\opus\MCIT\MATRIX-F_1.5_m_Solid_Probe_Fibre_1\)$. The macros are now in binary format (extension *mtb*) and cannot be edited. The main macro for starting the Instrument Test for a certain configuration is *IT.mtb*.

Below the directory which contains the macros is the directory *IT*. All reference and test spectra and all test reports for a certain configuration will be stored here. Below the directory

IT the directory *SET* is created. It contains all measurement experiments, integration methods and the configuration file *IT_SET.0*.



Use of old Reference Spectra

In the Setup of the Instrument Test up to three reference spectra (ENERGY.0, GFA.0 and GFB.0) are measured. If the user worked with OPUS-NT 3.1 and wants to use the reference spectra of this version also in OPUS 4.2, he can copy the reference spectra from the 'old' (3.1) to the 'new' (4.2) directory:

Example: Copy the reference spectra from

 $OPUS_NT T$

to

\OPUS\MCIT\MATRIX-F_1.5m_Solid_Probe_Fibre_1\IT.

Be sure that you work with the same Laser Wavenumber as in OPUS-NT 3.1. The standard Laser Wavenumber given on the page *Interferometer / AQP* of the function *Optic Setup and Service* (menu *Measure*) in the OPUS 4.2 version should be identical to the Laser Wavenumber which was used to measure the reference spectra. Load a reference spectrum in OPUS, perform a right-click and choose *Show Parameters*. You find this Laser Wavenumber in the block *Instrument parameters*.

Do not use the function *Adjust Laser Wavenumber* in the OPUS 4.2 Instrument Test, since after a change of the Laser Wavenumber (even if this change is small) new reference spectra must be measured.

3. Usermac.lst

The file *Usermac.lst* is stored in the OPUS-Path. It contains an entry for each Instrument configuration to show an menu item in the OPUS *Validation* menu. *Usermac.lst* is now language dependent. If you perform an OPUS installation in German and start the OPUS in English, there will be no Instrument Test entry in the *Validation* menu !

🌌 Usermac.lst - I	ditor	:
Datei Bearbeiten	Format ?	
[GERMAN] [FRENCH] [ENGLISH] d:\opus\MCIT d:\opus\MCIT d:\opus\MCIT	MATRIX-F_1.5_m_Solid_Probe_Fibre_1\IT.MTB@8@IT_MATRIX-F_1.5_m_Soli MATRIX-F_1.5_m_Solid_Probe_Fibre_3\IT.MTB@8@IT_MATRIX-F_1.5_m_Soli MATRIX-F_1.5_m_Solid_Probe_Fibre_5\IT.MTB@8@IT_MATRIX-F_1.5_m_Soli	J

4. Firmware Update

For the new Bruker Optik Instrument Types (MATRIX, TENSOR...) the OPUS 4.2 Instrument Test works correctly only if an up-to-date firmware is used.

You can check the release date of the Instrument firmware with the function *Optic Setup and Service* (menu *Measure*). On the page *Optical Bench* the date is given in the line *Optical Bench Firmware*. The firmware must be created in January 2002 (or later). The version number has to be *1.216* or higher.

It's strongly recommended to perform a firmware update if the firmware of your optical bench is older.

Optic Setup and Service	×
Optical Bench Devices/Opt	ions Interferometer/AQP Export Options Service Optic Communication
Configuration:	matrix
Optical Bench URL:	http://149.236.34.160/
Optical Bench:	Matrix-F
Optical Bench Firmware:	1.216 Jan 14 2002
Save Settings	Cancel Help

5. Optic Setup and Service

Before starting an Instrument Test, several things have to be done in OPUS. Start the function *Optic Setup and Service* in the *Measure* menu. Go to the page *Interferometer / AQP*. The standard Laser Wavenumber is normally 15798.0 cm⁻¹. Check the item *Channel specific Laser Wavenumber*. Even if you use only one measurement channel (e.g. *Sample Compartment*), this option must be activated. Exit the function *Optic Setup and Service* with the button *Save Settings*.

