قطر للطاقة
QatarEnergy
LNG

CORRELATION TEST
COMPARISON RESULT

SAMPLE	:	QatarEnergy LNG - CPC CORRELATION SAMPLE 2025
SAMPLE CYLINDER No.	:	DA8104
LOCATION	:	QatarEnergy LNG - SOUTH LABORATORY
ANALYSIS DATE	:	29-Oct-2025
ANALYST	:	AJI WINARNO
ANALYSIS METHOD	:	GC, GPA 2261

COMPONENT	UNIT	GC SYSTEMS			MAX-MIN	CONCLUSION	CORRELATION LIMIT [GPA 2261-64]
		AGILENT - 6	AGILENT - 7	AGILENT - 8			
CH4	% MOL	92.84	92.82	92.84	0.02	OK	0.30
C2H6	% MOL	6.44	6.46	6.44	0.02	OK	0.10
C3H8	% MOL	0.15	0.15	0.15	0.00	OK	0.05
I-C4H10	% MOL	0.01	0.01	0.01	0.00	OK	0.03
N-C4H10	% MOL	0.01	0.01	0.01	0.00	OK	0.03
I-C5H12	% MOL	0.00	0.00	0.00	0.00	OK	0.03
N-C5H12	% MOL	0.00	0.00	0.00	0.00	OK	0.03
C6H14	% MOL	0.00	0.00	0.00	0.00	OK	0.03
N2	% MOL	0.55	0.55	0.55	0.00	OK	0.03
CO2	% MOL	0.00	0.00	0.00	0.00	OK	0.03
O2	% MOL	0.00	0.00	0.00	0.00	OK	0.03
TOTAL	% MOL	100.00	100.00	100.00			

SGS QATAR

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QatarEnergy
LNG

CORRELATION TEST
COMPARISON RESULT

QatarEnergy LNG - CPC CORRELATION TEST 2025 - FINAL

SAMPLE CYLINDER No.	→	DA8104	Taichung 48	Taichung 49
LOCATION	→	QatarEnergy LNG - SOUTH LABORATORY	CPC CORPORATION, TAICHUNG TERMINAL LAB	CPC CORPORATION, YUNG-AN TERMINAL LAB
ANALYSIS DATE	→	29-Oct-25	30-Sep-25	02-Oct-25
ANALYST	→	AJI WINARNO	CHENG FENG WANG	TONY HSU
ANALYSIS METHOD	→	GC, GPA 2261	GC, GPA 2261	

COMPONENT	UNIT	QELNG GAS CHROMATOGRAPHS			CPC GAS CHROMATOGRAPHS				MAX - MIN	CONCLUSION	CORRELATION LIMIT [GPA 2261-64]
		SOUTH LABORATORY			TAICHUNG TERMINAL		YUNG-AN TERMINAL				
		AGILENT - 6	AGILENT - 7	AGILENT - 8	AGILENT GC-C	AGILENT GC-D	AGILENT GC-H	AGILENT GC-L			
CH4	% MOL	92.84	92.82	92.84	92.84	92.84	92.91	92.92	0.10	OK	0.30
C2H6	% MOL	6.44	6.46	6.44	6.44	6.44	6.37	6.36	0.10	OK	0.10
C3H8	% MOL	0.15	0.15	0.15	0.16	0.16	0.15	0.15	0.01	OK	0.05
I-C4H10	% MOL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	OK	0.03
N-C4H10	% MOL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	OK	0.03
I-C5H12	% MOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OK	0.03
N-C5H12	% MOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OK	0.03
C6H14	% MOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OK	0.03
N2	% MOL	0.55	0.55	0.55	0.54	0.54	0.55	0.55	0.01	OK	0.03
CO2	% MOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OK	0.03
O2	% MOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OK	0.03
TOTAL	% MOL	100.00	100.00	100.00	100.00	100.00	100.00	100.00			

SGS QATA 6

قطر للطاقة
QatarEnergy
LNG

SGS QATAR 6

CORRELATION SHEET FOR LNG CERTIFICATION

SAMPLE	REFERENCE STANDARD GAS	CORRELATION TEST SAMPLE
CYLINDER No.	5803001	DA8104
SQC SAMPLE TYPE	NOT APPLICABLE	QatarEnergy LNG - CPC CORRELATION SAMPLE 2025
LOCATION	QatarEnergy LNG - SOUTH LAB. / AGILENT - 6	QatarEnergy LNG - SOUTH LAB. / AGILENT - 6
GC MODEL	AGILENT 7890B	AGILENT 7890B
GC SERIAL No.	US 13493032	US 13493032
DATE CERTIFIED	06-Apr-23	29-Oct-25
SAMPLED BY	SCOTT SPECIALTY GASES	QatarEnergy LNG - SOUTH LAB
ANALYSIS DATE	29-Oct-25	29-Oct-25
ANALYST	AJI WINARNO	AJI WINARNO
ANALYSIS METHOD	GC, GPA 2261	GC, GPA 2261

