DataApex
Clarity™
CHROMATOGRAPHY SOFTWARE

MICROSAIC 4500 MID

Clarity Control Module   ENG

Author: DM

Contents

To facilitate the orientation in the **Microsaic 4500 MiD** manual and **Clarity** chromatography station, different fonts are used throughout the manual. Meanings of these fonts are:

Open File (italics) describes the commands and names of fields in **Clarity**, parameters that can be entered into them or a window or dialog name.

WORK1 (capitals) indicates the name of the file and/or directory.

ACTIVE (capital italics) marks the state of the station or its part.

[Chromatogram](#) (blue underlined) marks clickable links referring to related chapters.

The bold text is sometimes also used for important parts of the text and the name of the **Clarity** station. Moreover, some sections are written in format other than normal text. These sections are formatted as follows:

Note: Notifies the reader of relevant information.

Caution: Warns the user of possibly dangerous or very important information.

▌**Marks the problem statement or trouble question.**

Description: Presents more detailed information on the problem, describes its causes, etc.

Solution: Marks the response to the question, presents a procedure how to remove it.

1 Microsaic 4500 MiD Control Module

This manual describes the setting of the **Microsaic 4500 MiD** and **4000 MiD** detectors, including the **MiDas** module. The control module enables direct control of the instrument over Local Area Network (LAN).

Fig. 1: Microsaic 4000 MiD detector

Direct control means that the MS detector can be completely controlled from the **Clarity** environment. Instrument method controlling the analysis conditions will be saved in the measured chromatograms.

2 Requirements

- **Clarity** Installation with LC Control module (p/n A24) and MS Extension (p/n A38).
- **Microsaic 4500 MiD** detector with firmware (Masscape) version 2.8 or higher.
- LAN card in the PC.
- LAN cross cable (p/n SK08).

Note: Cables are not part of **Clarity** Control Module. It is strongly recommended to order required cables together with the Control Module.

3 Installation Procedure

3.1 Hardware - Wiring

The **Microsaic 4500 MiD** detector is controlled by LAN communication. It uses standard LAN cable. To set the communication with**Clarity** and HPLC system , following parameters need to be set properly. There are two ways how the **Microsaic 4500 MiD** detector can be connected - while on the local network which is using an active networking component (e.g. a router) with a DHCP turned on, or using a direct connection to the PC with a static IP address set in the **Microsaic 4500 MiD**. In bot of the cases, some necessary settings are common:

1. In Masscape software - Customise dialog, the option **Remove Connection Pattern. Close socket after command** must be unchecked.
2. The firewall must allow clarity.exe to send/receive signals over LAN, the respective used ports must be unblocked. Note the network used for communication should not by set as Public – the firewall applies lot of restrictions to it in default settings.

The rest of the settings differ based on whether the detector works with DHCP or without it.

Outside of the LAN connection, the **Microsaic 4500 MiD** detector is equipped with I/O connector, through which the detector (and **Clarity** too) can be started remotely using the TTL input. The pins used for that are described within the detector documentation.

3.1.1 Usage with DHCP

This mode is preferred one by detector's producer, but expects an active networking component on the network.

1. Open Masscape software and use the two small up/down arrows in top right corner to open menu
2. Use *VPN Connections - Configure VPN...*
3. Use the *Add* button in the emerging *Network Connections* dialog, chose *Ethernet* from the dropdown menu
4. Name the connection and switch to the *IPv4 Settings* tab; in the *Method* dropdown, select *Automatic (DHCP)* option.
5. Save the settings, close the dialogs
6. Use the up/down arrows again to open the menu, then select the just created network
7. Use Connection Information to display a dialog describing the network settings including the assigned IP Address.

Note: The IP address on the active networking component that is assigned to **Microsaic 4500 MiD** detector should be reserved for the detector - once **Clarity** sets the configuration, it does not have any reason to check for the changes of the IP Address again.

3.1.2 Usage without DHCP (direct link - 4500 MiD)

This mode should be used when the detector is directly connected to the PC or when there is a passive networking component (e.g. a switch) between the PC and detector. To connect the **Microsaic 4500 MiD** to the PC, please:

1. Open Masscape software and use the two small up/down arrows in top right corner to open menu
2. Use *VPN Connections - Configure VPN...*
3. Use the *Add* button in the emerging *Network Connections* dialog, chose *Ethernet* from the dropdown menu
4. Name the connection and switch to the *IPv4 Settings* tab; in the *Method* dropdown, select *Link-Local Only* option.
5. Save the settings, close the dialogs
6. Use the up/down arrows again to open the menu, then select the just created network
7. Restart the Masscape
8. In the top-right corner of Masscape, the IP Address is shown. The same IP Address should be found when *AutoDetect* button in the *MS Detector Setup* dialog is used.

Note: The IP address of the LAN board in PC must have the same subnet as used by the HPLC system (e.g. 10.1.1.100). Last three digits must be different to enable the communication.

