

PŘÍLOHA: OPTIMALIZOVANÝ PROGRAM

Local Maximum

1 True 1

-----Channel Selection settings-----

1 Master 280,0 101,272003173828 0

2 Master 364,0 138,90608215332 0

3 Master 380,0 152,417465209961 0

4 Master 440,0 168,178817749023 0

-----spectrometer settings-----

Master 40 5 0,35795 -0,0000112 -2,72E-09 191,146 5 0 0 640 1328

FIAlab for Windows 5.11.19

Hardware Settings Wavelength 1 (nm) 280

'Kys: RUT 357 / QER 370 / HVA 280 / 4MC 282 / PAA 284 / HFP 272

Hardware Settings Wavelength 2 (nm) 364

'Zas: RUT 375 / QER 383 / HVA 281 / 4MC 283 / PAA 280 / HFP 273

Hardware Settings Wavelength 3 (nm) 380

Hardware Settings Wavelength 4 (nm) 440

Hardware Settings Integration Time (msec) 5

Hardware Settings Detectors to Average 5

Hardware Settings Samples to Average 40

Hardware Settings Scan Rate (Hz) 20

Hardware Settings Use Wavelength 4 as Reference

Syringe_Pump_1 Command (?) K0R

Contact Closure Off

'Defintion of Variables

Variable Define New OptionCleanHoldingCoil

Variable Define New OptionCleanSolenoidPump

Variable Define New OptionCleanSyringe

Variable Define New OptionCleanTubing

Variable Define New OptionCleanSampler

Variable Define New OptionBuiltColumn

Variable Define New Preconcentrate

Variable Define New OptionDischargeColumn

Variable Define New OptionMeasureUV

Variable Define New PosClean

Variable Define New PosSampler

Variable Define New PosSample

Variable Define New BeadVolume

Variable Define New PosMeasure
Variable Define New Repetition

'Assignment Values to Variables

OptionCleanHoldingCoil = 0
OptionCleanSolenoidPump = 0
OptionCleanSyringe = 0
OptionCleanTubing = 0
PosClean = 5
OptionCleanSampler = 0
PosSampler = 1

OptionBuiltColumn = 0
BeadVolume = 250
OptionMeasureUV = 1
OptionDischargeColumn = 0
Repetition = 4
PosMeasure = 3

' Valve positions:

' 1 - Waste & Flow port / 2 - HV interface + Air / 3 - Autosampler / 4 - Weak wash or H2O

' 5 - Strong wash (Eluent) / 6 Detection flow cell / 7 - GI interface / 8 - Bead suspension

' Solenoid pump: Modifier, ca 55 $\mu\text{L/s}$ - 1 Hz

' Peristaltic pump: Sampler

If OptionCleanHoldingCoil = 1

'Fill syringe partly
Syringe_Pump_1 Valve In
Syringe_Pump_1 Flowrate (microliter/sec) 200
Syringe_Pump_1 Aspirate (microliter) 1000
Syringe_Pump_1 Delay Until Done

'Empty syringe pump
Multiposition Valve port 1
Syringe_Pump_1 Valve Out
Syringe_Pump_1 Flowrate (microliter/sec) 100
Syringe_Pump_1 Empty
Syringe_Pump_1 Delay Until Done
End If

If OptionCleanSolenoidPump = 1

Insert File C:\Users\Obsluha\Desktop\Flavonoids\Procedure_CleanSolenoidPump.fia
End If

If OptionCleanSyringe = 1

Loop Start (#) 4

'Empty syringe pump

Multiposition Valve port 1
Syringe_Pump_1 Valve Out
Syringe_Pump_1 Flowrate (microliter/sec) 200
Syringe_Pump_1 Empty
Syringe_Pump_1 Delay Until Done

'Fill syringe partly
Syringe_Pump_1 Valve In
Syringe_Pump_1 Aspirate (microliter) 500
Syringe_Pump_1 Delay Until Done
Loop End
End If

If OptionCleanTubing = 1

Insert File C:\Users\Obsluha\Desktop\Flavonoids\Procedure_CleanTubing.fia
End If

If OptionCleanSampler = 1

Insert File C:\Users\Obsluha\Desktop\Flavonoids\Procedure_CleanSampler.fia
End If

