Agilent Purification System, LAB EXERCISE

LAB TITLE
Addition of the LCMS & A2P.

Lab Objectives
To familiarize yourself with how to install and configure the OpenLAB CDS ChemStation software, the A2P plugin and how to configuring the LC/MS and LC modules.

The LAB has two parts:

1) Configure the LCMS and Shared Services, and Install OpenLAB plugin
2) Get familiar with the influence of the makeup flow and the splitter ratio

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1)Configure the LCMS and Shared Services

***IMPORTANT:* The instrument needs to be hooked up and be under vacuum, in order to continue with the lab. (Install rough pump, power cables, nitrogen gas line, switch hub, LAN cables, tune calibrant and ESI source)**

a) Configure the TCP/IP network protocols on the PC and turn off the firewall, according to the training materials. Specify what settings are used:

PC-IP address: ……....
Subnet Mask: ……....
Gateway: ……....
Preferred DNS: ……
Alternate DNS: ……....

b) Insert Disc 1 of the OpenLAB CDS ChemStation C.01.05 in the DVD Rom drive and double click the "setup.bat". Follow the on-screen prompts.

Note: make sure that the I/O libraries are also installed

c) In the OpenLAB Control Panel, configure the Agilent LC/MS System according to the training materials. Specify what settings are used:

LC-IP address: ……....
MC-IP address: ……

d) Configure the shared services as per training materials.

e) Install the A2P plugin as per training materials.

f) Update the MSD Firmware to v3.02.47 or higher; Double click the msupdate.exe in MS firmware file on the desktop and follow the on-screen prompts.

g) Create a system, and launch it "Online" in OpenLAB. Does the instrument have communicating with the PC? Is there error messages? Initial OpenLAB start-up, select your instrument model: (i.e. 6130A)

h) If there is no communication between the PC and the LC and/or MSD, how will you go about working out what the problem is?
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i) If there is “network communication”, but OpenLAB can not communicate with the MSD, how will you go about working out what the problem is?
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j) Turn on ES calibrant and run auto-tune on the LC/MS

k) Run “Check-tune” to see if it passes.

Pass/Fail

l) Remove the LC/MS top covers and install the GPIO cable from Valve board to UIB. Then place the covers back again.

2) Get familiar with the influence of the makeup flow and the splitter ratio

m) Inject a 1mL standard solution on a 5mL/min flow of 70% ACN, while a split ratio of 100 is used and a make-up flow of 0.5mL/min. Make sure you remember where to find the data later.

n) Repeat step “m”, once with a split ratio of 10, and, once with a split ratio of 1000.

o) Repeat step “m” again, once with a make-up flow of 0.1mL/min, and, once with a make-up flow of 2mL/min.

p) Compare the data of the runs and describe the effect of both repeat runs from step “n”
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q) Compare the data of the runs and describe the effect of both repeat runs from step “o”
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