3.1.3 Usage without DHCP (direct link - 4000 MiD)

For **4000 MiD** the procedure to switch to the static IP Address is possible as well, but expects uploading special zip file to the detector. Please contact **DataApex** support for more details.
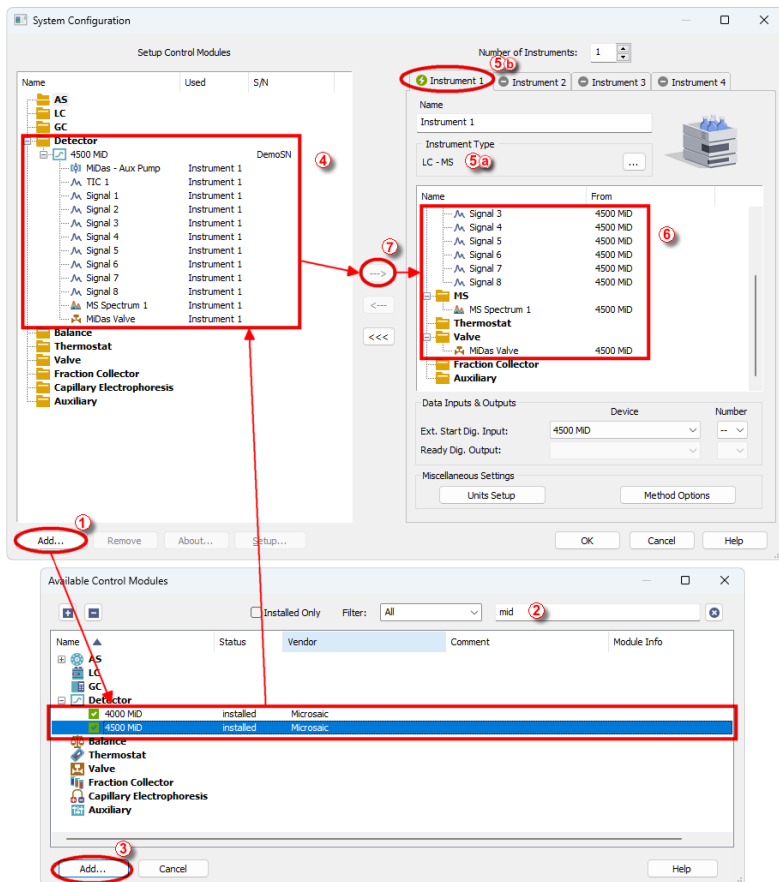
3.2 Clarity Configuration

Fig. 2: How to add Microsaic 4500 MiD

- Start the **Clarity** station by clicking on the ▲ icon on the desktop.
- Invoke the *System Configuration* dialog accessible from the *Clarity* window using the *System - Configuration...* command.
- Press the *Add* button ① (see **Fig. 2** on pg. **5**.) to invoke the *Available Control Modules* dialog.
- You can specify the searching filter ② to simplify the finding of the driver.
- Select the **4500 MiD** and press the *Add* ③ button.

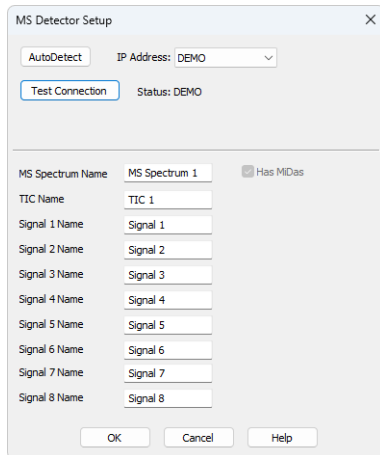The MS Detector Setup dialog will appear (see **Fig. 3** on pg. **6**.).

Fig. 3: MS Detector Setup

- Press the *AutoDetect* button and pick one from the list of found detectors. Then press *Test Connection* button to get the information on the particular detector.

Note: Other fields from this dialog are described later in the description of the MS Detector Setup dialog.

- Press the *OK* button.

The **4500 MiD** will appear in the *Setup Control Modules* list ④ of the *System Configuration* dialog.

- Change the *Instrument Type*⑤ ⓐ on the desired *Instrument* tab ⑤ ⓑ to LC-MS.
- Drag the **4500 MiD** item from the *Setup Control Modules* list on the left ④ to the *Instrument* tab on the right ⑥ , or use the ⟶ button ⑦ .

Note: The configuration dialog of the **Microsaic 4500 MiD** detector (MS Detector Setup) can be displayed any time by double-clicking on its icon or using the *Setup* button.

4 Using the control module

New MS tab is created in the *Method Setup* dialog. It can be accessed by using the *Method - MS Control…* command from the *Instrument* window.

4.1 Method Setup - MS - General

The *Method Setup - MS* tab for the **Microsaic 4500 MiD** detector has two sub-tabs: *General*, where all information on the acquisition of the signal is set, and the MiDas sub-tab containing the settings of the **MiDas** unit.
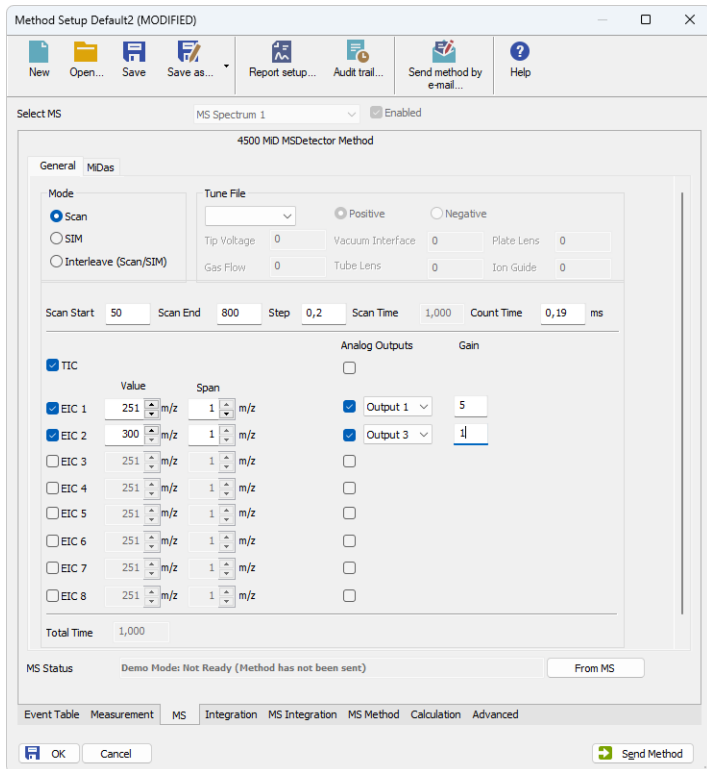

