**PLEASE FILL THE FORM IN ENGLISH AND AVOID HANDWRITTEN FORMS**

**End user contact information**

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| --- | --- | --- | --- |
| Company | The Scotch Whisky Research Institute | | |
| Customer Name | Hannah Ford | | |
| Department | Service Desk | | |
| Customer phone / Fax | 0131 449 8900 | | |
| Customer email | [Hannah.ford@swri.co.uk](mailto:Hannah.ford@swri.co.uk) | | |
| Zip code & City | Edinburgh EH14 4AP | | |
| Agilent/Distributor contact | vascar@crawfordscientific.com | | |
| Order Date | 11/18/2021 | Order number | 1000006885 |

**GC column information**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Part # | Product description | | Column dimension  (L x ID x df) | | Serial # | |
| 123-7163 | DB-HeavyWAX column | | 60 x 0.320 x 0.50 | | US1629923H | |
|  |  | |  | |  | |
| Retention gap or guard column used? | | Part # | | Serial # | | Connector part # |
| No | |  | |  | |  |

**GC instrument and method information**

|  |  |  |
| --- | --- | --- |
| GC Instrument used | Thermo ISQ Trace 1310 | |
| Injection | manual | automatic, specify model:  CTC Analytics CombiPAL |
| Inj. Port type and information | Packed split/splitless  PTV MMI On-Column Sampl. Valve Headspace Thermal Desorber model: | Inj. Volume: 1ul  Split flow: 20ml/min  TD Trap: |
| Injector temperature (°C) | 200 | |
| Inj. Liner part # | Restek 21055 – 214.5 | |
| Carrier Gas | He  H2  N2  Ar/CH4 | other: |
| Vol. column flow (ml/min) | 1.4ml/min | |
| Linear column flow (cm/s) | 30.96 cm/sec | |
| Inlet pressure (kPa) | 74 | |
| Inlet pressure (psi) | 10.7 | |
| Septum Purge (ml/min) | 5.0ml/min | |
| Oven | Max. (°C): 270 Equil.time (min): 0.1 | LTM Yes No |
| Temperature Program | Initial (°C): 40 | Hold Time (min): 0.5 |
|  | Ramp rate 1 (°C/min):3.57 Final temp 1 (°C):170 | Hold Time (min): 0 |
|  | Ramp rate 2 (°C/min):100 Final temp 2 (°C):270 | Hold Time (min): 10.00 |
|  | Ramp rate 3 (°C/min): Final temp 3 (°C): | Hold Time (min): |
|  | Ramp rate 4 (°C/min): Final temp 4 (°C): | Hold Time (min): |
|  | Ramp rate 5 (°C/min): Final temp 5 (°C): | Hold Time (min): |
| Detector | FID  TCD  NPD  ECD   FPD  SCD  MSD   MS-Trap  Other: | Temp (°C): 240 Interface Temp (°C): 240 |
| Det. Gases (ml/min) | H2 N/A Air  make-up | Ref. Gas (ml/min): N/A |

**Sample information**

|  |  |
| --- | --- |
| Compounds of interest: | Ethyl carbamate |
| Concentration & solvent | 2.5 – 100 ug/L in 70% ethanol/water |
| Matrix: | Spirits (final product and process samples) @ 70% ethanol/water |
| sample preparation: | filtered through 0.2um nanopore filter |

**Problem description**

|  |  |
| --- | --- |
| Does the problem appear from the beginning, at first use? | Almost |
| First time use the product? If not, how many columns used before without problems and please provide some serial #’s | Column type in use for just over a year.  Previous column serial #s: US0193821H  US1176911H  US1403721H |
| Detailed problem description: | resolution of column deteriorated very quickly after one analytical run |

**If possible, please attach the complete method printout or file, chromatograms good versus bad, spectra etc. that are explaining the problem**

**Please also clearly label all peaks and indicate dates and run numbers.**

**If available, please also attach a copy of the Performance test report shipped with the column.**