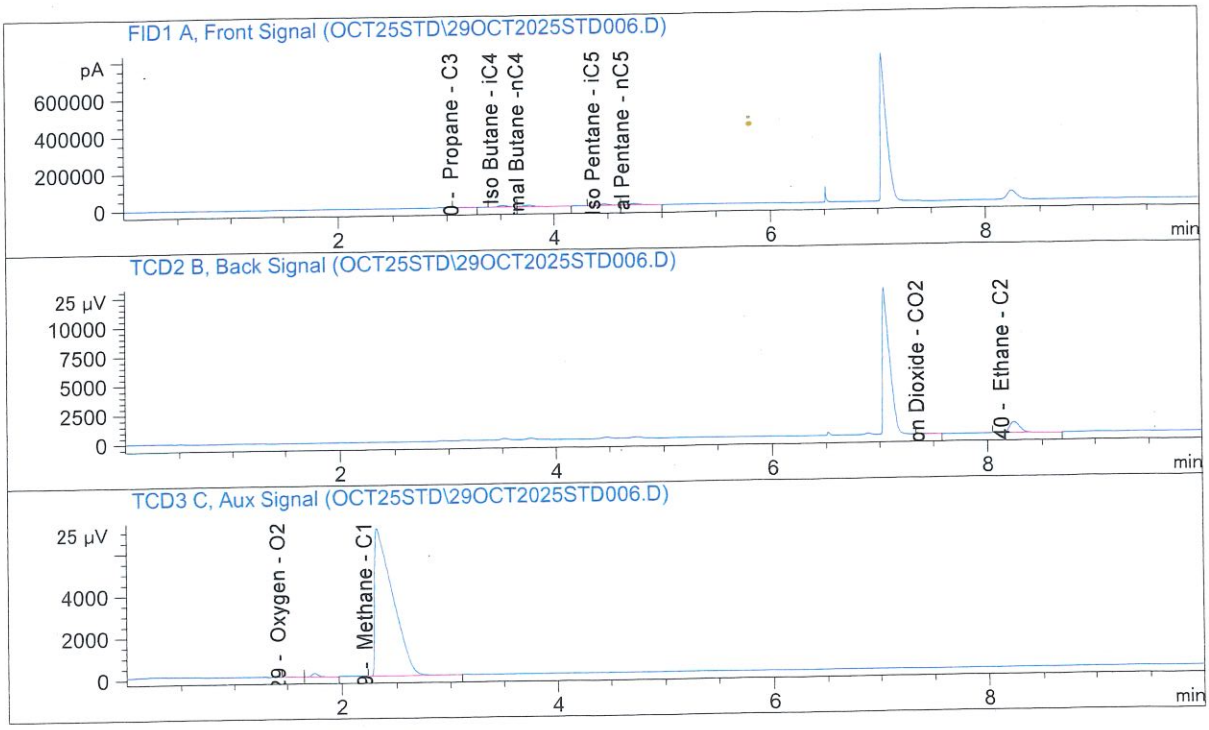
		COUNT 1			COUNT 2			DIFF	AVERAGE	COUNT 1			COUNT 2			DIFF	TEST RESULT (MOL%)	
	CERTIFICATE MOL%	SAMPLE PRESSURE	PEAK AREA	RESPONSE FACTOR	SAMPLE PRESSURE	PEAK AREA	RESPONSE FACTOR	RESPONSE FACTOR	RESPONSE FACTOR	SAMPLE PRESSURE	PEAK AREA	MOL%	SAMPLE PRESSURE	PEAK AREA	MOL%	DIFF MOL%	UNORMALIZED	REPORTED VALUE
	A	B(mmHg)	C	D=A*B/C	E(mmHg)	F	G=A*E/F	H=(D-G)*100/I	I=(D+G)/2	J	K	L=I*K/J	M	N	O=I*N/M	P=(L-O)*100/Q	Q=(L+O)/2	
O2	0.0250	760	32	0.5937500	760	33	0.5757576	3.08	0.584753788	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
N2	0.4990	760	599	0.6331219	760	599	0.6331219	0.00	0.633121870	760	657	0.5473172	760	653	0.5439850	0.61	0.546	0.55
CH4	92.0600	760	79639	0.8785344	760	79616	0.8787882	0.03	0.878661285	760	79880	92.3519256	760	79810	92.2709962	0.09	92.311	92.84
C3H8	0.1022	760	8454	0.0091876	760	8442	0.0092007	0.14	0.009194133	760	12519	0.1514492	760	12505	0.1512798	0.11	0.151	0.15
I-C4H10	0.3008	760	36219	0.0063118	760	36211	0.0063132	0.02	0.006312523	760	920	0.0076415	760	918	0.0076249	0.21	0.008	0.01
N-C4H10	0.2983	760	37556	0.0060365	760	37555	0.0060367	0.00	0.006036612	760	1530	0.0121527	760	1529	0.0121447	0.07	0.012	0.01
I-C5H12	0.2987	760	45571	0.0049815	760	45575	0.0049811	0.01	0.004981283	760	145	0.0009504	760	144	0.0009438	0.66	0.001	0.00
N-C5H12	0.2997	760	46592	0.0048887	760	46594	0.0048884	0.00	0.004888545	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
CO2	0.1244	760	128	0.7386250	760	128	0.7386250	0.00	0.738625000	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
C2H6	5.9900	760	5799	0.7850319	760	5795	0.7855738	0.07	0.785302836	760	6187	6.3929851	760	6210	6.4167508	0.37	6.405	6.44
C6H14*	0.0000	760	0	0.0000000	760	0	0.0000000	0.00	0.000000000	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
TOTAL	99.9981		260589			260548					101838	99.4644215		101769	99.4037252		99.434	100.00

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC6_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25STD\29OCT2025STD006.D

Instrument: Agilent 6
Injection Date: Wed, 29. Oct. 2025 8:49:16 AM
Lab. Tech.: AJI

Sample Name: STANDARD
Sample Note: 760 mmHg



Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.53	32	0.0248
Nitrogen - N2	TCD3 C,	1.75	599	0.4988
Methane - C1	TCD3 C,	2.32	79639	92.0733
Propane - C3	FID1 A,	3.15	8454	0.1023
Iso Butane - iC4	FID1 A,	3.52	36219	0.3008
Normal Butane -nC4	FID1 A,	3.76	37556	0.2983
Iso Pentane - iC5	FID1 A,	4.47	45571	0.2987
Normal Pentane - nC5	FID1 A,	4.75	46592	0.2997
Carbon Dioxide - CO2	TCD2 B,	7.45	128	0.1242
Ethane - C2	TCD2 B,	8.24	5799	5.9920
		Total	260588	100.0130