Fig. 4: Method Setup - MS - General

Mode

Mode section sets the basic operation conditions of the **Microsaic 4500 MiD** detector. The detector can work in three modes - *Scan*, *SIM* and *Interleave*.

Scan

In *Scan* mode, the spectra are collected as defined by the *Scan Start* and *Scan End* fields, with the m/z step defined in the *Step* field. The detector can, outside of the spectra, provide up to 8 *EIC* (Extracted Ion Current) signals, which are

extracted from the spectra in the **Microsaic 4500 MiD** detector, and the *TIC* (Total Ion Current) signal.

SIM

In *SIM* mode, no spectra are collected, but rather selected *SIM* (Single Ion Monitoring) signals are collected. These signals are defined by the table in the lower portion of the dialog by m/z *Value* and *Dwell Time*, the time for which the particular signal will be collected. The SIM *Span* is always *1*. On top of the particular SIM signals, the TIC signal is provided too calculated as a sum of defined SIMs.

Interleave

In *Interleave* mode, a combination of Scans and SIMs is collected. Scan is defined the same as in *Scan* mode by *Scan Start*, *Scan End* and *Step* fields, SIMs are defined the same as in *SIM* mode in the table below by m/z *Value* and *Dwell Time*. The SIM *Span* is always *1*. No extracted signals are available in the *Interleave* mode, as opposed to the *Scan* mode.

Note: In any of the modes, at least one signal must be selected in the method to be able to start the acquisition.

Tune File

Displays the contents of the preset tune file. The displayed value in the *Tune File* combo- box is *Actual* as the **Microsaic 4500 MiD** detector does not provide information on which tune file it uses, but you can still check the contents of the file used. Selecting different tune file from the list and sending the method changes the tune file used by the **Microsaic 4500 MiD** detector. The information on the contents of the tune file include the set *Tip Voltage*, *Gas Flow*, *Vacuum Interface*, *Tube Lens*, *Plate Lens* and *Ion Guide* settings, as well as polarity of the ionization.

Scan Start

Defines the lowest m/z value in the spectra collected in the *Scan* and *Interleave* modes. The field can contain any value between *50* and the value in the *Scan End* field.

Scan End

Defines the highest m/z value in the spectra collected in the *Scan* and *Interleave* modes. The field can contain any value between the value in the *Scan Start* field and *800* for **4000 MiD**, or value between the value in the *Scan Start* field and *1400* for **4500 MiD**.

Step

Defines the m/z step for the spectra acquisition in the *Scan* and *Interleave* modes. The allowed values are either *0.1* or *0.2*.

Scan Time

Displays the scan time calculated from the *Scan Start*, *Scan End*, *Step* and *Count Time* parameters. Due to rounding of *Count Time* values to one decimal place during internal calculations in the **Microsaic 4500 MiD** detector, the *Scan Time* value displayed before sending and receiving method and after that may differ.

> *Note:* It is not possible to use the scan time lower than *0.5 s* as the **Microsaic 4500 MiD** detector does not allow such short scan times.

Count Time

Sets the duration of the data collection on each m/z value in the *Scan* and *Interleave* modes. Allowed values range between *0.10* and *999.00* ms.

SIM List/EIC List

Defines the collection of TIC, SIM signals, EIC signals and the setting of **Microsaic 4500 MiD** detector analog outputs. The collection of particular signal is governed by the checkbox in the first column of the section, further settings then define the signal parameters. The columns define the m/z *Value* of the signal, signal *Span* (width of the m/z span for data collection and *Dwell Time* (the time for which the given signal will be collected). For *SIM* and *Interleave* modes, the *Span* column is hidden and the *Span* is always *1*, for *Scan* mode, the *Span* is user definable. *Dwell Time* column is on the other hand not available for the *Scan* mode.

The *Analog Outputs* column allows to set up to 4 signals from the offered list (TIC and SIM/EIC) to be sent to **Microsaic 4500 MiD** detector analog outputs. The proper output must be set using the combo-box, the *Gain* column further modifies the signal values on the output.

The *Total Time* field shows the time necessary for acquisition of one data point, it's inverted value being equal to signal rate. The *Total Time* is equal to the *Scan Time* in the *Scan* mode, equal to the time necessary to measure all SIMs (including the settle time for realigning the detector) in the *SIM* mode and equal to the sum of the *Scan Time* and time necessary to measure all SIMs in the *Interleave* mode.

From MS

Reads the method from the **Microsaic 4500 MiD** detector.