Optic Setup and Service				×
Optical Bench Devices/Options	Interferometer/AQP	Export Options Servic	e Optic Communication	J
Abook to Pook Position	22252	Pointe		
Absolute Feak Fosition	33332	Foints		
Laser Wavenumber	15798.Q	cm-1		
Channel Specific Laser War	venumber			
Maximum Resolution	1	cm-1		
Maximum FT Size	256	K Points		
Maximum Data Rate	80000	Hz		
Save Settings		Cancel	Hel	n
		ounoor		P

6. Channel Specific Laser Wavenumbers

OPUS 4.2 offers the possibility to use for each measurement channel (defined by the CHN parameter) its own Laser Wavenumber. If for a certain measurement channel no specific Laser Wavenumber is defined, the standard Laser Wavenumber given on the page *Interferometer / AQP* is used.

The channel specific Laser Wavenumber is set in the Instrument Test with the function *Adjust Laser Wavenumber* (see chapter 12).

The Laser Wavenumber which is currently used for a certain channel is given on the page *Acquisition* of the *Measurement* function.

Measurement
Basic Advanced Optic Acquisition FT Display Background Check Signal
Wanted High Frequency Limit: 15000 15798.96 cm-1 Wanted Low Frequency Limit: 0 0.00 cm-1
Laser wavenumber: 15738.36 Interferogram size: 7108 Points FT size: 8 K
Low Pass Filter: 1 ; 10 KHz I5799 cm-1
Correlation Mode: No
Interferogram acquisition directly to harddisk
Exit Cancel Help

For instruments which measure with the AQP, the channel specific Laser Wavenumbers are stored in the *nta*-file (e.g. Vec22n.nta) which can be found in the OPUS directory. You find the Laser Wavenumbers under the label *[CALIB]*.

🖉 vec22n.nta - Editor	
Datei Bearbeiten Format ?	
ENABLED=1 [CALIB] ENABLED=1 8=15799.350000 9=15799.780000 10=15800.020000 11=15798.960000	A
•	•

The integer number specifies the measurement channel. The corresponding channel name is given in *Optic Setup and Service*, page *Decives / Options*, if you click on the button *Setup* in the line *Channel*.

Devices/Options			
Channel	ОК		
✓ I=Y Fibre ✓ 8=Fibre 1	Cancel		
	Item UP		
✓ 11=Fibre 4 ✓12=Fibre 5 ✓13=Fibre 6	Item DOWN		
1=Front 2=Reference	E dit Item		
3=External 3	Add New Item		
5=External 5	Delete Item		
☐6=External 6	Restore Factory Defaults		
Format:			

For the new instrument types the channel specific Laser Wavenumbers can be viewed with the Internet Explorer. Starting from the instrument home page go to *Service -> Full Report*. Then scroll down to the field *Additional parameters for Cmds*. You will find the Laser Wavenumbers in the line *CHN*.

Additional parameters for Cmds
CHN *18=15797.64cm-1@*110=15797.93cm-1@*112=15797.21cm-1@
DTC *116448=0;0@
Auto Accessory Recognition

The numbers are also given in the EWS.ini, which is shown on the same page.

ø	Configuration & Diagnostics Report - Microsoft Internet Explorer	BX
	Datei Bearbeiten Ansicht Favoriten Extras ?	-
1	← Zurück 🔹 → 🗸 🙆 🚰 🔯 Suchen 📓 Favoriten 👹 Verlauf 🛛 🔂 🕶 🎒	
_ A	Adresse 🙆 http://149.236.34.160/config/report.htm	nks »
	Source LFT=4000(@*1LC=00000001(@*1LCC=0x0(@*1TYP=M1K(@*1HFQ=10000cm-1(@*1LFQ=30cm-	
	1@*ILFT=44000@	
	C:/EWS/EWS.INI	
	[EWS INI]	
	1.00	
	LOCONSTI	
	MAXDR=80000	
	MAXRES=1	
	MAXPLL=1	
	MAXXAS=8	
	KLWN=15798.000000	
	FOC=69	
	MAXEBW=40000	
	[OPTIONS]	
	;RAMAN=1	
	RMNSDT=0.000233	
	PEAKSEARCH=1	
	RWN1000=9394.0cm-1	
	RPW1000=2500mW	
	CHN8=15797.64cm-1	
	CHNI0=15797.93cm-1	
	CHN12=15797.21cm-1	
	[INITCMD]	
	RDX=0	
	[END]	-
ø] Fertig	

