ATAS Evolution Workstation , Method *'Expert'*

General

Method Name	Method1
Equilibration Time (sec)	5
End Time (sec)	300

Name of the method and it will be displayed in the status window during the time that the method is active.

Time that the OPTIC will stabilize its parameters after they are set to their initial values and after the ready input signal is received from the gas chromatograph.

Method run time. Normally this is set equal to the GC run time.

Inlet Temperature

Initial Temperature (°C)	35
Delay Time (sec)	10
Ramp Rate 1 (°C/sec)	5,0
Hold Temperature 1 (°C)	200
Hold Time 1 (sec)	600
Ramp Rate 2 (°C/sec)	0,0
Hold Temperature 2 (°C)	0
Hold Time 2 (sec)	0
Ramp Rate 3 (°C/sec)	0,0
Hold Temperature 3 (°C)	0
Ramp Rate 9 (°C/sec)	0
Hold Temperature 9 (°C)	0
Hold Time 9 (sec)	0
Solvent Cooling Effect	No
Cooling Valve Mode	No

The initial temperature is the begin temperature of the method.

Wait time before the inlet starts to heat.

Rate of heating, for liquid samples take care not to heat too fast (<10). For Pyrolysis you can set 60°C/sec.

Final temperature of step 1.

Time that the temperature for step 1 will be active.

To add a temperature step: point with the computer mouse in the graphic display on the temperature profile where you like to add a step and 'right click' with the mouse and select 'Add Step'.

When a large volume injection is performed, the solvent is evaporated and vented out of the inlet. For the evaporation heat (energy) is used and this will result in a temperature drop of the liner.
'No' means that the inlet will try to maintain the initial temperature. (Normally used)
'Yes' means that the controller will not heat against the cooling effect of solvent evaporation. This will result in a larger temperature drop in the liner and therefore low boiling analytes are more retained. (this results in longer vent times.)

Normally this is set to 'No'. When 'Yes' is chosen, the injector will use cooling gas to control the temperature during the run, a negative temperature step can be made. For hot injections, this should be set to 'No'.

Septum Purge Flow

Septum Purge Flow (ml/min)	5

Septum purge flow should be set here, normal setting would be 5 ml/min. The flow is controlled with a mass flow controller. (Septum purge flow is independent of the inlet pressure)

Solvent Venting

Vent Mode	Threshold
Vent Time (sec)	30
Solvent Monitor Level (%)	10
Solvent Monitor Threshold	25

For a large volume injection most of the solvent needs to be vented off. This can be done by time or by making use of the solvent sensor. 'Fixed Time': is a mode that uses set time to vent the solvent out. The injector will switch to the splitless state after vent time is elapsed. 'Solvent Level': the sensor is used and the injector will be switched to splitless depending on the level of the sensor. (solvent peak) 'Threshold': the sensor is used and the injector will switch to splitless depending on the threshold set for the sensor. (solvent peak)

Time that the solvent will be vented. The 'Vent Flow' is active during this time.

The OPTIC will switch from vent flow to splitless when the sensor has reached the relative level (%) of the solvent peak. (relative vent mode)

The OPTIC will switch from vent flow to splitless when the sensor has reached the threshold value of the negative slope of the solvent peak. (absolute vent mode)

Column Flow/Injector Pressure

Carrier Control Mode	Flow
Zero LINEX Head Pressure	No
Column Flow Time 1 (sec)	600
Column Flow Time 2 (sec)	0
Column Flow Time 3 (sec)	0
Column Flow Time 4 (sec)	0
Column Flow Time 5 (sec)	0
Column Flow Time 6 (sec)	0
Column Flow Time 7 (sec)	0
Column Flow Time 8 (sec)	0
Column Flow Time 9 (sec)	0
Initial Column Flow (ml/min)	1,0
Start Column Flow 1 (ml/min)	1,0
End Column Flow 1 (ml/min)	1,0
Start Column Flow 2 (ml/min)	0,0
End Column Flow 2 (ml/min)	0,0
Start Column Flow 3 (ml/min)	0,0
End Column Flow 9 (ml/min)	
Sample Sweep Injector Pressure (kF	50,0
Start Injector Pressure 1 (kPa)	50,0
End Injector Pressure 1 (kPa)	50,0
Start Injector Pressure 2 (kPa)	50,0
End Injector Pressure 2 (kPa)	50,0
Start Injector Pressure 3 (kPa)	50,0
Start Injector Pressure 3 (kPa)	50,0
End Injector Pressure 7 (kPa)	
Start Injector Pressure 8 (kPa)	50,0
End Injector Pressure 8 (kPa)	50,0
Start Injector Pressure 9 (kPa)	50,0

