**Record of Technical Anomaly**

**Technical Anomaly No: TA442**

**PART 1: Issue, impact assessment and signing open**

**Raised by:** Hannah Ford **Date: 19/04/22**

**OP / Method: OP224 Ethyl Carbamate**

**Analytical sequence initiated** *(where appropriate)***: EC0799**

**Details** *(please tick relevant box(es) and provide supplementary information where required)***:**

□ QC point(s) above/below ±2SD □ Bracketing standard(s) outside limits

□ QC point(s) above/below ±3SD □ QC Recovery outside limits

□ QC point(s) outside expanded uncertainty R Other *(add details below)*

Signal to noise system suitability failed for 2.5ppb level – result 8.0. Passes for 5ppb level at 14.8.

In the past signal to noise has been improved by tuning the detector – the tune had not been performed prior to this run as all quality checks apart from signal to noise in the previous run had passed and the instrument takes a long time to stabilize after tuning. See also TA441. MS will be tuned prior to next run.

It is quite acceptable to members’ results to adjust reporting limit to 5ppb to allow for the low signal to noise below this level.

There was also an interfering peak present in the Cal 0 standard greater than 400 (578) – this was 34% of 2.5ppb cal peak area and 17% of 5ppb cal peak area. Adjusting the reporting limit to 5ppb will also reduce the impact of the interfering peak on the reported results to an acceptable level.

This was the third consecutive run with no maintenance performed – it may be that a small leak has developed as this is known to cause interfering peaks. The septum will be changed prior to next run but the fact that all other quality data passes indicates that any further intervention (eg front end clean) is not required. (And it is undesirable to perform unnecessary maintenance given long instrument restabilization time and that trimming the column very often reduces its lifespan.)

□ No apparent reason for this anomaly

**Recommended Action:**

□ No action required out with the usual close monitoring of the Quality Control data in subsequent runs.

Septum to be changed and MS tuned prior to next run.

**Explanation why the issue does not impact data quality & why it isn’t a departure:**

Reporting limit will be adjusted to 5ppb for this run to acknowledge both signal to noise failure and interfering peak in Cal 0.

**Management Review:**

***I agree to open this Technical Anomaly and confirm that this would not prevent results from being reported.***

**Authorised by:**

**(Technical/Services/Quality Manager)**

**Date:**

**PART 2: Follow-up actions and close-out**

**Follow-up actions conducted:**

□ No follow up required

**All analytical sequence(s) affected** *(where appropriate)***:**

**Signed off & closed by Quality Manager:**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_**

