SHIMADZU Solutions for Science

SHIMADZU

TOC-V Series
TOTAL ORGANIC CARBON ANALYSER

Short-User Manual

TOC-V CPH/CPN
TOC-Control V
Version 2.00

Table of Content

I. Main Menu

Parameter	Action/Description
Start TOC-Control V Main Menu	START→PROGRAMS→TOC-Control V →TOC-Control V or double-click on the TOC-Control V icon (Desktop)

1 Measurement

1.1 Sample Table Editor

- to create and edit methods, calibration curves and sample measurement sequences.

Parameter	Action / Description
Start	Click on the "Sample Table Editor" button
User Name / Password	Enter exact user name and password
Sample Table Editor	Sample Table Editor opens to start the TOC instrument

1.2 H/W Settings

- to configure a new system
- to view or modify the instrument settings

Parameter	Action / Description
Start	Click on the "H/W Settings" button
User Name / Password	Enter exact user name and password
H/W Settings	H/W Settings opens

1.2.1 New System

- to configure a new instrument.

Parameter	Action / Description
Start	Click on the "Create a New Setting" button

Instrument Setup Wizard-1 : Basic System Information

Parameter	Action / Description
System	Enter a unique name (max. 32 characters)
Instrument serial number	Enter the serial number of the TOC-instrument (mentioned on the instrument label)

User	Name of current user is automatically entered, if entered it cannot be edited
Date of Creation	Current date is automatically entered and cannot be edited
Comment	Enter additional system information (optional)

Instrument Setup Wizard-2 : Instrument Options

Parameter	**Action / Description**
Oxidation	Select "Combustion"
Options	Select the installed instrument components (TOC, ASI, SSM, Sparge Kit and 8-port Sampler) [The selected options determine which Instrument Setup Wizard screens will subsequently be displayed.]

Instrument Setup Wizard-3 : Instrument Parameters

Parameter	**Action / Description**
Catalyst type	Select the catalyst type (Regular, High Sense or TC/TN)
Tubing Diameter Regular Suspended Particle	Select the diameter size of the sample injection tubing. 0.5 mm diameter 0.8 mm diameter
Cell length	Select the cell of the NDIR detection (Long as default, short for SSM measurements)
TC Furnace	This item sets the TC furnace temperature
Buzzer	If this item is selected, a buzzer will sound with the press of each instrument key
Auto regeneration of IC solution	If this item is selected, IC reagent will automatically be generated in special situations (Please refer to the User Manual)
Enable ready status check	Select this option to enable the Ready Status Check function [recommended, thus software always verifies Ready Status of instrument prior to starting measurement]
TN Power	If this item is selected, the power to the optional TNM-1 is turned on.

Instrument Setup Wizard-4 : ASI parameters

Parameter	**Action / Description**
Tray Type	Select ASI tray type (24 ml, 40 ml or 125 ml vial)
Needle Type	Select the needle type. (only active if Sparge Kit was selected)
No of Needle Washes	Select the number of times (0-10) the outside of the needle to be washed with dilution water, after each sample analysis
No of Flow Line Washes	Select the number of times (0-10) the flow lines to be washed with dilution water from the needle to the injection tube, at the completion of the sample sequence
Rinse	Select this option to rinse the sampling needle with dilution water between each sample.
Rinse after acid addition	Select this option to rinse the sampling needle after each acid addition.
Stirrer on	Select this option to use the magnetic stirrer. (if installed)

Instrument Setup Wizard-5 : SSM parameters

Parameter	Action / Description
SSM TC Furnace ON	Select this option to heat the TC furnace of SSM
SSM IC Furnace ON	Select this option to heat the IC furnace of SSM

Instrument Setup Wizard-6 : Communication parameters

Parameter	Action / Description
Com Port	Select the communication port
Stop Bits and Parity	Cannot be edited by the user . [determined by the hardware, automatically set based on Com Port]
[Finish] Button	The system configuration is created and the newly created system configuration is displayed as an icon in the H/W Setting List window.

1.2.2 H/W Setting List

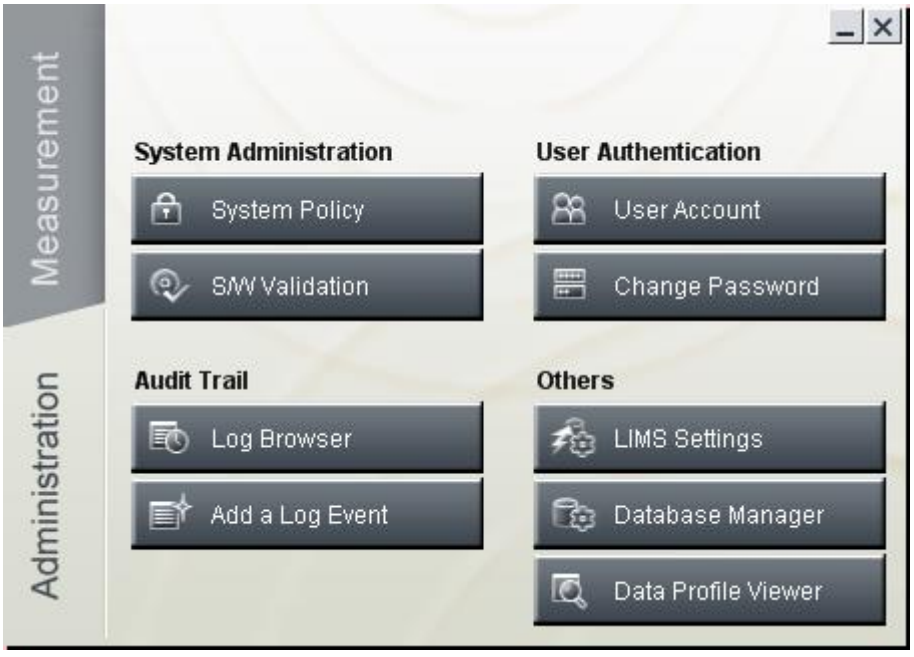
- to view or modify instrument parameters of already defined systems