7. Beamsplitter

For the new instrument types (MATRIX, TENSOR...) a valid beamsplitter name should existing in the firmware. Normally this is managed by a VB-Script which is started from OPUS. If your current OPUS version is not equipped with the feature, the beamsplitter type can be manually set with the Internet Explorer. Starting from the instrument home page go to *Service -> Edit hardware configuration -> Edit AAR.ini for Auto Accessory Recognition*. If there is a ? given for the beamsplitter type, you should enter a valid name.



Beamsplitter Typ	HFQ	LFQ
Quartz	15500	3300
CaF2	15000	1200
KBr	7500	370
KBr-Broadband	10000	400
CsI	5000	200
ZnSe	6000	500

Enter the beamsplitter name in the line *Typ* and the *HFQ* and *LFQ* limits according to the table above.

DWG OOONEGD41	
[BMS_UUUAECD4]	
LOC=0x01	
TYP=Quartz	
HFQ=15500cm-1	
LFQ=3300cm-1	
J	
Save AAR.INI	Back

Click on the button *Save AAR.ini* and then on *Back*. On the hardware page click on the item <*<One Level Back*. On the Config page click on *Reset Instrument*. The Reset page is shown.

🖉 Reset Menu - Microsoft Internet Explorer 📃 🗖	IX
Datei Bearbeiten Ansicht Favoriten Extras ?	
📔 🗘 Zurück 🔻 🔿 🔻 🔯 🖓 🖓 Suchen 🕋 Favoriten 🖓 Verlauf 🛛 🖏 🗸 🎒	
Adresse 🙆 http://149.236.34.160/config/resetpage.htm	s »
Matrix-F SN_0129 01 Reset Menu	4
RESET INSTRUMENT Page generated on Wed, 06 Feb 2002 14:00:18	Ī
Errtig	

Click on the button *RESET INSTRUMENT*. The operation may take a while. Wait until the instrument beeps.

8. Check Experiments

All *XPM*-files used in the Instrument Test should be checked. They are stored in the various \IT\SET subdirectories and have the names *IT.xpm*, *IT_FR.xpm*, *IT_GF.xpm* and *IT_PS.xpm* (the last one is sometimes missing). Go to the *Measure* menu and start the function *Setup Measurement Parameters*. Load the first IT-experiment. If there is no red error sign, everything is OK. (A blue-yellow information sign is allowed). Check all IT-experiments. If a red error sign comes up, correct the setting. Then go to the page *Advanced* and store the method. If you work in validated environment (21 CFR 11), the experiments must signed now with category *Release* (see chapter 15).

Setup Measurement Parameters					
🚦 Basic Advanced 🤤 Opt	C Acquisition FT Display Background Check Signal				
Source Setting:	Tungsten (NIR)				
Aperture Setting:	Open 💌				
Measurement Channel:					
Detector Setting:	NIR Diode Preamp Gain: 1				
Scanner Velocity:	6 ; 10.0 KHz				
Sample Signal Gain:	Automatic				
Background Signal Gain:	Automatic				
Switch Gain:	ON Window in Points: 300				
Delay after Device Change:	30				
Delay Before Measurement:	0				
Exit	Cancel Help				

Use of old experiments

If an user worked with OPUS-NT 3.1 and did not use the standard IT-experiments, but adapted them for his specific needs, maybe wants to use these files also in OPUS 4.2. He must then copy the files from the 'old' (3.1) to the 'new' (4.2) directory.

Example: Copy the IT-experiments from

\OPUS-NT\IT\SET

to

\OPUS\MCIT\EQUINOX_55_DTGS\IT\SET.

