



# CONCEPT LIFE SCIENCES

## METHOD STATEMENT NITROUS OXIDE ON MOLECULAR SIEVES BY GCMS / TD

### INTRODUCTION

The performance of this method is validated in accordance with internationally recognised procedures.

This procedure describes the determination of Nitrous Oxide on Molecular Sieve tubes by thermal desorption / gas chromatography / mass spectrometry.

### PRINCIPLE

A series of calibration standards are analysed by this method and the data is used for reference and calibration.

### PERFORMANCE CHARACTERISTICS

#### SUBSTANCES DETERMINED

- Nitrous Oxide

#### RANGE OF APPLICATION

- 1 ug - 10 ug

#### LIMIT OF DETECTION

- 0.5 ug / sample

### VALIDATION

Initial method validation was conducted via the analysis of 6 x 2 replicate spike samples prepared and analysed independently, along with a three point calibration, method blanks and independent QC samples.

Ongoing method performance is monitored via analytical quality control charts.

### ANALYTICAL QUALITY CONTROL

Analytical quality control is maintained by a number of measures:

- Multi-point calibration with authentic standards (with defined minimum performance characteristics)
- Analysis of control samples within each analytical batch, such as independent standards, matrix spikes or reference materials
- Analysis of reagent/method blanks within each analytical batch
- Ongoing quality assured by the use of control charts in conjunction with warning and action limits for the QC sample data



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## REFERENCES

- HSE MDHS80 : Volatile organic compounds in air.