

Action	Set parameter (input) - default value in ()	Measured parameter (output)
1. Define all settings. Settings different from defaults can be set by adding them to the "Change default parameters..." block	All – detailed below	
2. Set and open the main inlet and Valco port (if used). ValcoTime is a pause to ensure time to switch port.	Set_MainInlet (Inlet_1) Set_ValcoPort (Valco_0_Port_1) Set_ValcoTime (5 s) CycleID (text description of sample)	
3. Flush the dryer.	Set_InletFlushTime (15 s) Set_InletFlushFlowV (0.5 V = 1 LPM)	UV_InletFlushPressure UV_InletFlushFlowIn UV_InletFlushFlowOut
4. Evacuate the cell and manifold.	Set_CellEvacPressure (10 hPa) Set_CellEvacTime (1:00 min)	UV_Pevac1
5. Flush the cell	Set_CellFlushPressure (300 hPa) Set_CellFlushTime (30 s) Set_CellFlushFlow (10 LPM)	UV_Pflush
6. Evacuate the cell and manifold.	Set_CellEvacPressure (10 hPa) Set_CellEvacTime (1:00 min)	UV_Pevac2
7. Start filling the cell with pressure-flow PID control, continue flow	Set_Pressure (1100 hPa) Set_Flow (1.0 SLPM)	
8. Settle	Set_SettlingTime (5:00 min)	
9. Collect spectra and analyse	Set_ScanTime per spectrum (1:00 min). The number of spectra has to be set by the loop counter for the Collect Spectra block.*	All spectrum analyses outputs, mole fractions, AI averages etc
10. Stop the cell flow.		
11. Close the Main inlet and set the valco to its park position.	Set_ValcoParkPort (Valco_0_Port 8)	

* This is a limitation of the current task builder – the principle with the measure task is that all user selectable parameters can be set in the first few lines of the task, and the inner loops need never be opened in the task builder. The loop counter for the number of spectra is the only exception to this, and requires the user to dig into the inner task to change it.

Variants:

Measure Static block is almost the same as Measure Flow except that the flow is stopped (step 10.) after the settling time (step 8.) and a selectable further delay before starting to collect spectra (step 9.). An alternative is to measure spectra during the initial flow period while the measurements approach steady state, stop the flow and then measure further spectra in static mode.

Measure N2 is the same as *Measure flow* but modified to measure N₂ from the purge gas supply. MALT spectrum analysis parameters specific for N₂ analysis are loaded at the start of the loop, and reset to defaults after the collect and analyse is complete.

Revisions:

14 June 2017 Rev 1:

- Default Set_SettlingTime = 5 min
- Flush dryer – replaced the logged average flow in and flow out with the instantaneous final pressure, flow in and flow out at the end of the flush.

16 Nov 2018

- SetDataBaseIndex action moved up from first line of the “Flush Cell” block to the top of each “Measure” block.