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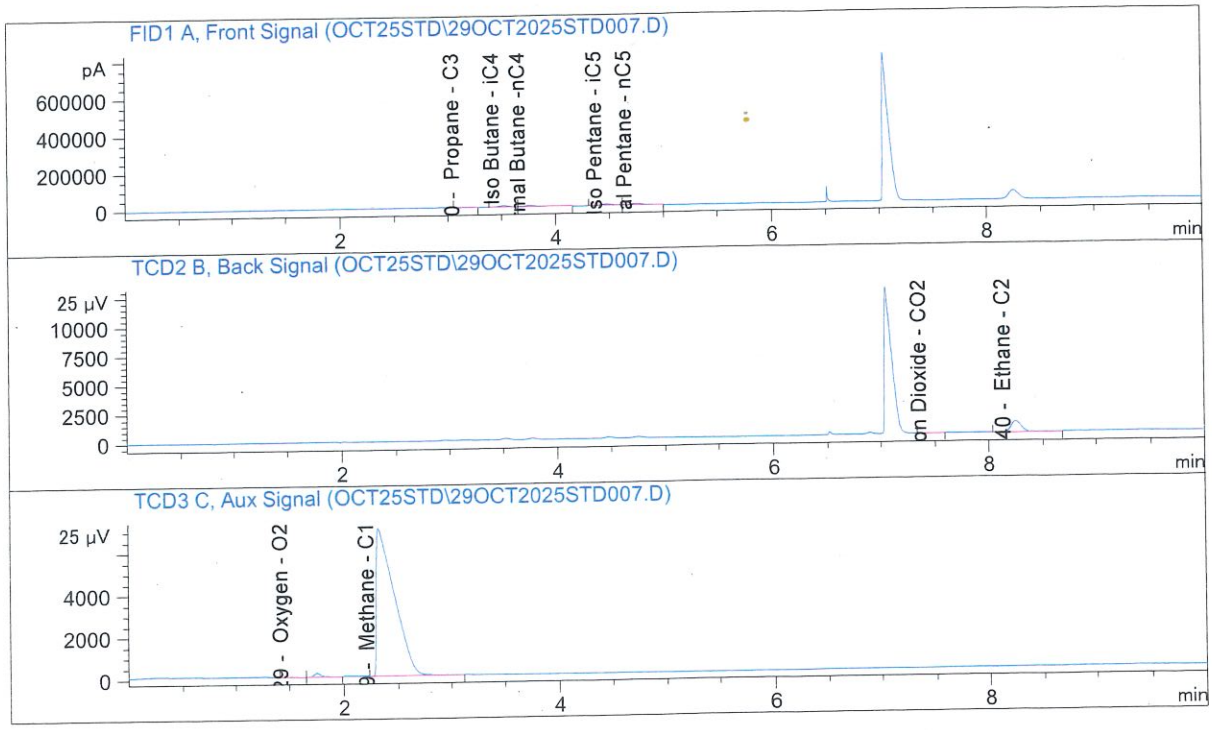
QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC6_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25STD\29OCT2025STD007.D

Instrument: Agilent 6
Injection Date: Wed, 29. Oct. 2025 9:02:31 AM
Lab. Tech.: AJI

Sample Name: STANDARD
Sample Note: 760 mmHg



Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.53	33	0.0252
Nitrogen - N2	TCD3 C,	1.75	599	0.4992
Methane - C1	TCD3 C,	2.32	79616	92.0467
Propane - C3	FID1 A,	3.15	8442	0.1021
Iso Butane - iC4	FID1 A,	3.52	36211	0.3008
Normal Butane -nC4	FID1 A,	3.76	37555	0.2983
Iso Pentane - iC5	FID1 A,	4.47	45575	0.2987
Normal Pentane - nC5	FID1 A,	4.75	46594	0.2997
Carbon Dioxide - CO2	TCD2 B,	7.45	128	0.1246
Ethane - C2	TCD2 B,	8.24	5795	5.9880
		Total	260548	99.9832

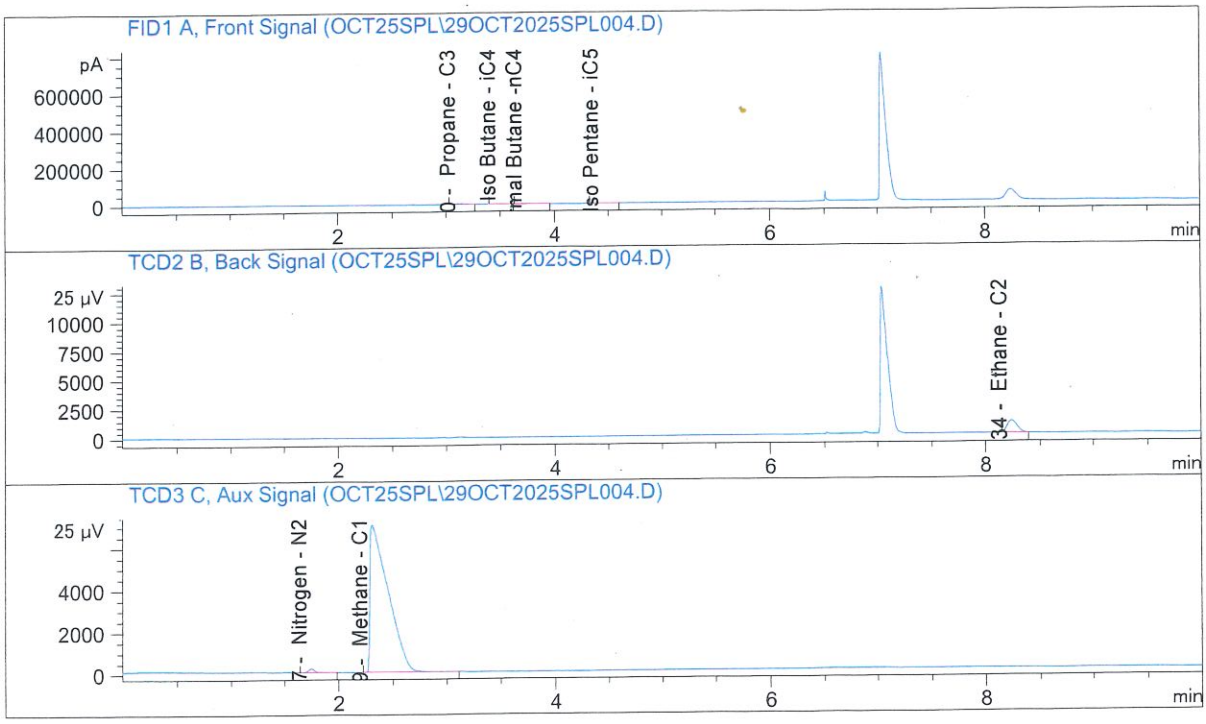
SGS QATAR 6

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC6_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25SPL\29OCT2025SPL004.D