> *Note:* The method will switch to the operation mode which was last used during the analysis run and only parameters for that mode will be uploaded, regardless of the methods sent to the **Microsaic 4500 MiD** and operation modes sent in them. For example if the last method used for analysis was *Interleave*, using the button will update only the *Interleave* method content, even when last sent method was a *Scan* method. This is a limitation of the firmware.
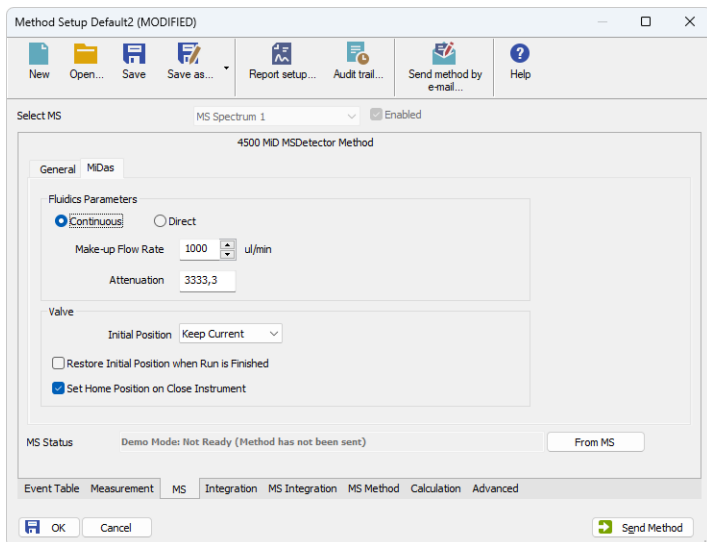
4.1.1 Method Setup - MS - MiDas

Fig. 5: Method Setup - MS - MiDas

The *MiDas* tab allows to set parameters for the behavior of the **MiDas** module.

Fluidics Parameters

This section sets the **MiDas** flow conditions during the analysis run. The operation can be either *Continuous* or *Direct* - for the explanation on both modes please check the **Microsaic 4500 MiD** detector hardware manual.

Make-up Flow Rate

Sets the desired pump flow rate.

Attenuation

Sets the desired attenuation. The actual attenuation may be different, **MiDas** will try to get as close to the set Attenuation as possible within its limits.

Valve

Section allowing to set the behavior of the sampling valve of the **MiDas** module. Only Initial parameters and the behavior of the module at the end of the run is set on the *MS - MiDas* tab, the behavior of the valve during the run is set using the Method Setup - Event Table tab.

Initial Position

Specifies the initial position to which the valve is switched at the sending of the method. Possible values are: *Keep Current*, *Inject* and *Load*. *Keep Current* option does not change the valve position at the sending of the method.

Restore Initial Position when Run is Finished

This checkbox specifies what will happen after the acquisition is finished. If checked, the valve will return to the state specified in the *Initial Position* field.

Set Home Position on Close Instrument

This checkbox specifies what will happen after the Instrument is closed. When checked, the valve will return to the *Load* position. When unchecked, the valve will stay in current position or move to position set in **Event Table**. Default state is "checked".

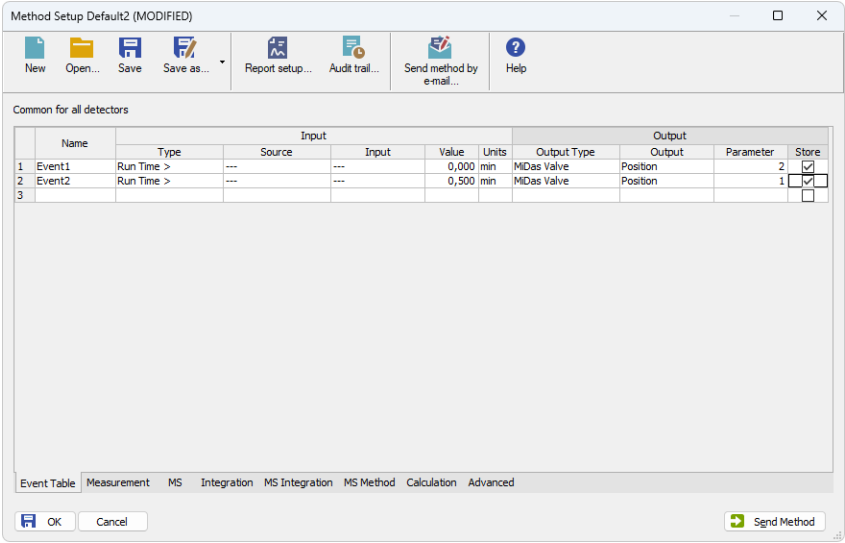## 4.2 Method Setup - Event Table

Fig. 6: Method Setup - Event Table

The **MiDas** injection valve settings can be modified using the **Event Table**. There is *MiDas* item available in the *Output Type* column, allowing to set the output reaction to switch the valve to either *Load* or *Inject* position.

