

# CERTIFICATE OF ANALYSIS

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Issued by **EffecTech**  
Date of issue **24 July 2024**Certificate number **24/0206/12**Approved signatory  
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**Customer** : Southern Gas Networks plc  
Fullarton House, 1 Fullarton Drive, Cambuslang, G32 8FD.

**Analysis method** : Sample analysed by comparison with a reference gas mixture using a single-point calibration design (SPO) in accordance with ISO 12963 Gas analysis - Comparison methods for the determination of the composition of gas mixtures based on one- and two-point calibration using high precision gas chromatography with a sulphur chemiluminescence detector (GC-SCD)

**Sample identification** : Sample point: Beattock Compressor Station, 2024-07-13, 13:30 hrs, line pressure 61.1 bar, line temperature 11.4 °C, sampled by R. Bell.

**Date of analysis** : 22 July 2024

*This laboratory was not responsible for the sampling stage as the sample and sample identification information was provided by the customer. The results presented in this certificate apply to the sample analysed on an as received basis.*

## Composition

component	amount fraction ( $\mu\text{mol/mol}$ )
hydrogen sulphide	$1.183 \pm 0.054$
carbonyl sulphide	<0.030
methyl mercaptan	<0.030
ethyl mercaptan	<0.030
dimethyl sulphide	$0.448 \pm 0.039$
methyl ethyl sulphide	<0.030
iso-propyl mercaptan	<0.030
n-propyl mercaptan	<0.030
tert-butyl mercaptan	$1.288 \pm 0.056$
diethyl sulphide	<0.030
n-butyl mercaptan	<0.030

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k=2$ , which for a normal distribution provides a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with JCGM 100:2008 - *Evaluation of measurement data - Guide to the expression of uncertainty in measurement* (GUM).

EffecTech is accredited by UKAS to undertake the analysis presented in this certificate according to ISO/IEC 17025:2017.

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The laboratory activities reported were performed at the location of the issuing body  
The reference values reported relate only to the specific sample identified in this certificate