Instrument: Agilent 6
Injection Date: Wed, 29. Oct. 2025 10:32:51 AM
Lab. Tech.: AJI

Sample Name: CPC CORR SAMPLE
Sample Note: 760 mmHg



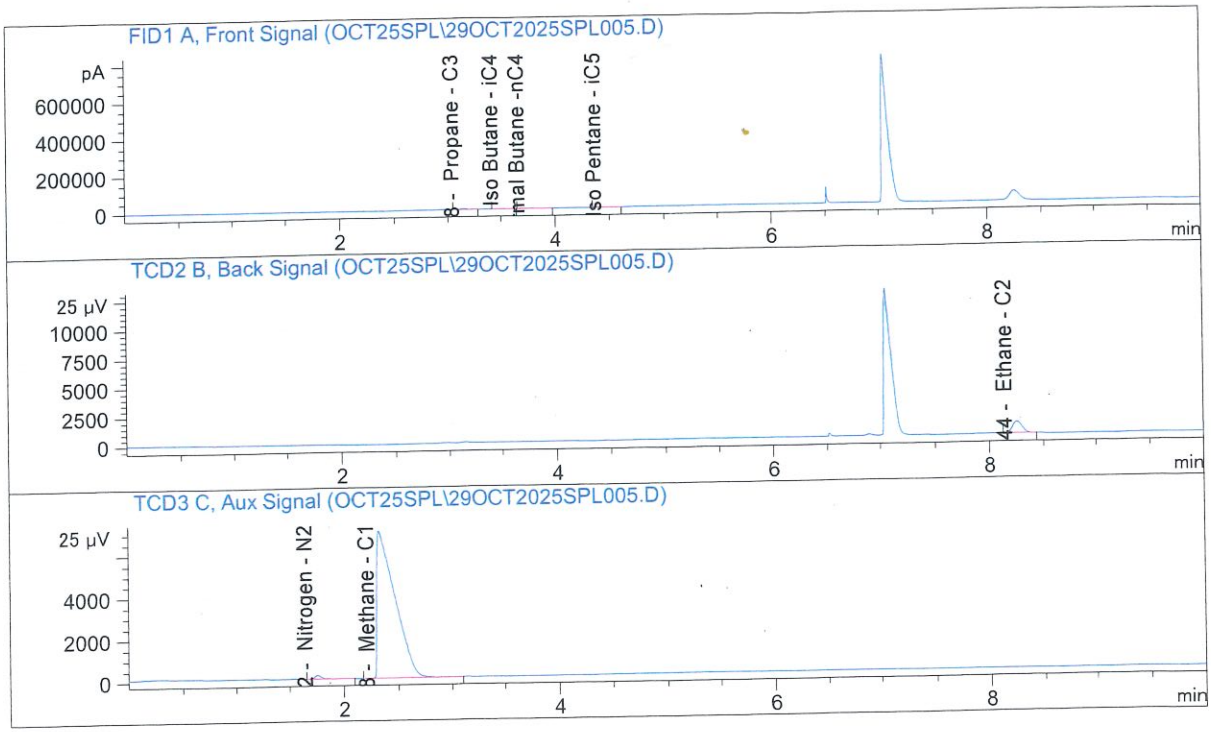
Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.53	0	0.0000
Nitrogen - N2	TCD3 C,	1.75	657	0.5469
Methane - C1	TCD3 C,	2.32	79880	92.3525
Propane - C3	FID1 A,	3.15	12519	0.1515
Iso Butane - iC4	FID1 A,	3.52	920	0.0076
Normal Butane -nC4	FID1 A,	3.76	1530	0.0122
Iso Pentane - iC5	FID1 A,	4.47	145	0.0009
Normal Pentane - nC5	FID1 A,	4.75	0	0.0000
Carbon Dioxide - CO2	TCD2 B,	7.45	0	0.0000
Ethane - C2	TCD2 B,	8.24	6187	6.3927
		Total	101838	99.4644

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC6_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25SPL\29OCT2025SPL005.D

Instrument: Agilent 6
Injection Date: Wed, 29. Oct. 2025 10:45:29 AM
Lab. Tech.: AJI

Sample Name: CPC CORR SAMPLE
Sample Note: 760 mmHg



Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.53	0	0.0000
Nitrogen - N2	TCD3 C,	1.75	653	0.5441
Methane - C1	TCD3 C,	2.32	79810	92.2719
Propane - C3	FID1 A,	3.15	12505	0.1513
Iso Butane - iC4	FID1 A,	3.52	918	0.0076
Normal Butane -nC4	FID1 A,	3.76	1529	0.0121
Iso Pentane - iC5	FID1 A,	4.47	144	0.0009
Normal Pentane - nC5	FID1 A,	4.75	0	0.0000
Carbon Dioxide - CO2	TCD2 B,	7.45	0	0.0000
Ethane - C2	TCD2 B,	8.24	6210	6.4173
		Total	101770	99.4053