4.3 Method Setup - Advanced

The **MiDas** module of the **Microsaic 4500 MiD** detector also provides auxiliary signals, which can be added to the resulting chromatograms in the *Method Setup - Advanced* dialog.
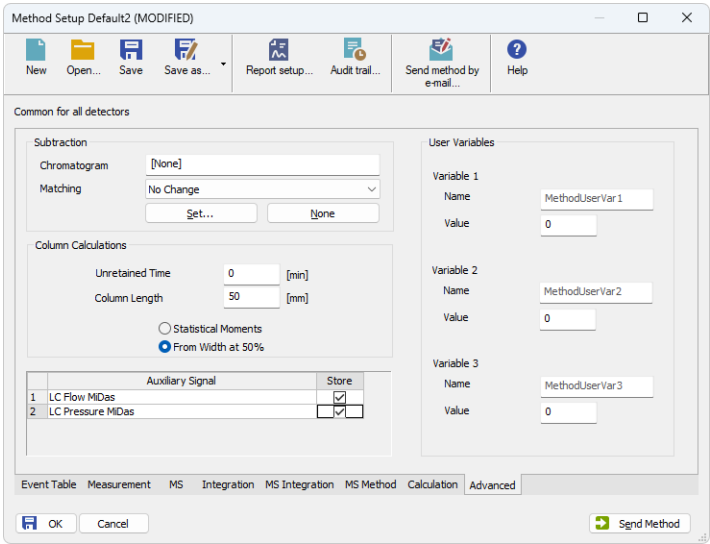

Fig. 7: Method Setup - Advanced

Check the checkbox in the *Store* column to save the particular auxiliary signal to the chromatogram.

4.4 Device Monitor

The window with the detector status can be invoked by the *Monitor - Device Monitor* command from the *Instrument* window or using the ⊘ *LC Monitor* icon. It displays the actual values for detector parameters, allows to set the detector to *OPERATE* and *STANDBY* state, work with the detector vacuum and also perform the mass calibration by using the Mass Calibration dialog. The Device Monitor Dialog has two parts, one for **MiDas** module and one for the **4500 MiD** itself.
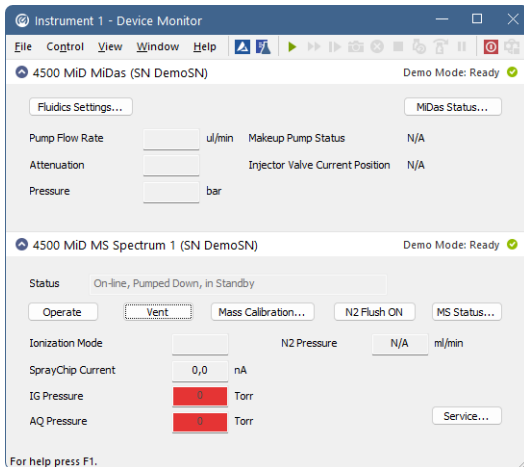

Fig. 8: Device Monitor

Device Monitor - MiDas

Fluidics Settings…

Opens the Fluidics Settings dialog used for manual change of said parameters outside of the run. The button is disabled during the run.

MiDas Status…

Button allowing to open the *Hardware Configuration* dialog displaying the status and connection of the detector. The dialog can also be accessed using the *MS Status* button in the **4500 MiD** *Device Monitor* pane.
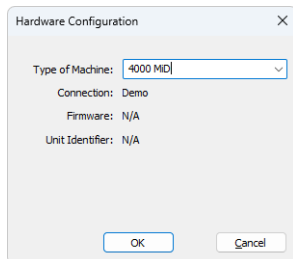

Fig. 9: Hardware Configuration

Pump Flow Rate
  Displays the currently set flow rate value.

Pump Attenuation
  Displays the currently set attenuation value.

Pressure
  Displays the actual pressure of the **MiDas** makeup pump.

Makeup Pump Status
  Displays the current status of the **MiDas** makeup pump (whether it is running or not running).

Injector Valve Current Position
  Shows the current position of the **MiDas** injector valve.

Device Monitor - 4500 MiD

Status
  Shows the general status of the **Microsaic 4500 MiD** detector. Upon starting **Clarity**, the detector is *VENTED* and needs to be first switched to *STANDBY* state by using the *Pump Down* button, then to the *OPERATE* state to be able to gather data.

. . . .

  Caution: Please head the instructions by **Microsaic** company on working with the **Microsaic 4500 MiD** detector to prevent possible damage done to the detector.

  Outside of the *VENTED*/*STANDBY*/*OPERATE* status, the field also displays the *ON-LINE* or *OFF-LINE* notification, based on the pressure in the analytical and ion guide vacuum chamber.

Operate/Standby
  Switches the **Microsaic 4500 MiD** detector to *OPERATE* or *STANDBY* state depending on the current state of the detector. The button displays the action to be performed, therefore the *Operate* button is only available when the detector is in the *STANDBY* state and vice versa.

  When switching the detector from *OPERATE* to *STANDBY* status, a warning message is issued to disconnect the HPLC or **MiDas** tubing from the detector to prevent flowing of the detector source. The status change is only performed after the warning message is confirmed. Same message also appears when closing **Clarity** *Instrument* window as that automatically switches the **Microsaic 4500 MiD** to *STANDBY* state too if it is in *OPERATE*.

Pump Down/Vent
  Button allowing to build the vacuum (when the detector is vented) or vent the detector when it is in the *STANDBY* state (actual action offered is dependent on the state of the detector). Pumping the detector down issues a 3-minute timer before the detector is ready, a confirmation message is issued upon using the *Vent* button.

Mass Calibration
  Opens the Mass Calibration dialog serving for calibrating the **Microsaic 4500 MiD** detector.

N2 Flush ON/OFF
Switches the nitrogen flush of the chamber on or off. The direct control of the nitrogen flush is only available outside of the analysis run.

MS Status
Button allowing to open the *Hardware Configuration* dialog displaying the status and connection of the detector. The dialog can also be accessed using the *MiDas Status* button in the **MiDas** *Device Monitor* pane.

Ionization Mode
Displays the ionization mode of the **Microsaic 4500 MiD** detector.