(The name depends on your selected configuration).

Also OPUS-NT 3.1 MATRIX-F users, who do *not* update their firmware (see chapter 4), can use the old OPUS-NT 3.1 IT-experiment files for OPUS 4.2, since they better fit to the old firmware.

9. User Settings – Instrument Test

Go to the OPUS menu *Setup* and start the function *User Settings*. On the page *Instrument Test* the various Instrument Test configurations must be now registered. Up to six configurations can here be declared. Click on the button *Path* in the line *IT* and select the path where the binary macros of the first Instrument Test configuration are stored (e.g. D:\opus\MCIT\MATRIX-F_1.5_m_Solid_Probe_Fibre_1\). Then specify the pathes of the other configurations, if you have any.

User Settings							
General 2101111 Rights Preferences Display Diagnostics Instrument Test							
Warning/alarm indication for							
IT Path D:\opus\MCIT\MATRIX-F_1.5_m_Solid_Prc XPMs							
IT 2 Path IT\MATRIX-F_1.5_m_Solid_Probe_Fibre_3\XPMs							
IT 3 Path IT\MATRIX-F_1.5_m_Solid_Probe_Fibre_5\							
TIT4 Path XPMs							
TIT 5 Path XPMs							
TIT 6 Path XPMs							
OK Abbrechen Übernehmen Hilfe							

Leave the dialog box by clicking on OK.

9. Validation Menu

Go to the OPUS menu *Validation*. Here you will find the Instrument Test configurations which you have installed. By clicking on a menu item you can start one Instrument Test.



10. Setup IT

Instrument Test	×
Parameters	
Start II	Exit
Setup IT is only fo	or authorized operators !!
There exist no refere	ence spectra ! Please go to
Setup IT and sta	rt Measure Reference !
Setup IT	

The function *Setup IT* is available only for OPUS users which have *Administrator* rights. For normal OPUS *Operators* the access is stopped. The user rights are set in the function *User Management* which you can find in the menu *Setup*. In the line *User Group* the rights for a certain User ID are defined.

User Management		×			
Setup Record Global Options Audit Trail					
	1 User R	ecords			
		>>			
User II) anna				
Passwor	d xxxxxx				
Password Verificatio	n 🔤				
	Password expires: Nev	er			
Operator Name	g Bruker				
User Group	Administrator	_			
	List Administrator				
Lock User		Delete Record			
Store	Cancel	Help			

11. Period of validity

The period of validity for an Instrument Test is 24 hours by default. You can change this value in *Set Instrument*.

Set Instrument NIR	×
Parameters	
Instrument Type Serial Number	MATRIX-F 1.5m Solid Probe Fibre 1 0129 01
	Test X-Axis:
Test Frequency I	Calibration
Used Peak	Polystyrene
	Test Y-Axis:
🔽 Glass Filter A	
🔽 Glass Filter B	
Period of validity in hours	48
Set	

12. Adjust Laser Wavenumber

On the page *Setup Instrument Test* is the new function *Adjust Laser Wavenumber*. With this function the water vapour spectrum is measured and the channel specific Laser Wavenumber is calculated.

Setup Instrument Test		×
Parameters		
Set Instrument		
Adjust Laser Wave#		
Measure Ref Spectra		
The following con	nmand is only necessary after char	nging IT_SET.0
Get Settings from IT_SET	Г.О	
Continue	Cancel	Help

Click on *Adjust Laser Wave*# to start the measurement. The next page shows the results.



When you are setting up your system for the first time the standard Laser Wavenumber is taken for the measurement (->Optic Setup and Service -> Interferometer / AQP -> edit field Laser Wavenumber). Normally this should be 15798.0 cm-1. In the Instrument Test this value is given in the line Current Laser Wavenumber. The calculated channel specific Laser Wavenumber is given in the line Optimal Laser Wavenumber. If you click on the button Set Laser Wavenumber this value is set for the used measurement channel (in the firmware for MATRIX, TENSOR... instruments or in the *nta*-file for the other instruments, see chapter 6). It's not necessary to set this value manually.