Parameter	Action / Description
Open	Select the “Instrument/System” icon and press “Open” to open the instrument properties
Delete	Select the “Instrument/System” icon and press “Delete” to delete the instrument system
Close	Press “Close” to close the H/W Setting List window.

1.3. Online Manual

- to open the user manual as PDF format

2 Administration



2.1 System Administration

2.1.1 System Policy

- to check the security functions, activation of them is done during the installation

2.1.2 S/W Validation

- to verify that the TOC-Control V program files have not been modified since installation

2.2 Audit Trail

2.2.1 Log Browser

- to open the audit trail database (please refer to the Administration Manual)

2.2.2 Add a Log Event

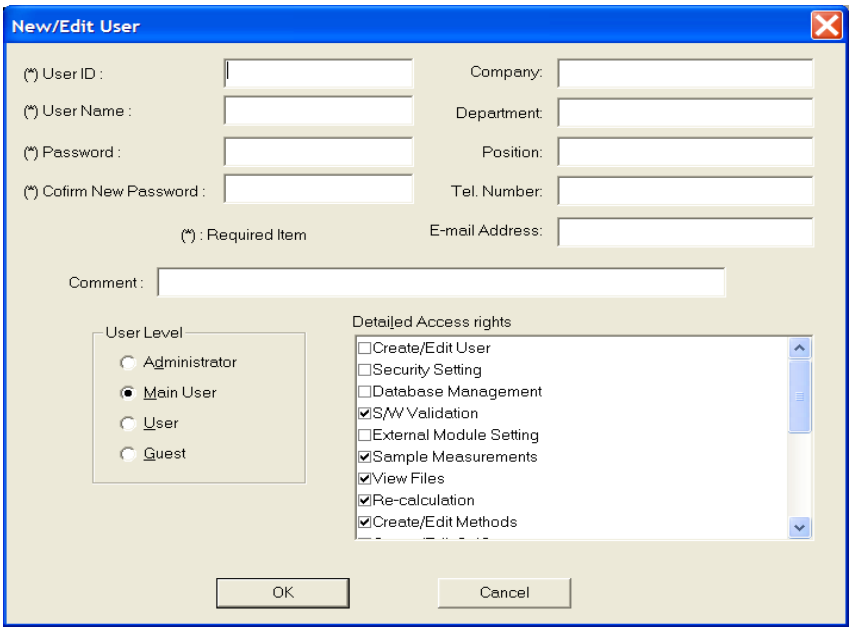
- to add an event to the Log Browser

2.3 User Authentication

2.3.1 User Account

- to create new user
- to edit user information of already registered users
- to deactivate accounts.

Parameter	**Action/Description**
Start	Click on User Accounts
User Name/Password	Enter exact user name and password [first time: "Admin", no password]
New User	Select User→New
Change existing user accounts	Select User→Edit



Parameter	**Action/Description**
User ID (required item)	Enter a user name (maximum 32 characters). Spaces are the only characters that cannot be used.
User Name (required item)	Enter additional information about the account (this field is optional max.128 characters)

Password (required item)	Enter the password for the new account. The limits for password length and complexity can be changed. Please refer to the Administration Menu
Confirm Password (required item)	Enter the password again.
Company, Department, Position, Tel, email	Enter additional information of user if required
User Level Administrator Main User User Guest Detailed Access Rights	Select a radio button to establish the user level [Each user level has a set of access rights that are selected by default. Adaptation is possible, see detailed access rights.] Add or remove access rights for main user, user and guests
Detailed Access Rights	Lists the functions that a user can access. Each of the four user levels has a default list of access rights, displayed in this field. The administrator can use this list to add or remove access rights for main user, user and guests. Please refer to the Administration Menu
[OK]	Click on the OK button to create a new account

2.3.2 Change Password

- to change the password of user ID

2.4 Others

2.4.1 LIMS Settings

- The LIMS-related settings are used to establish a relationship between external applications and TOC-Control V software. These applications run in the background before an d after measurement
- Please refer to the Administration Manual

2.4.2 Database Manager

- The Database Manager enables export of the database file in .mdb format (Microsoft Access)
- Please refer to the Administration Manual