SparayChip Current
Displays the current on the spray chip. Normal current is 10 nA and more, if the current is lower, the spray chip may be blocked. The field uses a background color while **Microsaic 4500 MiD** is in Operate state to notify the user visually whether the pressure is correct or not for given detector state - green color means spray is established, while red color signals possible problems.

IG Pressure
Displays the pressure in the ion guide vacuum chamber. Normal operating pressure is in the range of 1E-3 to 5E-3 Torr with the cell empty, 9.8E-3 - 1.8E-2 Torr during the measurement. The field uses a background color to notify the user visually whether the pressure is correct or not for given detector state - green color means correct pressure, amber color means borderline correct pressure and red color may signalize a problem, either temporary or systematic.

AQ Pressure
Displays the pressure in the analytical quadrupole vacuum chamber. Normal operating pressure is in the range of 1E-5 to 5E-4 Torr. The field uses a background color to notify the user visually whether the pressure is correct or not for given detector state - green color means correct pressure, red color may signalize a problem, either temporary or systematic.

N2 Pressure
Displays the pressure of nitrogen used in the **Microsaic 4500 MiD** detector. Nitrogen is used prior to pump down operation and while the detector is in Operate state. The units of the N2 Pressure are ml/min as flow is reported rather than pressure. The field uses a background color to notify the user visually whether the N2 pressure is correct or not for given detector state - green color means correct pressure/flow, red color may signalize a problem, either temporary or systematic.

Service…
Provides an entry point to accessing the Service dialog displaying additional detector parameters. The usage of the function is password protected.

4.4.1 Mass Calibration

The dialog for performing the mass calibration of the **Microsaic 4500 MiD** detector and working with tune files. The dialog consists of two tabs, each of which is described in it's own section.

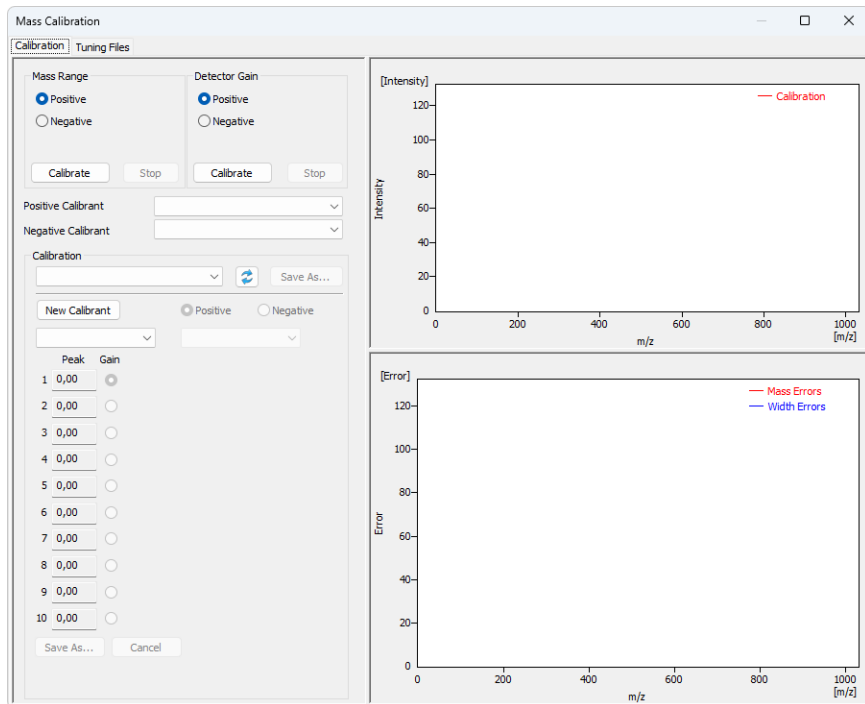### Calibration

Tab used for performing the mass calibration.

Fig. 10: Calibration tab

Mass Range

Section allowing to perform the mass calibration on using *Positive* or *Negative* ionization. By pressing the *Calibrate* button, the mass range calibration is performed using the appropriate calibrant as set below the section.

Detector Gain

Section allowing to perform the mass calibration on using *Positive* or *Negative* ionization. By pressing the *Calibrate* button, the detector gain calibration is performed using the appropriate calibrant as set below the section. The peak used for the calculation is set in the calibrant file and can be checked (or edited) in the *Calibration* section by the radio button next to the mass value.

Positive Calibrant / Negative Calibrant

Sets the calibrant to be used during the mass range calibration and detector gain calibration. Separate settings are done for each *Positive Calibrant* and *Negative Calibrant*.

Calibration

Calibration section displays the expected mass values for the selected calibrant, real mass values as obtained and calculated during the mass calibration and peak width values as obtained from the calculation in three columns. During the calibration, the fields may become primed red or green according to the fact whether they comply with the expected values or not. As the calibration progresses, more fields should be primed green towards the final goal.

At the end of the calibration (as soon as the **Microsaic 4500 MiD** detector reports calibration is finished) all values in the fields are cleared. A calibration report may be recovered using the 🔄 *Reload* and *Save As…* buttons in the pdf form.

Tune Graphs

Right section of the *Mass Calibration* dialog is filled with **Tune Graphs** - one spectral graph and one convergence/mass error graph (depending on whether Mass Range calibration or Detector Gain calibration is being performed).

Spectral graph is displaying just a thin spectrum (solely intensities of the calibrant ion peaks) as communication protocol does not support asking for spectra during calibration. The support of full spectra will be added in later version of the **Microsaic 4500 MiD** driver.