As long as the option *Channel Specific Laser Wavenumber* is activated in *Optic Setup and Service*, all experiments which use this measurement channel will take this specific Laser Wavenumber.

13. Instrument Status

If you click on the small Instrument Status light in the right bottom corner of OPUS (or if you call the function *Optics Diagnostics* in the *Measure* menu) you get the Instrument Status. Here the status of several hardware components and the status of the Instrument Test configurations are listed.

Instrument Status				×
Helle LASER	sounce ក្រា →¥	INTERFERIO- METER		DETECTOR
IT-RESULT	IT-RESULT	IT-RESULT		
Quit				

14. Configuration Changes

Sometimes it is necessary to change some settings of an Instrument Test configuration. Example: the operator uses an 80 meter fibre instead of the standard 1.5 m fibre. In this case e.g. the frequency limits for the 100 % Line test must be changed. This can be done in the following way:

Load the file IT_SET.0 into OPUS. This configuration file is stored in the directory \IT\SET. Call the function *Information Input* in the *Edit* menu. Go to the second page and change the parameter *X-Endpoint 100* % from 4500 to 5000. Click on the button *Add Information*. The file gets now the red card, which means, that the file was changed, but this change is in the moment not yet stored on the harddisk. Call the function *Save File* in the *File* menu and save IT SET.0. The file will get the blue card. Then unload this file from OPUS.

Start the corresponding Instrument Test and go to the page *Setup Instrument Test* (see page 15). If you click on the button *Get Settings from IT_SET.0* the new information is read from the file IT_SET.0 to the Instrument Test macro.



15. Instrument Test in validated Environment



If the user works in validated environment (21 CFR 11, menu *Setup->User Settings->Rights*), all method files (e.g. measurement experiments, integration methods etc.) must be signed with the category *Release*. All Instrument Test method files which are installed from the OPUS 4.2 installation CD have this *Release* signature. The *.xpm and *.int method files are stored in the corresponding \IT\SET subdirectory.

The signature data block for method files can be viewed and created with the function *Methods – Add Signature / Show History* which can be found in the *Validation* menu. Start this function, select the wanted method type (e.g. *Measurement Experiments*), click on *Load Method* and select the file. On the page *Signature* you see the content of the signature data block. A signature is only valid, if it was the last operation which was performed on this file. Go to the page *History* and scroll down. The last entry must be *Add Signature*.