SGS QATAR

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QatarEnergy
LNG

SGS QATAR 6

CORRELATION SHEET FOR LNG CERTIFICATION

SAMPLE	REFERENCE STANDARD GAS	CORRELATION TEST SAMPLE
CYLINDER No.	5803001	DA8104
SQC SAMPLE TYPE	NOT APPLICABLE	QatarEnergy LNG - CPC CORRELATION SAMPLE 2025
LOCATION	QatarEnergy LNG - SOUTH LAB. / AGILENT - 7	QatarEnergy LNG - SOUTH LAB. / AGILENT - 7
GC MODEL	AGILENT 7890B	AGILENT 7890B
GC SERIAL No.	US 13493020	US 13493020
DATE CERTIFIED	06-Apr-23	29-Oct-25
SAMPLED BY	SCOTT SPECIALTY GASES	QatarEnergy LNG - SOUTH LAB
ANALYSIS DATE	29-Oct-25	29-Oct-25
ANALYST	AJI WINARNO	AJI WINARNO
ANALYSIS METHOD	GC, GPA 2261	GC, GPA 2261

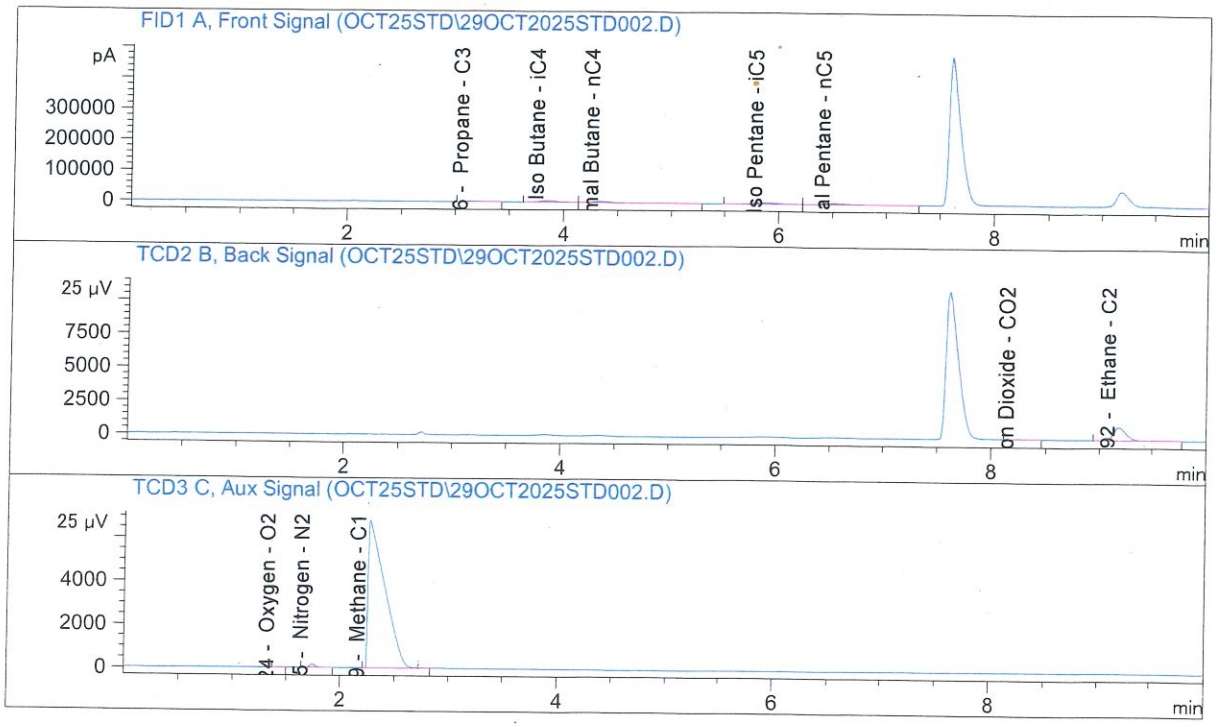
		COUNT 1			COUNT 2			DIFF	AVERAGE	COUNT 1			COUNT 2			DIFF	TEST RESULT (MOL%)	
	CERTIFICATE MOL%	SAMPLE PRESSURE	PEAK AREA	RESPONSE FACTOR	SAMPLE PRESSURE	PEAK AREA	RESPONSE FACTOR	RESPONSE FACTOR	RESPONSE FACTOR	SAMPLE PRESSURE	PEAK AREA	MOL%	SAMPLE PRESSURE	PEAK AREA	MOL%	DIFF MOL%	UNORMALIZED	REPORTED VALUE
	A	B(mmHg)	C	D=A*B/C	E(mmHg)	F	G=A*E/F	H=(D-G)*100/I	I=(D+G)/2	J	K	L=I*K/J	M	N	O=I*N/M	P=(L-O)*100/Q	Q=(L+O)/2	
O2	0.0250	760	26	0.7307692	760	26	0.7307692	0.00	0.730769231	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
N2	0.4990	760	529	0.7168998	760	529	0.7168998	0.00	0.716899811	760	579	0.5461645	760	578	0.5452212	0.17	0.546	0.55
CH4	92.0600	760	70940	0.9862644	760	70940	0.9862644	0.00	0.986264449	760	71030	92.1767945	760	70943	92.0638931	0.12	92.120	92.82
C3H8	0.1022	760	10860	0.0071521	760	10863	0.0071501	0.03	0.007151130	760	15713	0.1478496	760	15712	0.1478402	0.01	0.148	0.15
I-C4H10	0.3008	760	40862	0.0055946	760	40886	0.0055914	0.06	0.005592994	760	1106	0.0081393	760	1106	0.0081393	0.00	0.008	0.01
N-C4H10	0.2983	760	41641	0.0054443	760	41678	0.0054395	0.09	0.005441929	760	1761	0.0126095	760	1760	0.0126024	0.06	0.013	0.01
I-C5H12	0.2987	760	51120	0.0044408	760	51174	0.0044361	0.11	0.004438424	760	163	0.0009519	760	162	0.0009461	0.58	0.001	0.00
N-C5H12	0.2997	760	51945	0.0043849	760	52009	0.0043795	0.12	0.004382171	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
CO2	0.1244	760	162	0.5836049	760	162	0.5836049	0.00	0.583604938	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
C2H6	5.9900	760	8117	0.5608476	760	8132	0.5598131	0.18	0.560330344	760	8698	6.4128333	760	8699	6.4135706	0.01	6.413	6.46
C6H14*	0.0000	760	0	0.0000000	760	0	0.0000000	0.00	0.000000000	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
TOTAL	99.9981		276202			276399					99050	99.3053426		98960	99.1922129		99.249	100.00