If OptionBuiltColumn = 1

Insert File C:\Users\Obsluha\Desktop\Flavonoids\Procedure_BuildColumn.fia
End If

If OptionMeasureUV = 1

PosSampler = 2 'First tube on the autosampler
Loop Start (#) 4 'Number of tubes on the autosampler
Insert File C:\Users\Obsluha\Desktop\Flavonoids\Procedure_CleanSampler.fia
Loop Start (#) Repetition
'Aspirate segmentation air bubble
Multiposition Valve port 2
Syringe_Pump_1 Valve Out
Syringe_Pump_1 Flowrate (microliter/sec) 150
Syringe_Pump_1 Aspirate (microliter) 50
Syringe_Pump_1 Delay Until Done

'Aspirate sample

Multiposition Valve port PosMeasure
Syringe_Pump_1 Aspirate (microliter) 750
Contact Closure On
Delay (sec) 5
Contact Closure Off
Syringe_Pump_1 Delay Until Done

'Load sample

Multiposition Valve port 6
Analyte New Sample
Syringe_Pump_1 Flowrate (microliter/sec) 10

Spectrometer Absorbance Scanning
Syringe_Pump_1 Dispense (microliter) 750
Syringe_Pump_1 Delay Until Done
Spectrometer Stop Scanning

'Refill syringe

Syringe_Pump_1 Valve In
Syringe_Pump_1 Flowrate (microliter/sec) 250
Syringe_Pump_1 Aspirate (microliter) 500
Syringe_Pump_1 Delay Until Done

'Clean holding coil

Syringe_Pump_1 Valve Out
Multiposition Valve port 1
Syringe_Pump_1 Dispense (microliter) 450
Syringe_Pump_1 Delay Until Done

'-----
'Aspirate segmentation air bubble

Multiposition Valve port 2
Syringe_Pump_1 Valve Out
Syringe_Pump_1 Flowrate (microliter/sec) 150
Syringe_Pump_1 Aspirate (microliter) 50
Syringe_Pump_1 Delay Until Done

'Aspirate weak wash

Multiposition Valve port 4
Syringe_Pump_1 Aspirate (microliter) 300
Syringe_Pump_1 Delay Until Done

'Wash column

Analyte New Sample
Multiposition Valve port 6
Syringe_Pump_1 Flowrate (microliter/sec) 15
Spectrometer Absorbance Scanning
Syringe_Pump_1 Dispense (microliter) 300
Syringe_Pump_1 Delay Until Done
Spectrometer Stop Scanning

'Refill syringe

Syringe_Pump_1 Valve In
Syringe_Pump_1 Flowrate (microliter/sec) 250
Syringe_Pump_1 Aspirate (microliter) 500
Syringe_Pump_1 Delay Until Done

'Clean holding coil

Syringe_Pump_1 Valve Out
Multiposition Valve port 1
Syringe_Pump_1 Dispense (microliter) 450

Syringe_Pump_1 Delay Until Done

'-----
'Aspirate Eluent

Multiposition Valve port 5

Syringe_Pump_1 Flowrate (microliter/sec) 150

Syringe_Pump_1 Aspirate (microliter) 250

Syringe_Pump_1 Delay Until Done

'Elution and measurement

Analyte New Sample

Multiposition Valve port 6

Syringe_Pump_1 Flowrate (microliter/sec) 15

Syringe_Pump_1 Dispense (microliter) 500

Spectrometer Absorbance Scanning

Delay (sec) 35

Spectrometer Stop Scanning

Syringe_Pump_1 Delay Until Done

'Refill syringe

Syringe_Pump_1 Valve In

Syringe_Pump_1 Flowrate (microliter/sec) 250

Syringe_Pump_1 Aspirate (microliter) 250

Syringe_Pump_1 Delay Until Done

Loop End

PosSampler += 1

Loop End

End If

If OptionDischargeColumn = 1

Insert File C:\Users\Obsluha\Desktop\Flavonoids\Procedure_DischargeColumn.fia

End If

'Empty syringe pump

Multiposition Valve port 1

Syringe_Pump_1 Valve Out

Syringe_Pump_1 Flowrate (microliter/sec) 200

Syringe_Pump_1 Empty

autosampler rack 1 (sample #) 1

autosampler Up

Beep

Message Finished