The mass error graph is displayed in the lower part during Mass Range calibration, the convergence graph is displayed during Detector Gain calibration.

> *Note:*   All graphs start appearing only after first calibration iteration cycle has been finished.

Tuning Files

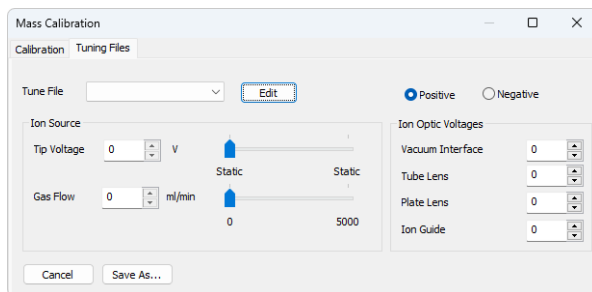Tab used for editing the contents of the tune files.

Fig. 11: Tuning Files tab

Tune File

Selects the tune file to display and edit.

Note: The communication protocol does not support these actions at the moment. The support will be added in later version of the **Microsaic 4500 MiD**driver.

4.4.2 Service

The dialog for performing advanced operations with the **Microsaic 4500 MiD** detector. It contains three tabs - *Vacuum*, *Spraychip* and *Detector*, each of which is described in it's own section.

Note: The contents of the *Service* dialog may not be properly updated, the dialog does not contain means to controlling the displayed parameters due to the communication protocol not supporting these actions. The support will be added in later version of the **Microsaic 4500 MiD** driver.

Vacuum

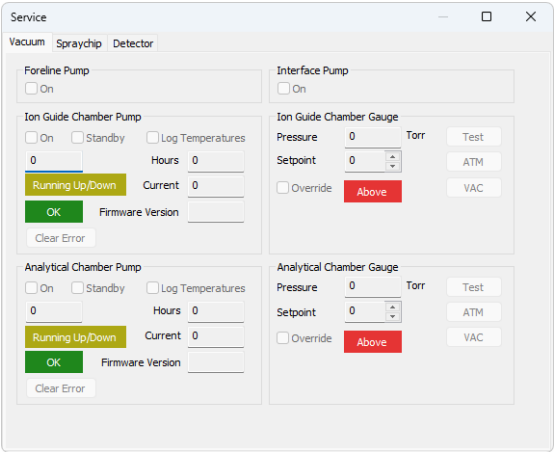Tab containing information on the vacuum pumps.

Fig. 12: Service dialog, Vacuum tab

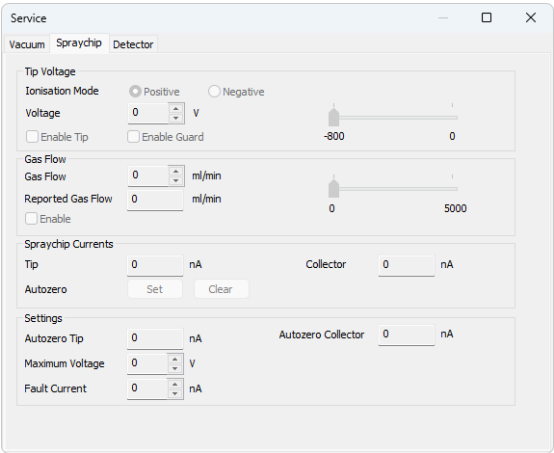## Spraychip

Tab containing information on the spraychip status.

Fig. 13: Service dialog, Spraychip tab

Detector

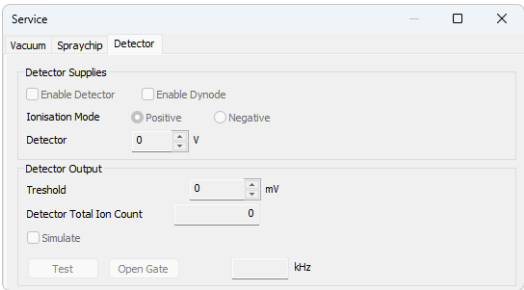Tab containing information on the detector.

Fig. 14: Service dialog, Detector tab

4.4.3 Fluidics Settings

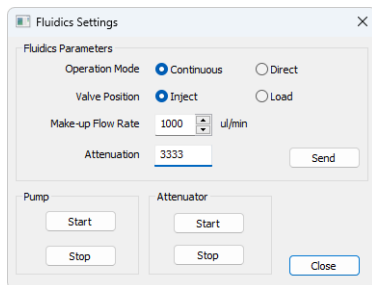The dialog for direct manual handling with the **MiDas** module.

Fig. 15: Fluidics Settings dialog

Fluidics Parameters

Section allowing to control most of the **MiDas** functions. Upon changing some values, the parameters are not automatically sent to the **Microsaic 4500 MiD** detector - to do so, it is necessary to use the *Send* button.

Operation Mode

Displays (and allows to set) the operating mode of the **MiDas** unit. The user can select between *Continuous* and *Direct* operation modes.

Valve Position

Allows to set the injection valve to the *Inject* or *Load* position.

Make-up Flow Rate

Sets the desired pump flow rate.

Attenuation

Sets the desired attenuation.

Pump

Allows to *Start* and *Stop* the **MiDas** pump.

Attenuator

Allows to *Start* and *Stop* the **MiDas** attenuator.

4.5 MS Detector Setup

The *MS Detector Setup* dialog serves for the correct setting of the communication between **Clarity** and the **Microsaic 4500 MiD** detector.