Select here flow or pressure mode.

When set to 'No' the inlet pressure will work in a normal way. When set to 'Yes', the method will begin to set all flows and the pressure as required from the method settings. At the moment that the set points are reached the pressure will go to zero and the OPTIC will give the 'Ready Out' signal. The PAL can change the liner and after changing the liner the PAL gives a 'Start' signal to the OPTIC. The OPTIC will set the flows and pressure before it starts the temperature steps. (same as in LINEX methods.)

The column flow time for step 1.

To add a Flow/Pressure step: point with the computer mouse in the graphic display on the Flow/Pressure profile where you like to add a step and 'right click' with the mouse and select 'Add Step'.

Column flow at the moment of injection and during the vent time.

Starting column flow of step 1. This should be set to an appropriate flow for the installed column.

Column flow at the end of step 1.

Starting column flow of step 2.

Same as in the Flow mode.

Split Flow

Direct Split Valve Control	No
Initial Split Flow (ml/min)	50
Split Flow 1 (ml/min)	50
Split Flow Time 1 (sec)	600
Split Flow 2 (ml/min)	0
Split Flow Time 2 (sec)	0
Split Flow 7 (ml/min)	0
Split Flow Time 7 (sec)	0
Split Flow 8 (ml/min)	0
Split Flow Time 8 (sec)	0
Split Flow 9 (ml/min)	0
Split Flow Time 9 (sec)	0

Normally set to 'No'. When set to 'Yes' the Split/Splitless valve is in the 'open' state. This can be used for special backflush setups.

The split flow at the beginning of the method.

Split flow at the moment that the inlet starts to heat (before delay time).

End time of split flow 1.

To add a split flow step: point with the computer mouse in the graphic display on the split flow profile where you like to add a step and 'right click' with the mouse and select 'Add Step'.

Cryotrap	
Cryotrap Low Temperature (°C)	30
Low Temperature Hold Time (sec)	0
Cryotrap High Temperature (°C)	35
Cryotrap Heat Ramp Rate (°C/sec)	15.0

Beginning temperature of the Cryotrap in the method. When LN2 is used -110°C will be fine for many compounds. With CO2 as a coolant the lowest temperature is -70°C.

Time that the trap is cold after the start in signal. This time should be longer than the delay time + time to ramp the inlet till the maximum set point.

Upper temperature of the trap. This should not be higher as the maximum temperature of the column.

Ramp rate of the Cryotrap from low to high. Normally set to 60°C/sec.

Auxiliary Flow/Pressure	
Start Aux Flow 1 (ml/min)	10
Aux Gas Control Time 1 (sec)	600
End Aux Flow 1 (ml/min)	10
Start Aux Flow 2 (ml/min)	0
Aux Gas Control Time 2 (sec)	0
End Aux Flow 2 (ml/min)	0
... Aux ... 2 (ml/min)	0
Aux Gas Control Time	0
End Aux Flow 7 (ml/min)	0
Start Aux Flow 8 (ml/min)	0
Aux Gas Control Time 8 (sec)	0
End Aux Flow 8 (ml/min)	0
Start Aux Flow 9 (ml/min)	0
Aux Gas Control Time 9 (sec)	0
End Aux Flow 9 (ml/min)	0

Start flow of the auxiliary flow module. Usually used for Inlet Backflush.

Time that step 1 is active.

End of step 1 flow.

To add a flow step: point with the computer mouse in the graphic display on the aux flow profile where you like to add a step and 'right click' with the mouse and select 'Add Step'.