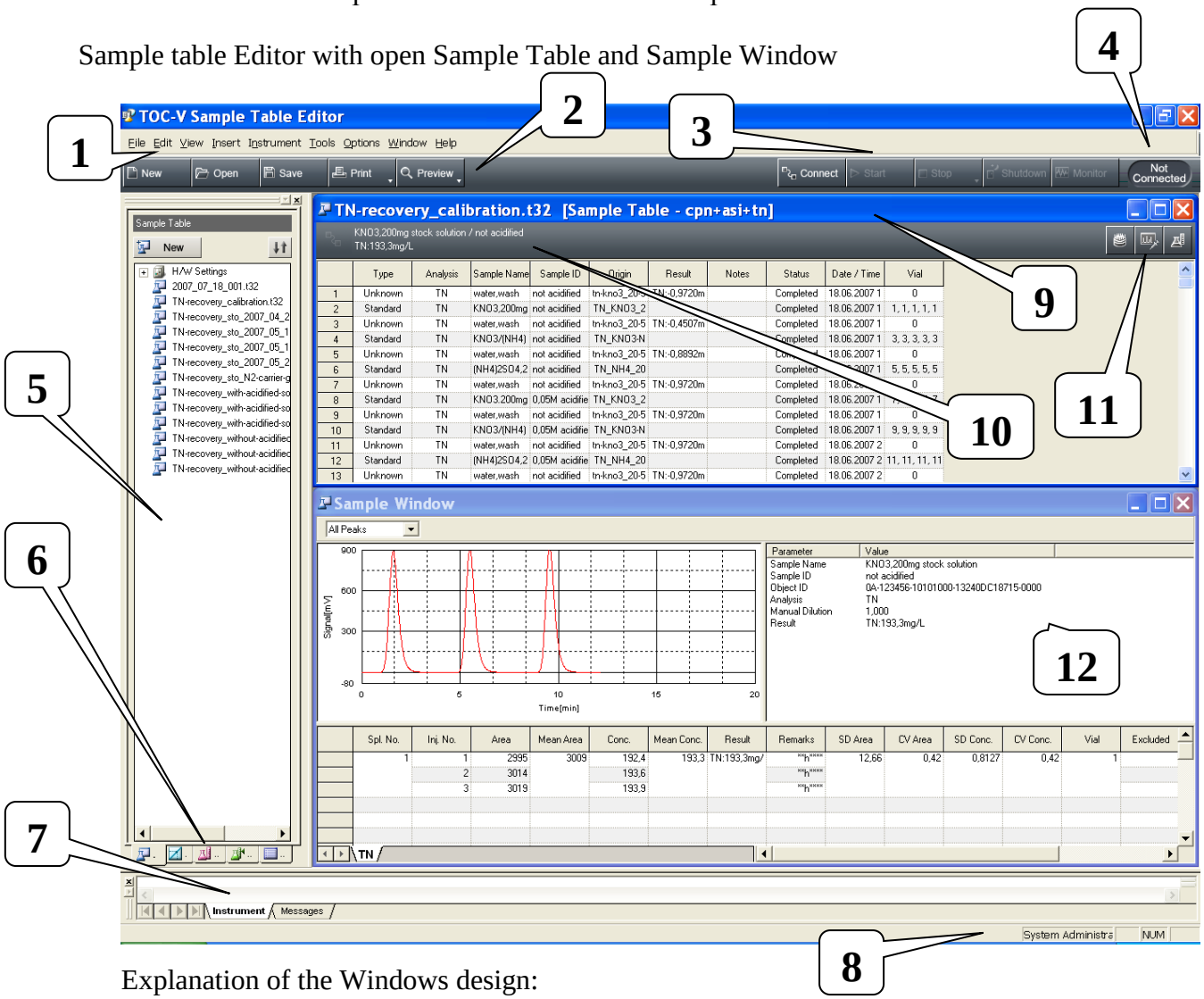
2.4.3. Data Profile Viewer

- The data profile can be exported from TOC-Control V software and displayed. Each row of the TOC-Control V sample table is output as an individual data profile

II. Sample Table Editor

Start the TOC-Control V from the Windows Start menu, and click the Sample Table Editor or click the short cut “Sample Table Editor” on the desktop.

Sample table Editor with open Sample Table and Sample Window



Explanation of the Windows design:

1: Menu bar
2: Tool bar for the file
3: Tool bar for the instrument
4: Status indication for instrument
5: File viewer for Sample tables, Calibration curves, Methods, Control samples and Schedule files
6: Tabs to change the file viewer
7: Output bar
8: Status bar with name of the Login
9: Sample table, name of the sample table file in the header
10: Display of the sample information according to the selected row in the sample table
11: Buttons for Vial settings, Sample window and measurement parameters
12: Sample Window

1. Create a Calibration Curve File

A Calibration Curve File is used to generate a calibration curve. This file includes standard solution concentration and measurement parameters

- Click “New” in the Calibration Curve tab of the file viewer or
- Select “File” – “New” – “Calibration Curve”

Calibration Curve Wizard –1 System Information

Parameter	**Action/Description**
System	Select the instrument to be used for measurement
Operator	Name of current user is automatically entered
Date of Creation	Current date and time are automatically entered
Comment	Enter a comment (512 characters minimum)

Calibration Curve Wizard –2 Calibration Curve Type

- to select options that specify the calibration curve type.

