

# Fact Sheet Proficiency Test

## Gas analysis: Composition of (Liquefied) Natural Gas

This international PT scheme provides you to evaluate the analytical performances of your laboratory results. This PT is suitable for international standards (e.g.: ASTM D1945, GPA 2261, GPA 2286, ISO 6974, ISO 6976, ISO 17023) and all in house methods for (liquefied) natural gas composition measurement.

### Contact details:

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### (Liquefied) Natural Gas composition range:

Component	Range (% mol/mol)	Component	Range (% mol/mol)
CH <sub>4</sub>	60 – 99.9	iso-C <sub>5</sub> H <sub>12</sub>	0.02 - 0.8
C <sub>2</sub> H <sub>6</sub>	0.25 - 11	n-C <sub>5</sub> H <sub>12</sub>	0.02 - 0.8
C <sub>3</sub> H <sub>8</sub>	0.1 – 10	n-C <sub>6</sub> H <sub>14</sub>	0.02 - 0.4
iso-C <sub>4</sub> H <sub>10</sub>	0.03 – 0.7	CO <sub>2</sub>	0.2 – 20
n-C <sub>4</sub> H <sub>10</sub>	0.03 – 0.7	N <sub>2</sub>	0.1 - 20

Physical properties @ (0 °C metering temp and 25 °C combustion temp) and (15 °C metering temp and 15 °C combustion temp): Superior Caloric Value in MJ/m<sup>3</sup>, Density in kg/m<sup>3</sup> and Wobbe index in MJ/m<sup>3</sup>

The samples will be supplied in an aluminium cylinder with a water capacity of 5 L with a pressure of approximate 2.0 MPa and a DIN-1 valve connection. Samples will be prepared by Scott Specialty Gases, the Netherlands.

### Reference laboratory:

VSL, the Dutch National Metrology institute (traceability of the reference values to international measurement standards is guaranteed).

### Estimate number of participants:

Minimum number of participants: 12; typical number of participants: 20

### Measurements protocol:

Will be provided by e-mail after shipment of the cylinders, participants has two weeks to perform the analysis.

### Evaluation:

Evaluation by  $E_n$  value and Z-scores against reference values determined by VSL.

All participants will receive a report of the interlaboratory comparison within four weeks after ending the comparison cycle.

### Accreditation:

The organisation of this Proficiency Test is in accordance with the requirements of ISO/IEC 17043. Accreditation is granted by RvA, registration number R006.

### Confidentiality statement:

"VSL keeps all data regarding the performance of individual participants, or groups of participants, strictly confidential. Data is accordingly protected and stored in areas on networks with restricted access. The relationship between results and the laboratories that submitted them will never be disclosed. Only the laboratory is granted access to its performance through the assigned code number."

### Fee & Schedule:

The frequency is twice a year. Contact us for specific schedule and fee details.

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### Requirement 5.9 ISO/IEC 17025:

*Assuring quality of testing and calibration results:* The laboratory will have quality control procedures for monitoring test validity and calibrations undertaken. This monitoring will be planned and validated and may include the following: *participation in interlaboratory comparisons or proficiency-testing programmes.*