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC7_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25STD\29OCT2025STD002.D

Instrument: Agilent 7
Injection Date: Wed, 29. Oct. 2025 6:38:46 AM
Lab. Tech.: AJI

Sample Name: STANDARD
Sample Note: 760 mmHg



Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.42	26	0.0256
Nitrogen - N2	TCD3 C,	1.74	529	0.5043
Methane - C1	TCD3 C,	2.27	70940	93.0007
Propane - C3	FID1 A,	3.17	10860	0.1025
Iso Butane - iC4	FID1 A,	3.87	40862	0.3018
Normal Butane - nC4	FID1 A,	4.37	41641	0.2992
Iso Pentane - iC5	FID1 A,	5.90	51120	0.2995
Normal Pentane - nC5	FID1 A,	6.53	51945	0.3004
Carbon Dioxide - CO2	TCD2 B,	8.26	162	0.1247
Ethane - C2	TCD2 B,	9.20	8117	6.0190
		Total	276202	100.9778

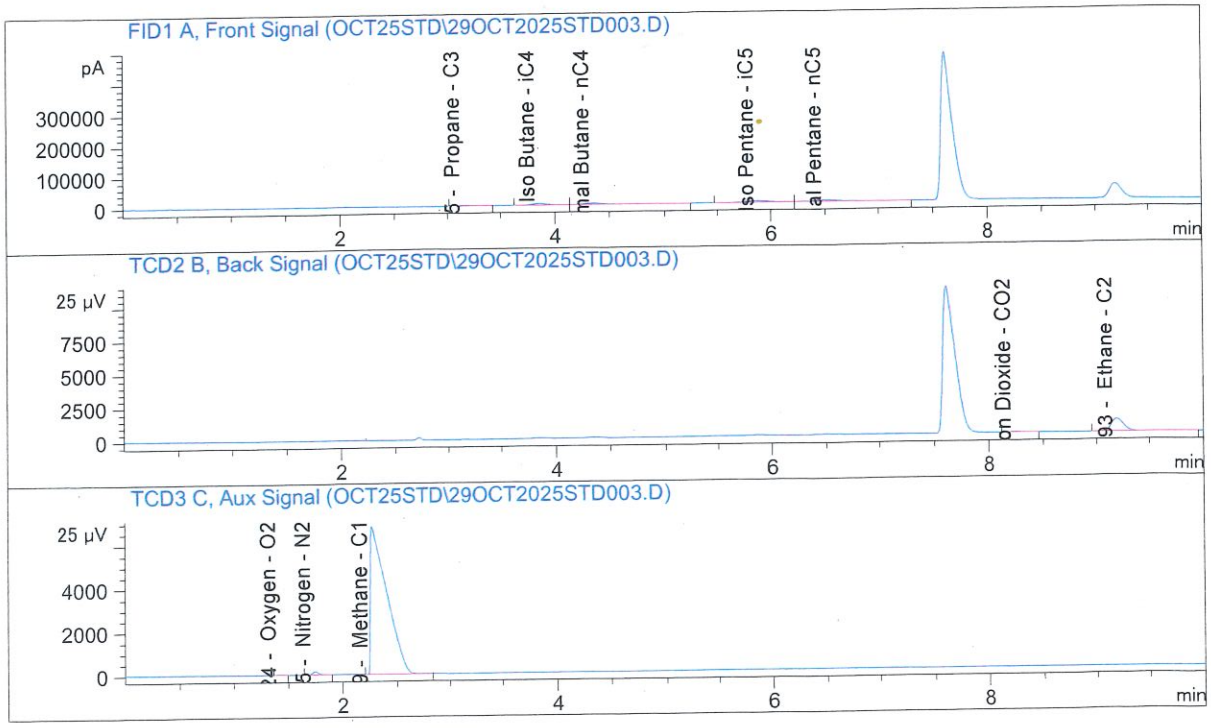
SGS QATAR

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC7_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25STD\29OCT2025STD003.D

Instrument: Agilent 7
Injection Date: Wed, 29. Oct. 2025 6:49:09 AM
Lab. Tech.: AJI

Sample Name: STANDARD
Sample Note: 760 mmHg



Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.42	26	0.0256
Nitrogen - N2	TCD3 C,	1.74	529	0.5042
Methane - C1	TCD3 C,	2.27	70940	93.0007
Propane - C3	FID1 A,	3.17	10863	0.1025
Iso Butane - iC4	FID1 A,	3.87	40886	0.3019
Normal Butane - nC4	FID1 A,	4.37	41678	0.2995
Iso Pentane - iC5	FID1 A,	5.90	51174	0.2998
Normal Pentane - nC5	FID1 A,	6.53	52009	0.3008
Carbon Dioxide - CO2	TCD2 B,	8.26	162	0.1249
Ethane - C2	TCD2 B,	9.20	8132	6.0299
		Total	276398	100.9899