Load Method	Meas	urement Experiment (*.xpr	n) 💌	Add Signature
		21 CFR 1	1	Print Signature
First Name	Last Name	Meaning	Category	Date Time
Bruker	Optik	qualified	Release	2002/01/08 15:31:21
2 Bruker	Optik	qualified	Release	2002/01/22 12:14:23
ls - Add Signature/5	how History -	D:\opus\MCIT\MATRI	(X-F_1.5_m_Solid_Pro	obe_Fibre_3\IT\SET\IT.XPM
Is - Add Signature/S ture History Print History	i <mark>how History</mark> - (use Li	D:\opus\MCIT\MATRI andscape)	IX-F_1.5_m_Solid_Pro	obe_Fibre_3\IT\SET\IT.XPM
Is - Add Signature/S ture History Print History A	ihow History -	D:\opus\MCIT\MATRI andscape)	(X-F_1.5_m_Solid_Pro	obe_Fibre_3\IT\SET\IT.XPM
Is - Add Signature/S ture History Print History A 48 Save an Expe	ihow History - (use La eriment File	D:\opus\MCIT\MATRI andscape)	(X-F_1.5_m_Solid_Pro	obe_Fibre_3\IT\SET\IT.XPM C 2002/01/22 12:10
Is - Add Signature/S ture History Print History A 48 48 50 Sample Dare	show History - (use La eriment File	D:\opus\MCIT\MATRI andscape) B Old value	IX-F_1.5_m_Solid_Pro	Dbe_Fibre_3\IT\SET\IT.XPM
Is - Add Signature/S ture History Print History Print History A Save an Expension Sample Paral 50 Sample Paral 51 Operator Nan	ihow History - (use La criment File meter ne	D:\opus\MCIT\MATRI andscape) B Old value Default	(X-F_1.5_m_Solid_Pro	obe_Fibre_3\IT\SET\IT.XPM C 2002/01/22 12:10 New value Bruker
Is - Add Signature/S ture History Print History Print History A Save an Expe 30 50 51 52	ihow History - (use La eriment File meter ne	D:\opus\MCIT\MATRI andscape) B Old value Default	(X-F_1.5_m_Solid_Pro	obe_Fibre_3\IT\SET\IT.XPM C 2002/01/22 12:10 New value Bruker
Is - Add Signature/S ture History Print History Print History A Save an Expe 30 50 51 52 53 Acquisition P	show History - (use La eriment File meter ne arameter	D:\opus\MCIT\MATRI andscape) B Old value Default Old value	IX-F_1.5_m_Solid_Pro	obe_Fibre_3\IT\SET\IT.XPM C 2002/01/22 12:10 New value Bruker New value
Is - Add Signature/S ture History Print History Print History A Sawe an Expension Sample Paral Operator Nan Sample Paral Operator Nan Sample Acquisition M	ihow History - (use La eriment File meter ne farameter ode	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR	IX-F_1.5_m_Solid_Pro	De_Fibre_3\IT\SET\IT.XPM C 2002/01/22 12:10 New value Bruker New value Double Sided,Forward-Bac
Is - Add Signature/S ture History Print History A 48 Save an Expe 49 50 Sample Para 51 Operator Nan 52 53 Acquisition Me 55	show History - (use La eriment File meter ne farameter ode	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR	[X-F_1.5_m_Solid_Pro	De_Fibre_3\IT\SET\IT.XPM C 2002/01/22 12:10 New value Bruker Bruker New value Double Sided,Forward-Bac
Is - Add Signature/S ture History Print History Print History A Save an Expe 49 50 Sample Paral Operator Nan 52 53 Acquisition M 55 56 Optic Parame	show History - (use La criment File meter ne arameter ode eter	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR Old value	IX-F_1.5_m_Solid_Pro	Dobe_Fibre_3\IT\SET\IT.XPM
Is - Add Signature/S ture History Print History Print History A A 48 50 50 51 52 53 Acquisition Ma 55 56 Optic Parame 57 Low Pass Filt	show History - (use La eriment File meter ne tarameter ode eter	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR Old value 2710PGN	IX-F_1.5_m_Solid_Pro	obe_Fibre_3\IT\SET\IT.XPM C 2002/01/22 12:10 New value Bruker New value Double Sided,Forward-Bac New value Double Sided,Forward-Bac New value Double Sided,Forward-Bac
Is - Add Signature/S ture History Print History Print History A Save an Expe Sample Para Operator Nan 52 53 Acquisition M 55 54 55 56 0ptic Parame 57 Low Pass Filt 58 Source Settin	show History - (use La eriment File meter ne arameter ode eter eter g	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR Old value 2710PGN On 2740/00	IX-F_1.5_m_Solid_Pro	c 2 2002/01/22 12:10 2 New value 2 Double Sided,Forward-Bac 2 New value 2 NIR 2 NIR 2 NIR 2
Is - Add Signature/S ture History Print History Print History A 48 48 48 50 50 51 52 53 54 55 55 56 55 56 57 58 50 59 50 50 50 50 50 50 50 50 50 50	show History - (use La eriment File meter ne farameter ode eter g city	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR Old value 2710PGN On 2710VSC	IX-F_1.5_m_Solid_Pro	De_Fibre_3\IT\SET\IT.XPM
Is - Add Signature/S ture History Print History Print History A 48 Save an Expe 49 50 Sample Paral Operator Nan 52 53 Acquisition P 54 Acquisition M 55 56 Optic Parame 57 Low Pass Filt 58 Source Settin 59 Scanner Velo 60 81 Optic Parame	show History - (use La eriment File meter ne tarameter ode eter g city	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR Old value 2710PGN On 2710VSC Added	[X-F_1.5_m_Solid_Pro	De_Fibre_3\IT\SET\IT.XPM
Is - Add Signature/S ture History Print History Print History A 48 Save an Expe 49 50 Sample Para 51 Operator Nan 52 53 Acquisition P 54 Acquisition Me 55 56 Optic Parame 57 Low Pass Filt 58 Source Settin 59 Scanner Velo 60 61 Optic Parame 62 Beamsnlitter	show History - (use La eriment File meter ne arameter ode eter g city setting	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR Old value 2710PGN On 2710VSC Added Quartz	[X-F_1.5_m_Solid_Pro	De_Fibre_3\IT\SET\IT.XPM
Is - Add Signature/S ture History Print History Print History A A A A Save an Expe Sample Para Operator Nan 52 53 Acquisition M 55 56 Optic Parame 57 Low Pass Filt 58 Source Settin 59 Scanner Velo 60 61 Optic Parame 62 Beamsplitter 63	show History - (use La criment File meter ne arameter ode eter g city eter Setting	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 2710PGN On 2710VSC Added Quartz	IX-F_1.5_m_Solid_Pro	Double Sided,Forward-Bac New value Double Sided,Forward-Bac New value 10 KHz NIR 10 KHz
Is - Add Signature/S ture History Print History Print History A A A A A A A A A A A A A	show History - (use La eriment File meter ne arameter ode eter g city eter Setting	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR 2710PGN On 2710PGN On 2710VSC Added Quartz Signature	IX-F_1.5_m_Solid_Pro	Dobe_Fibre_3\IT\SET\IT.XPM
Is - Add Signature/S ture History Print History Print History A A A A A A A A C D D C C C C C C C C C C C C C	show History - (use La eriment File meter ne arameter ode eter g city eter Setting	D:\opus\MCIT\MATRI andscape) B Old value Default Old value 4444AQR Old value 2710PGN On 2710VSC Added Quartz Signature	IX-F_1.5_m_Solid_Pro	De_Fibre_3\IT\SET\IT.XPM