[refer to page 12 to see the different applications and consequences of these types]

Parameter	**Action/Description**
Calibration points are distributed uniformly over the calibration range	Select this option to calculate the calibration point concentration automatically. The software will calculate the concentrations by distributing them in equal amounts over the measuring range of the calibration curve
Edit calibration points manually	Select the option to enter the calibration point concentration manually on a subsequent Wizard page, the calibration Points list.
Calibration Curve according to DIN 38402/P-51	Select this option to create a calibration curve according to DIN 38402. This type consists 10 calibration points, with 10 injections of the lowest and highest standards and a single injection of the intermediates standards
Calibration curve according to USP/EP	Select this option to create a calibration curve according to the USP/EP standards (2 calibration points with concentration 0 and 500 µg/L)
Div. Standard Solutions / Fixed Dilution	Allows for manual entry of different standard solution with one fixed dilution factor
Div. Standard Solutions	Use of different standard solutions, dilution factor is set automatically if concentration is too high
Dilution from Standard Solutions	The instrument automatically prepares the standard solutions from a stock solution that will be used for generating the calibration curve

Calibration Curve Wizard –3 Analysis Information

Parameter	**Action/Description**
Analysis	Select the analysis type from drop-down list. Depending of the analysis type the wizard windows for each single parameter appears
Default Sample Name	Enter the default sample name (64 char. Max.) for the calibration standards
Default Sample ID	Enter the default sample ID (64 char. Max.) for the calibration standards

Calculation Method Point to point Linear regression	Select the calculation method to be used for the calibration curve. The point to point curve fit draws a straight line between adjacent data points and considers each line segment to be a separate calibration line governed by its own equation. A linear regression statistically determines the line that best fits the pattern of all data points.
Zero Shift	Select this item to shift the calibration curve through origin.
Multiple Injections	If this item is selected, multiple injections are made from a single aliquot of standard solution. This larger standard aliquot is drawn in the syringe in one aspiration an is sufficient to accommodate all of the repeat injections
File Name	Enter the name of the new calibration curve. Click on the browse button to save the file in a directory other than default directory

Calibration Curve Wizard –4 Calibration Measurement Parameters

Parameter	**Action/Description**
Units	Select the concentration unit.
Concentration Range	Enter the lower and upper limits of the calibration curve concentration range
No. Cal. Points	Enter the number of calibration standards
No. of Injections	Enter the minimum/maximum number of injections for the standards
No. of Washes	Enter the number of times the syringes is washed with sample
SD Max.	Enter the standard deviation limit. This limit is used to assess the analysis result
CV Max	Enter the coefficient of variation limit. This limit is used to assess the analysis result
Sparge Time	Enter the desire sparge time. This option is available only for NPOC analysis.
Acid Addition	Enter the percentage of acid to be added to the standard solution

Calibration Curve Wizard –5 Calibration Points List

[please refer to page 12]

Parameter	**Action/Description**
No.	Displays the calibration point number. Note that the standards will be analysed in the order shown
Auto Dilution	Displays the calculated automatic dilution factor
Injection Volume	Displays the injection volume for the calibration standards
Calibration points	Displays a table of measurement parameters for each calibration point
[Edit]	To edit the parameter for calibration point, highlight the point in the table and click on [Edit] button
[ADD]	To add a calibration point, click on the appropriate number in the No column to specify the insertion point, then click on [ADD] button
[Delete]	To delete a calibration point, highlight the point in the table and click on [Delete] button
[Delete All]	To delete all calibrations, click on [Delete All] button

Calibration Curve Wizard –6 Additional Settings

Parameter	Action/Description
Use default settings	Select this option to use the default values for peak detection.
Min. integration time	Enter the minimum time the instrument signal will continue to be detected
Max. integration	Enter the maximum time the instrument signal will be detected when no peak is found
Correlation Coeff. Check	If this item is selected, the calibration curve error judgement is based on the correlation coefficient. If the calibration curve contains less than 3 calibration points, error judgement is not possible and this option will have no effect
Failure Action (1st time) Continue Stop Repeat	Select the process to be conducted if an error occurs. Records the error and continue the measurement Records the error and stops analysis Records the error and re-analyse the calibration curve
Failure Action (2nd time) Continue Stop	Select the process to be conducted if a second error occurs. Records the error and continue the measurement Records the error and stops analysis
Lower Limit	Enter the minimum correlation coefficient value. If the calculated correlation coefficient is less than the value entered, an error is assessed.

Click Finish. The calibration curve is saved.

Overview about several possibilities to create a Calibration Curve:

Wizard -2 **Calibration curve type**	**Calibration points are distributed uniformly over concentration range**	**Edit calibration curve point manually**	**Calibration curve according to DIN 38402/P-51**	**Calibration curve according to USP/EP**
Application	Normal calibration curve, data points are added automatically, helps by multiple point calibration curve	Normal calibration curve, data points are added manually **!Normally used!**	Special calibration curve: always10 points, first point and last point are injected 10times all other points only one time; Linearity and homogeneity are calculated	Special calibration curve: Always 2 points: 0 and 500ppb (United States Pharmacopoeia or European Pharmacopoeia
Wizard -3	Same	Same	Same	Same
Wizard -4 **Units** **Concentration range** **No. of Cal points** **No of Injections** **No of Washes** **SD Max** **CV Max** **Sparge time** **Acid addition**	 Selectable default: ppm **Enter range: e.g 0-5** **Enter No of Points: e.g. 3** Selectable (1/20) Selectable (0-10) Selectable (0-9999) Selectable (0-100%) Selectable (0-20min) Selectable (0-20%)	 Selectable default: ppm **Disable** **Disable** Selectable (1/20) Selectable (0-10) Selectable (0-9999) Selectable (0-100%) Selectable (0-20min) Selectable (0-20%)	 Selectable default: ppm **Enter range: e.g. 10-100** **Recommended: 10** **Recommended: 1** Selectable (0-10) **Disable** **Disable** Selectable (0-20min) Selectable (0-20%)	 **Recommended: ppb** Fixed conc. range:0-500 **Fixed No. of Cal. Points: 2** Selectable (1/20) Selectable (0-10) Selectable (0-9999) Selectable (0-100%) Selectable (0-20min) Selectable (0-20%)
Wizard -5 **Calib. Points list** **Inj. Volume** **Calibration Points**	 Recommended value **Example: 0ppm** **5ppm** **10ppm**	 Calculated automatic. **Empty calibration points list. Manually filling via [ADD]**	 Recommended value **List of 10 calibration points in the range from 10 – 100 (as example)**	 Recommended value **List: 0ppb** **500ppb**
Wizard -6	Same	Same	Same	Same