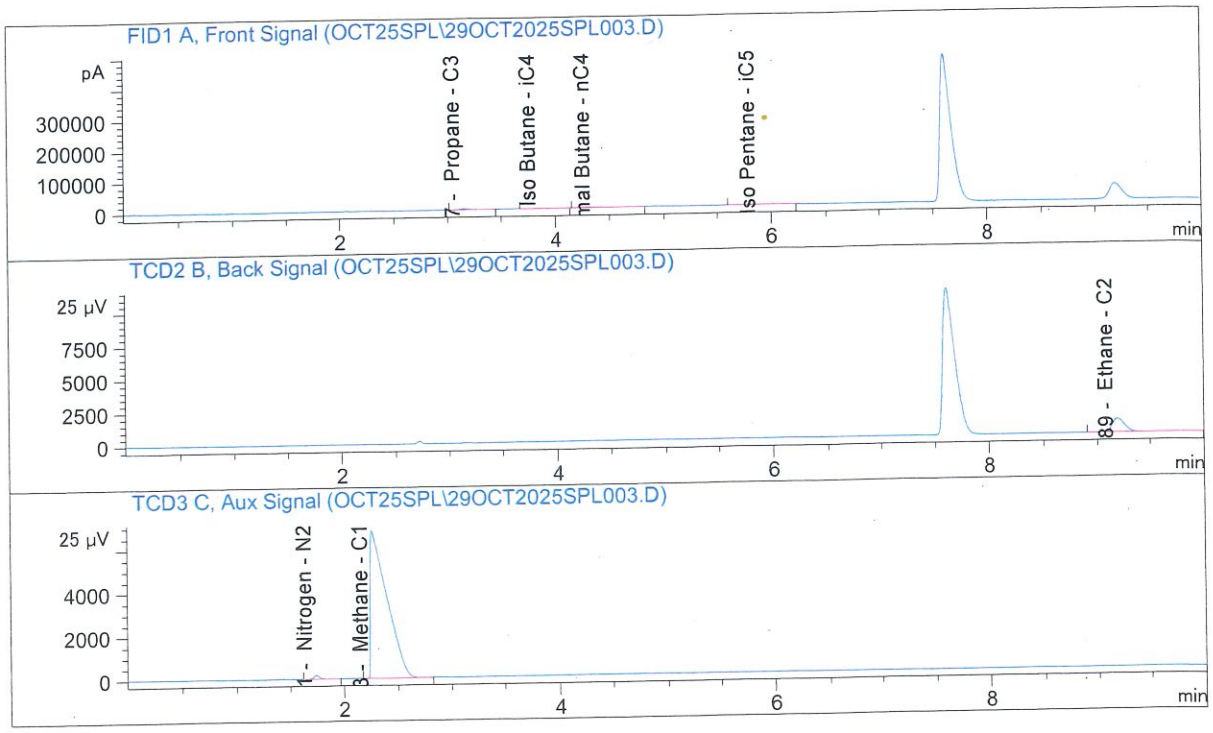
SGS QATAR

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC7_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25SPL\29OCT2025SPL003.D

Instrument: Agilent 7
Injection Date: Wed, 29. Oct. 2025 10:19:12 AM
Lab. Tech.: AJI

Sample Name: CPC CORR SAMPLE
Sample Note: 760 mmHg



Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.42	0	0.0000
Nitrogen - N2	TCD3 C,	1.74	579	0.5511
Methane - C1	TCD3 C,	2.27	71030	93.1193
Propane - C3	FID1 A,	3.17	15713	0.1483
Iso Butane - iC4	FID1 A,	3.87	1106	0.0082
Normal Butane - nC4	FID1 A,	4.37	1761	0.0127
Iso Pentane - iC5	FID1 A,	5.90	163	0.0010
Normal Pentane - nC5	FID1 A,	6.53	0	0.0000
Carbon Dioxide - CO2	TCD2 B,	8.26	0	0.0000
Ethane - C2	TCD2 B,	9.20	8698	6.4502
		Total	99050	100.2907

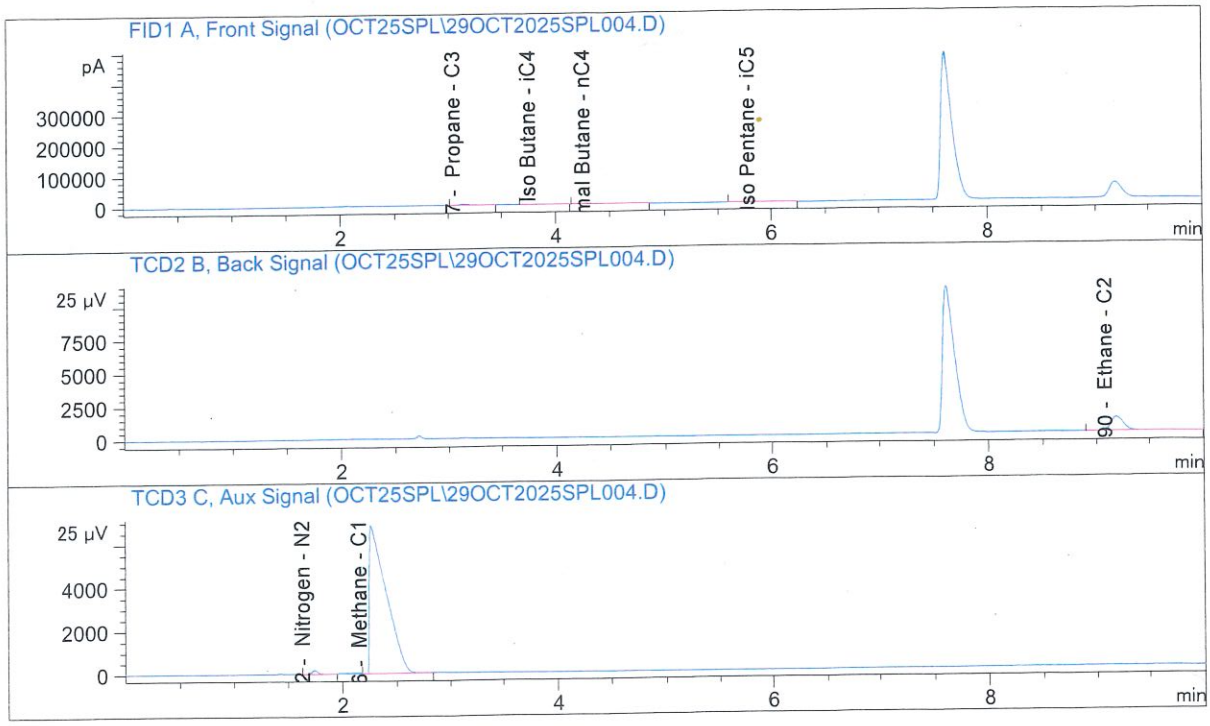
SGS QATAR

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC7_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25SPL\29OCT2025SPL004.D