If you work in 21 CFR 11 mode and you changed Instrument Test method files (see chapters 8 and 14), you must sign them before starting the Instrument Test.

Go to the *Setup* menu and start the function *Signature Setup*. Specify a *Signature Record* and click on *Store*. An example is given in the following figure.

SignatureSetup		X			
Setup Record Global Options Audit Trail					
21 CFR 11	1 Signature	Records			
User ID	Service				
Password	*****				
Password Verification	*****				
	Password expires: Neve	r			
First Name	Bruker				
Last Name	Optik				
Def	inition of Signature Mean	ing			
Category: Release and Meaning 1:	l Lock locked				
Category: Release Meaning 2:	qualified				
- Category: Review					
Meaning 3:					
Meaning 4:					
Meaning 5:					
Lock User		Delete Record			
Store	Cancel	Help			

Then start the function *Methods – Add Signature / Show History*, load and sign each Inatrument Test method file you have changed. For signing click on the button *Add Signature*.

Login for Signature	<
21 CFR 11	
User ID: Service	
Password:	
OK Abbrechen	

16. Installation of further Instrument Test configurations

If you have forgotten to install all Instrument Test configurations which you are interested in, or if you got new equipment (e.g. detector or fibre), it's possible to install further configurations with the OPUS CD. Start the OPUS installation in the usual way, but on the page *Select Components* only the item *Instrument test* should be checked. In this case an existing OPUS installation is not overwritten, only the new Instrument Test configurations are added to the selected directory.

Select Components		×
Select Components	Select the components you want to install, clear the componyou do not want to install. Components OPUS Workstation Optics Example Files Instrument test Documentation	o K O K O K O K O K
	Description Installs online documentation, e. g., help files, the manual as Word document, etc. Space Required: 0 K Space Available: 4194303	
	< Back Next > Cance	el