2. Creating a Method

A Method is a file used to set the analysis parameters used for measuring unknown samples.

- Click “New” in the Method tab of the file viewer or
- Select “File” – “New” – “Method”

Method Wizard –1 System Information

Parameter	Action/Description
System	Select the instrument
Operator	Displays the current operator name. This is fixed.
Date of Creation	Displays the current system date and time. This is fixed.
Comment	Enter a comment (512 characters minimum)

Method Wizard –2 Analysis Information

Parameter	Action/Description
ANALYSIS EXAMPLE: TOC	Select the analysis type from drop-down list. Depending of the analysis type the wizard windows for each single parameter appears Wizard windows for TC and IC appears
Default Sample Name	Enter the default sample name (64 char. Max.)
Default Sample ID	Enter the default sample ID (64 char. Max.)
Manual Dilution	Enter the sample preparation dilution factor if the sample was diluted manually. The entered value will be used in the concentration calculation.
No of Determinations	Enter the number of times each sample is to be measured. This means determination of same sample in different vials.
Enable/disable USP/EP	Select this item to ensure that the results are compliant to the USP/EP standard
File Name	Enter a method file name

Method Wizard –3 Calibration Curve

Parameter	Action/Description
Analysis	Displays the selected analysis type
Calibration Curve 1-3	Enter the name of the calibration curve or click on the Browse button to select a file using the File>Open dialog box If no calibration curve is set, injection parameters has to enter manually

Method Wizard – 4 Analysis Information

If a calibration curve is set in Wizard 3, the parameters of this calibration curve are displayed. The settings are changeable, but normally the same parameters of calibration curve should be used for sample measurement.
If no calibration curve is set, injection parameters have to be entered manually.

Parameter	Action/Description
Analysis	Displays the selected analysis type
Units	Select the concentration unit to be used for samples
Injection Volume	The injection volume is automatically entered based on selected calibration curve

Expected Conc. Range	Enter the maximum expected concentration. A range value is automatically entered based on the selected calibration curve
No. of Injections	Enter the minimum/maximum number of injections for the samples
SD Max CV Max	Enter the maximum standard deviation and coefficient of variance that is acceptable for the injections. If one of these value is met, no additional injections are required. If both values are exceeded, the samples are automatically re-injected up to the maximum number of injections.
No. of Washes	Enter the number of times the syringes is to be washed with sample before the first analysis injection
Auto dilution	Enter the dilution factor for the samples. The instrument will automatically dilute the sample by this factor, and the result will be multiplied by the factor to obtain the final concentration.
Sparge Time	Enter the required sparge time. This option is available only for NPOC analysis.
Acid Addition	Enter the percentage of acid to be added to the sample
Multiple Injections	If this item is selected, multiple injections are made from a single sample aliquot. This larger aliquot is drawn in the syringe in one aspiration and is sufficient to accommodate all of the repeat injections
Use blank check area	If selected, the blank check value is subtracted from the analysis result
Auto. Correction of inj. Vol. and dilution	If selected the instrument will automatically adjust the injection volume and dilution factor and conduct re-analysis when the measurement result exceeds the calibration curve range

Method Wizard –5 Peak Time Parameters

Parameter	**Action/Description**
Analysis	Displays the selected analysis type
Use default settings	If this item is selected, the software default values are used for peak detection and the Min. integration time and Max. integration items are disabled
Min. integration time	Enter the minimum time the instrument signal will continue to be detected
Max. integration	Enter the maximum time the instrument signal will be detected when no peak is found

Note: Wizards from 3 to 5 are displayed for each single analysis type.

Click Finish and the method file is saved

3. Create a Sample Run

- Click “New” in the Sample Table tab of the file viewer or
- Select “File” – “New” – “Sample Table”

Parameter	Action/Description
System	Select the instrument
Comment	Enter a comment (512 characters minimum)

3.1 Editing the Sample Table

Insert the sample measurement parameters into the Sample Table

a) Insert the calibration curve (Standard solutions) into the Sample Table

- Drag the calibration curve file from the Calibration Curve tab of the file viewer or
- Select “Insert” – “Calibration Curve” and take the required calibration curve from the calibration curve folder or
- Press the right mouse button in the sample table, select “Calibration Curve” and take the required calibration curve from the calibration curve folder

b) Insert unknown samples

- Drag the method file from the Method tab of the file viewer
- Select “Insert” – “Sample” or
- Press the right mouse button in the sample table, select “Sample”

Sample Wizard –1 Parameter Source

Parameter	Action/Description
Method	To create the sample group using measurement parameters from a specified method. Enter the desired method or select the method using the [Browse] button
Calibration Curve	To create the sample group using the measurement parameters from a specified calibration curve. Enter the desired calibration curve or select the curve using the [Browse] button
Edit parameters manually	To insert a sample without defining a source. Sample measurement parameters will be entered in subsequent pages of the Sample Wizard.
Skip remaining Wizard pages...	To accept all measurement parameters from the source file. The [Next] button will become to [Finish] button and subsequent pages of the Sample Wizard will not be displayed. This option is disabled if *Edit parameters manually* is selected.

