



asia

fast, clean, safe
flow chemistry

technical note

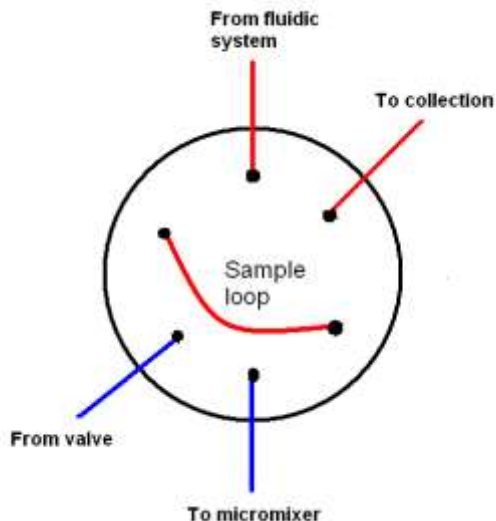
System :	Asia
Module :	Asia Sampler and Dilutor
Version :	1.1
Date :	16/09/2014
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Asia Sampler and Dilutor – Quick Start Guide

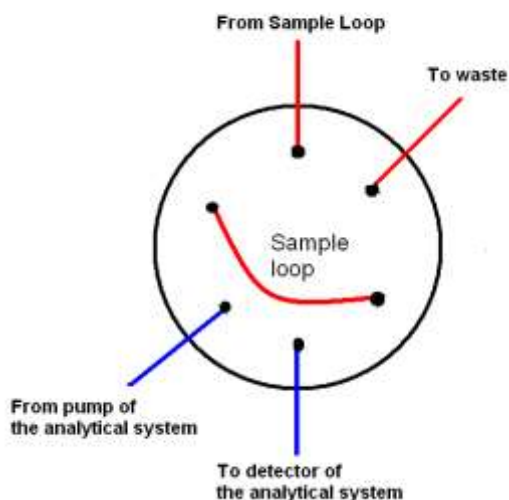
This Technical Note provides instructions on how to install the Asia Sampler and Dilutor (SAD) and how to control it in manual mode and from the software. This is not a User Manual and therefore not all options are covered in this document.

1. Setting the Asia Sampler and Dilutor

- Connect the micromixer chip to the linear connector. The connection can be made on either ends.
- Clip the micromixer chip on the side, next to the Analysis Valve.
- Connect two tubes to the ports labelled “Input” on the valve. Both tubes need to be fitted with filters and plunged into a bottle containing the solvent that will be used for the dilution.
- Connect the Sample Valve to the rest of the flow system (see “From fluidic system” and “To collection” below)



- Connect the Analysis Valve to the analytical device (see “From pump of the analytical system” and “To detector of the analytical system” below).



- Using the provided cable, connect the back of the Asia SAD to the analytical device (HPLC, UPLC, LCMS, etc...).
- Ensure the solvent is HPLC grade and degassed. Prime all the system. Check that there are no bubbles in the syringes and in the tubing.

2. Controlling the Asia Sampler and Dilutor from the front panel



To perform a dilution:

- On the main screen, select **RATIO** and press the control knob.
- Enter the dilution ratio.
- Press the control knob to validate the dilution ratio entry. The dilution sequence will start immediately: the SAD will take a sample, dilute it to the entered ratio, store the diluted sample in the Analysis Loop and send a contact-closure signal to the analysis equipment. The full sequence is about 2 minute-long.

Overview of the menu options:

- **RATIO**: determines the factor by which the reaction sample will be diluted. Example: a **RATIO** of 76 means that the sample concentration is divided by 76. Entering a **RATIO** value starts the dilution sequence immediately.
- **PRIME**: allows to flush the system with solvent. A prime sequence will fill the syringes with solvent then empty them. The sequence will be repeated the number of times entered in the menu. Use this function to wash the system and to fill all the tubing with solvent.
- **M**: gives access to additional control options.
- **LOG**: lists all actions performed by the Asia SAD in chronological order.

3. Controlling the Asia Sampler and Dilutor from Asia Manager software

Important: To control the Asia SAD via a PC you need Asia Manager software version 1.0.81 or above.

To use the Asia SAD in an experiment:

- Ensure the “Sampler Dilutor” is correctly detected in My Modules / Summary.
- In your task / Fluidic Setup, drag and drop the “Sampler Dilutor” component into your fluidic setup. It is usually placed just before the collection point. Design the rest of your fluidic setup as normal.
- In your task / Fluidic Setup, click on the Sampler Dilutor and choose if you want to take samples in the middle of the reaction slug or if you want to take samples at fixed period of time.
- In your task / Experiments, enter all experiment parameters including the dilution ratio for every single experiment.
- Go to Run View and run your list of experiments as normal.

Overview of the Manual Controls options:

There are two action tabs In Manual Controls for the Sampler Diluter: “Auto” and “Advanced”.

“Auto” tab options:

- **Prime:** flushes the system with solvent. A prime cycle consists in filling the syringes with solvent then emptying them. After entering the number of cycles required click “Start” to start priming. Use this function to wash the system and to fill all the tubing with solvent.
- **Dilute with a ratio of:** determines the factor by which the reaction sample will be diluted. Example: a ratio of 76 means that the sample concentration is divided by 76. After entering the ratio value, click “Start” to start the dilution.

“Advanced” tab options:

- **Initialise:** clicking on this button triggers an initialising sequence where the valve is set to its start position and both syringe drives are set to their top position (empty syringes).
- **Send Trigger Pulse:** when clicking this button, the Asia SAD sends a contact closure signal to the 3rd party analytical system connected to the SAD.
- **Fill:** by clicking on this button, both syringes will be filled
- **Empty:** by clicking on this button, both syringes will be emptied.
- **Sample valve position – Load:** sets the Sample Valve (top one) to load position i.e. position where the loop is connected to the rest of the fluidic system.
- **Sample valve position – Inject:** sets the Sample Valve (top one) to inject position i.e. position where the loop is connected to the valve and the micromixer.
- **Analysis valve position – Load:** sets the Analysis Valve (bottom one) to load position i.e. position where the loop is connected to the Sample Valve and to waste.
- **Analysis valve position – Inject:** sets the Analysis Valve (bottom one) to inject position i.e. position where the loop is connected to the pump and the detector of the Analytical system.

4. Controlling the Asia Sampler using 3rd party control

Important: To control the Asia SAD via 3rd party equipment you will need to use the Asia SAD I/O cable 2400368

- Connect the bare ends of the cable to your equipment and plug the 8 way DIN plug of the cable into the back of the Asia SAD.
- The table below explains what functions the different wire colours operate.

Connection Information

Asia SAD function	Asia SAD connection	DIN Plug connection	colour	item
Sample Injected	Contact 1	Pin 7	br	NOC
	Com 1	Pin 3	wh/br	Com
SAD Inhibit	Gnd 1	Pin 1	bl	Gnd
	Input 1	Pin 4	wh/bl	Input
SAD Busy	Contact 2	Pin 2	or	NOC
	Com 2	Pin 5	wh/or	Com
Remote Start	Gnd 2	Pin 8	gn	Gnd
	Input 2	Pin 6	wh/gn	Input

If you require assistance or further explanation, please contact support@syrris.com.