

CERTIFICATE OF ACCREDITATION

This is to attest that

AIR LIQUIDE INDIA SPECIALITY GASES PRIVATE LIMITED

N 163 MIDC TARAPUR NEAR KUMBHVLI NAKA BOISAR, MH 401506, INDIA

Testing Laboratory TL-1147

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date June 17, 2025



International Accreditation Service Issued under the authority of IAS management

SCOPE OF ACCREDITATION

International Accreditation Service, Inc. 3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

AIR LIQUIDE INDIA SPECIALITY GASES PRIVATE LIMITED

Contact Name Seema Patil

Contact Phone +919311962972

Accredited to ISO/IEC 17025:2017

Effective Date June 17, 2025

TM005/TA	NATURAL GAS Composition, Range of Measurement, % mol/mol	
	Amount fraction	(% mol/mol)
	Nitrogen	0.1 to 12
	carbon dioxide	0.05 to 8
	Methane	64 to 100
	Ethane	0.1 to 14
	Propane	0 to 8
	iso-butane	0 to 1.2
	n-butane	0 to 1.2
	neo-pentane	0 to 0.35
	iso-pentane	0 to 0.35
	n-pentane	0 to 0.35
	2-methyl pentane	0 to 0.35
	3-methyl pentane	0 to 0.35
	2,2-dimethylbutane	0 to 0.35
	n-hexane	0 to 0.35
	hexanes (1)	0 to 0.35
	Benzene	0 to 0.2
	cyclohexane	0 to 0.2
	n-heptane	0 to 0.2
	heptanes (1)	0 to 0.2
	Toluene	0 to 0.1
	methylcyclohexane	0 to 0.1
	n-octane	0 to 0.05
	octanes (1)	0 to 0.05
	n-nonane	0 to 0.02
	nonanes (1)	0 to 0.02
	n-decane	0 to 0.005
	decanes (1)	0 to 0.005
	Oxygen	0 to 1
Gas Mixture Properties	In-house method TM005/TA	
(Calculated Values from composi-		
tion)		
Superior calorific value	Values calculated by ISO 6976:1995 (including amendment No. 1,	
Inferior calorific value	May 1998) on a real or ideal gas basis assuming the mixture is dry	
Relative density	(free from water)	

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Density Superior Wobbe index Inferior Wobbe index Molar mass Compression factor	Combustion properties can be expressed in units of the Joule (J) or in kilowatt hours (kWh)
gross calorific value net calorific value relative density density	Values calculated by ISO 6976:2016 on a real or ideal gas basis assuming the mixture is dry (free from water)
gross Wobbe index net Wobbe index molar mass compression factor	Combustion properties can be expressed in units of the Joule (J) or in kilowatt hours (kWh)
gross heating value net heating value relative density compressibility factor	Calculated values according to methods given in GPA-2172-09 (2009) using data table from GPA 2145-09
gross heating value net heating value relative density compressibility factor	Calculated values according to methods given in ASTM D3588-98 (2011) using data tables from GPA 2145-09 using data table from GPA 2145-09