- Sample Wizard 3-5
- Please refer to chapter 3. Create a Method, Wizards 3-5.

c) Insert of multiple Samples

- When analyzing multiple samples using the same conditions, the inserted sample can be reproduced by copying and pasting. Select the inserted sample, right-click in the cell at the left end of the row and click “Copy” Select the rows in the Sample Table corresponding to the number of samples to set, right-click in the cell at the left end of the row, and click “Paste”

- Right-click in the left cell in the row where multiple samples are to be inserted. Select "Insert" – "Multiple Samples"

Sample Group Wizard –1 Sample Source

- enter the parameter source for the sample

Parameter	Action/Description
Method	- to create the sample group using measurement parameters of an existing method file - Enter the desired method or select the method using the Browse button
Calibration Curve	- to create the sample group using the measurement parameters of an existing calibration curve - Enter the desired calibration curve or select the curve using the Browse button

Sample Group Wizard –2 Sample Parameters

Parameter	Action/Description
No of Samples	Enter the number of samples in the group. (1-100.)
Start Vial	Enter the starting vial position for the sample group. This field is disabled if ASI is not supported by the system
Sample Name Sample ID	The default designations for these fields are obtained from the method or calibration curve identified in page 1. Enter other name if desired.
Index Start	Select this option to start counting index. Each sample added receives an increased counting index number.
Insert Cal. Curve / Control Samples	Select this option to insert calibration curves and control samples alon with the samples

Click Finish to insert the group of samples into the sample table
If "Insert Cal. Curve / Control Samples was selected, the Next button is displayed to enable proceeding to the next step in the wizard

Sample Group Wizard –3 Calibration Curves

- to define the sequence of calibration

Parameter	Action/Description
At the beginning of the sample group	Select this item to insert a calibration curve before the sample analysis
Always, after "number " of samples	Select this item to inert a calibration curve after every fixed number of samples. Enter that number in the box
Calibration Curves	Displays the information related to the added calibration curves. Up to 3 separate calibration curves may be added
[Add]	Use this button to add a calibration curve
[Delete]	Highlight a calibration curve listed in the window and click on the Delete button to remove the curve from the sample group

Sample Group Wizard –4 Calibration Curve Check

- Select the control samples to be inserted with the calibration curves

Parameter	Action/Description
Control Sample selection	Select the control sample to be attached to the calibration curve. These parameters can be entered for each calibration curve selected in Sample Wizard 4.

Sample Group Wizard –5 Controls

- to define the sequence of control samples

Parameter	Action/Description
At the beginning of the sample group	Select this item to insert a control sample before the sample analysis
Always, after "number " of samples	Select this item to inert a control sample after every fixed number of samples. Enter that number in the box
At the end of the sample group	Select this item to insert a control sample at the end of the sample analysis
Control Templates	Displays the information related to the added control samples. Up to 3 separate control samples may be added
[Add]	Use this button to add a control template
[Delete]	Highlight a control template listed in the window and click on the Delete button to remove this from the sample group
[Finish]	Click on the [Finish] button to save changes and add the sample group to the Sample Table.

4. Schedule File

4.1 Creating a new Schedule

- A schedule is a stored file which contains measurement parameters for multiple samples, including the specific sequence of analyses. The saved content of the file can be called up as desired, and loaded into a sample table.
- Editing of a schedule file in the format of a sample table is conducted using the same operations as in a sample table.

- Click “New” in the Schedule tab of the file viewer

Parameter	**Action/Description**
System	Select the system to be used
Comment	Enter a comment in the comment box, as necessary

A new schedule is created, and opens in the Sample Table Editor
- Enter information in the schedule in the same manner as in the Sample Table
- Enter the vial information, by clicking the button
- Save the Schedule file in the schedule folder

4.2 Export the Sample table as Schedule File

The Contents of a sample table can be exported as a Schedule file. The Schedule file can be exported in either sample table format or text format
- Click “File” – “Export Schedule File”
- Select either Sample Table Format or ASCII Text Format
- Enter the file name and destination path and click Save