Fig. 16: MS Detector Setup

AutoDetect

Serves for detecting all **Microsaic 4500 MiD** detectors available. If the communication attempt is successful, the combo-box next to the *AutoDetect* button is populated with available detectors.

Test Connection

Tries to connect to the **Microsaic 4500 MiD** detector selected in the combo-box next to the *AutoDetect* button. If the connection is successful, information about the detector firmware version, *Unit Identifier* and *Unit Type* (**4000 MiD** or **4500 MiD**) is displayed next to the *Test Connection* button.

Note: In case the firmware version does not support displaying the serial numbers, the *Unit Identifier* will be displayed as *N/A*.

MS Spectrum Name

Allows to set a custom name for the acquired spectrum. Spectrum will be referenced based on this name, the name will also be part of the name of the Device Monitor pane.

TIC Name

Allows to set a custom name for TIC (Total Ion Current) signal.

Signal 1(..8) Name

Allows to set custom names to the EIC signals in the SIM mode.

Note: The actual values of m/z used for particular signals are defined later in the Method Setup - MS - General dialog.

Has MiDas

Shows whether **MiDas** unit was detected during the *Test Connection* attempt on the selected *IP Address*. If the **MiDas** unit is not found, it's user interface will be hidden in the Method Setup - MS dialog, Method Setup - Event Table outputs section and Device Monitor dialog.

5 Report Setup

All of the detector settings accessible on the Method Setup - MS tab for the **Microsaic 4500 MiD** detector are reported. To do so, the *Instrument Control* parameter on the *Method* tab of the *Report Setup* dialog must be checked.
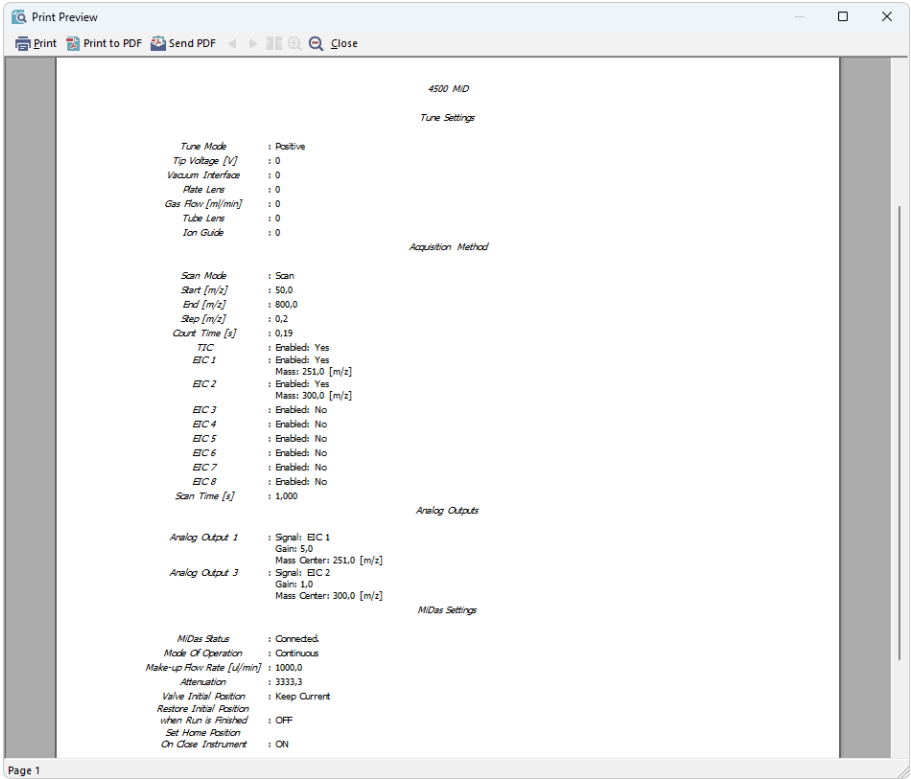

Fig. 17: Report Setup

6 Troubleshooting

When the solution to a problem cannot be found easily, a recording of the communication between **Clarity** and the detector will significantly help **DataApex** support.

The data recording can be enabled by adding or amending the COMMDRV.INI file in the **Clarity** installation directory (C:\CLARITY\CFG by default). The file can be edited in any text editor (e.g. Notepad). The following section should be edited or added:

```
[TCP_IP AAA.BBB.CCC.DDD:4848]
echo=on
textmode=on
filename=Microsaic_4848_%D.txt
reset=off


[TCP_IP AAA.BBB.CCC.DDD:4849]
echo=on
textmode=on
filename=Microsaic_4849_%D.txt
reset=off


[TCP_IP AAA.BBB.CCC.DDD:4850]
echo=on
textmode=on
filename=Microsaic_4850_%D.txt
reset=off


[TCP_IP AAA.BBB.CCC.DDD:4851]
echo=on
textmode=on
filename=Microsaic_4851_%D.txt
reset=off
```

Note: Instead of TCP_ IP AAA.BBB.CCC.DDD, type the IP Address used to communicate with the **Microsaic 4500 MiD** detector. This address is displayed when the *MS Status...* button in the Device Monitor dialog is invoked, and must be filled in including the port (4848, 4849, 4850, 4851).

Note: *%D* (or *%d*) in the filename parameter means that the log will be created separately for each day. The *reset=off* parameter disables deleting the content of the log each time the station is started during the same day. Please note that communication logging, mainly on port 4851, may create fairly big files.

The created *.TXT files will be of great help in the diagnosis of not documented errors and communication issues.