4.3 Insert a Schedule File

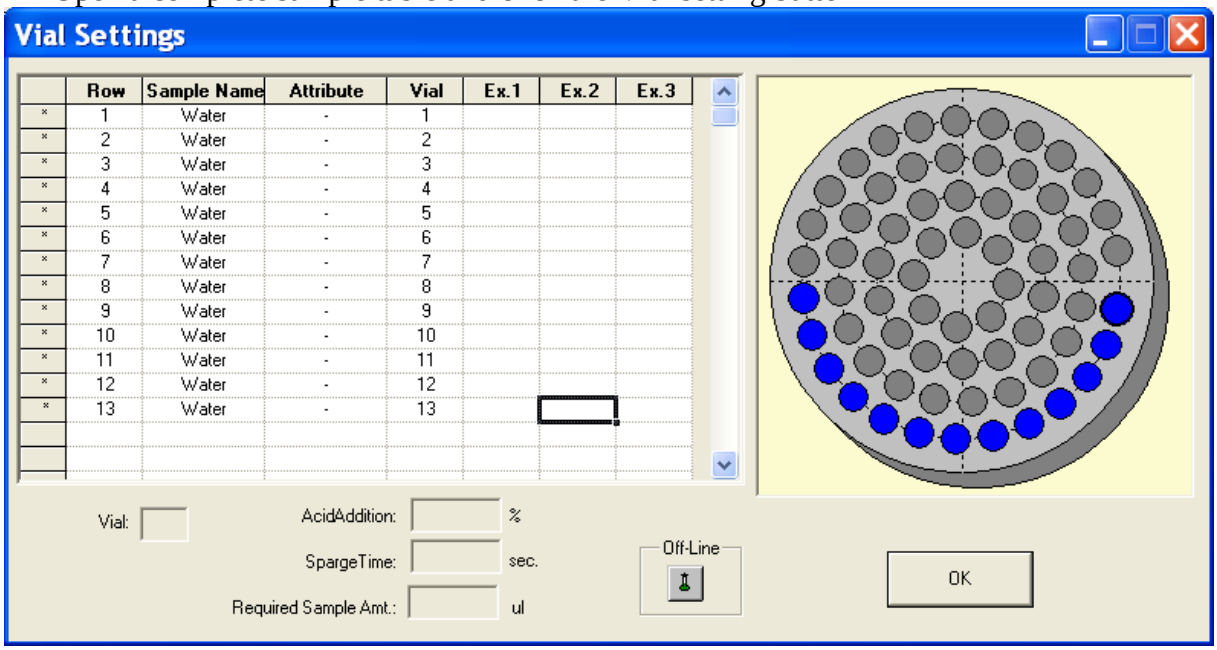
a) From the File Viewer
- The contents of a schedule can be inserted into the sample table by dragging the schedule file from the viewer

b) From the Menu
- Select the row of the sample table where the schedule content is to be added
- Select “File” – “Import Schedule File”
- Select the schedule file form the “open” dialog box
- The schedule content is inserted into the sample table

5. Vial number

After inserting the samples in the sample table, the vial number of vials to be sampled I the ASI-V must be associated with the samples

- Open a complete sample table and click the Vial setting button



Parameter	Action/Description
Table	The sample table displays the row, sample name and attribute of the inserted samples. Content in the Row, Sample Name and Attribute columns cannot be edited
Vial arrangement	Designated vials are marked blue. If the total injection volume exceed the capacity the vial is marked red
Vial	"!" is displayed if the total injection volume exceeds the vial capacity
Acid addition	Select a vial in the drawing to display the percent of acid to be added to the vial
Sparge Time	Select a vial in the drawing to display the length of time sparging will be conducted in that vial
Required Sample Amt.	Select a vial in the drawing to display the total injection volume from that vial
Off-Line	Select a cell in the Vial and enter a "0" to conduct sampling from the sampling tube on the left side of the instrument
[OK]	To verify the information. The Sample Table is displayed with the inserted analysis

Enter the vial number by:
a) Keyboard entry
b) Entry by Dragging
c) Entry by double-clicking the Vial arrangement drawing

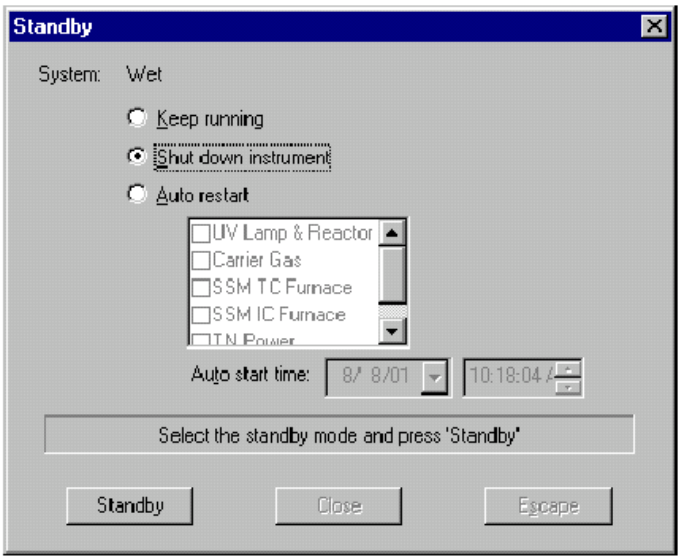
III. Analysis

1 Connecting to the Instrument

- Open the Sample Table to be used and click the [Connect] button of the Tool bar
- Click “Use Settings on PC”

2 Start of analysis (standby - function)

- Click [Start] button of the Tool bar
- Define the Standby option



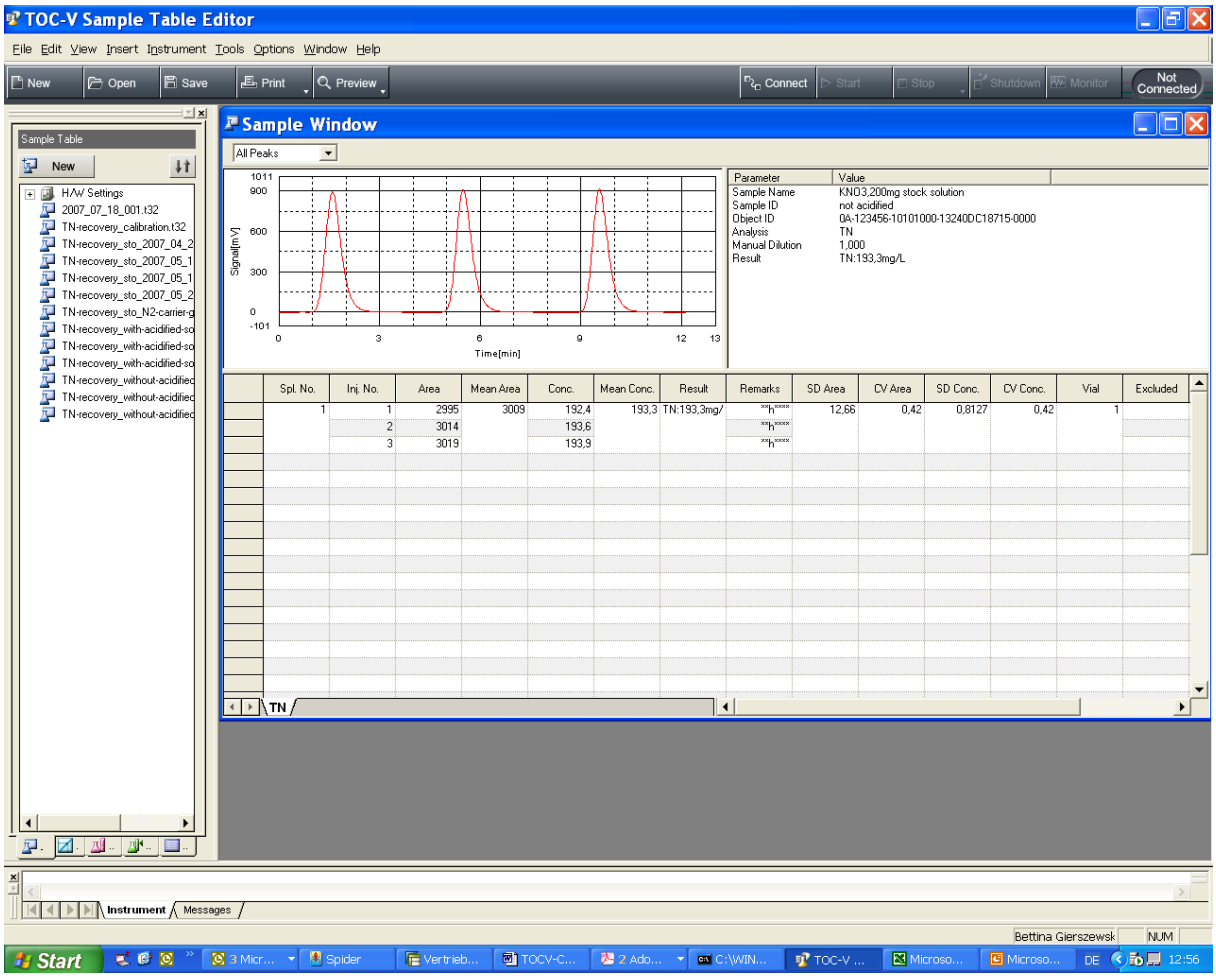
Parameters	Action/Description
System	Actual system name is displayed
Keep running	The instrument remains in the Ready state at the completion of the analysis sequence even after analysis is completed
Shut down instrument	The instrument automatically turns off at the completion of the analysis sequence
Sleep	The instrument enters the sleep state and restarts at a specified date and time
Auto restart time	To set the restart time.
[Standby]	To verify the settings

Parameters	Action/Description
“Sparging/Acid Addition” window	Shows again the vial settings parameter
[OK]	To verify the settings

Parameters	Action/Description
“Start ASI Measurement” window	
[Start]	To start the analysis

3 Sample Window - During Measurement

- Click the [Sample Window] button on the Tool bar



Parameters	Action/Description
Graph	
Current Peak	Displays the peak profile of the highlighted injection.
All Peaks	Displays all injection peaks for the selected sample
Calibration Curve	Displays calibration curve (for calibration standards only) This function is not available during real-time analysis.
Parameter Table	Displays the sample parameter of measured sample
Injection Table	Displays the result of the injection

4 Editing the Sample Table during analysis

The sample table can be edited during analysis by changing to the Edit Mode. This mode allows the following operations to be conducted in the sample table in the same way as when analysis is not being conducted

- During analysis, select “Instrument” – Edit Mode”
- The sample table is placed in the Edit Mode and following procedure can be conducted:
  - Adding and deleting samples
  - Changing analysis parameters and vial numbers
  - Printing reports for samples that are already analysed
- Click [Start] button to cancel the Edit Mode and restart analysis

5 Stop of Measurement

Parameters	**Action/Description**
Stop of Measurement	Select “Stop” in “Instrument” menu
Peak Stop	This option interrupts processing of the current injection, and analysis proceeds to the next injection measurement
Stop (after current sample is completed)	This option stops analysis after all of the scheduled injections of the current samples have been analysed
Stop (stop all processes immediately)	This option immediately interrupts the current analysis