Instrument: Agilent 7
Injection Date: Wed, 29. Oct. 2025 10:29:36 AM
Lab. Tech.: AJI

Sample Name: CPC CORR SAMPLE
Sample Note: 760 mmHg



Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.42	0	0.0000
Nitrogen - N2	TCD3 C,	1.74	578	0.5507
Methane - C1	TCD3 C,	2.27	70943	93.0056
Propane - C3	FID1 A,	3.17	15712	0.1483
Iso Butane - iC4	FID1 A,	3.87	1106	0.0082
Normal Butane - nC4	FID1 A,	4.37	1760	0.0126
Iso Pentane - iC5	FID1 A,	5.90	162	0.0009
Normal Pentane - nC5	FID1 A,	6.53	0	0.0000
Carbon Dioxide - CO2	TCD2 B,	8.26	0	0.0000
Ethane - C2	TCD2 B,	9.20	8699	6.4504
		Total	98960	100.1767

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QatarEnergy
LNG

SGS QATAR 6

CORRELATION SHEET FOR LNG CERTIFICATION

SAMPLE	REFERENCE STANDARD GAS	CORRELATION TEST SAMPLE
CYLINDER No.	5803001	DA8104
SQC SAMPLE TYPE	NOT APPLICABLE	QatarEnergy LNG - CPC CORRELATION SAMPLE 2025
LOCATION	QatarEnergy LNG - SOUTH LAB. / AGILENT - 8	QatarEnergy LNG - SOUTH LAB. / AGILENT - 8
GC MODEL	AGILENT 7890B	AGILENT 7890B
GC SERIAL No.	US 13503014	US 13503014
DATE CERTIFIED	06-Apr-23	29-Oct-25
SAMPLED BY	SCOTT SPECIALTY GASES	QatarEnergy LNG - SOUTH LAB
ANALYSIS DATE	29-Oct-25	29-Oct-25
ANALYST	AJI WINARNO	AJI WINARNO
ANALYSIS METHOD	GC, GPA 2261	GC, GPA 2261

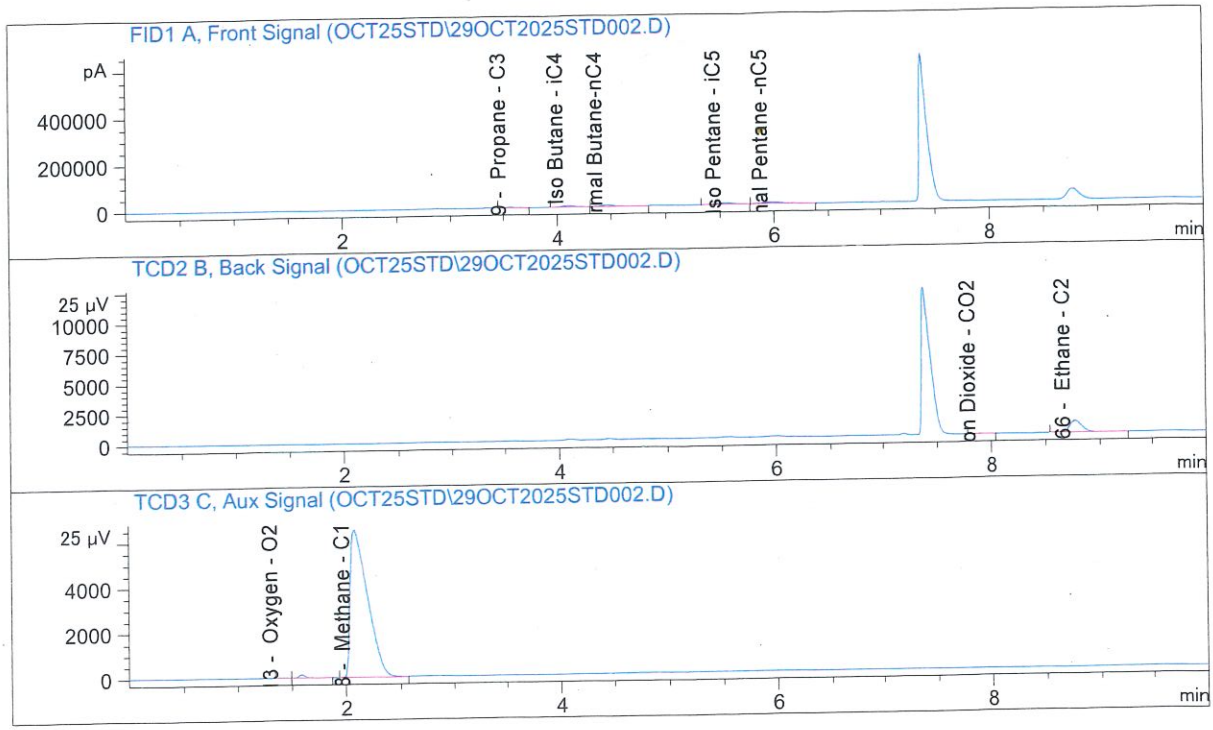
		COUNT 1			COUNT 2			DIFF	AVERAGE	COUNT 1			COUNT 2				TEST RESULT (MOL%)	
	CERTIFICATE MOL%	SAMPLE PRESSURE	PEAK AREA	RESPONSE FACTOR	SAMPLE PRESSURE	PEAK AREA	RESPONSE FACTOR	RESPONSE FACTOR	RESPONSE FACTOR	SAMPLE PRESSURE	PEAK AREA	MOL%	SAMPLE PRESSURE	PEAK AREA	MOL%	DIFF MOL%	UNORMALIZED	REPORTED VALUE
	A	B(mmHg)	C	D=A*B/C	E(mmHg)	F	G=A*E/F	H=(D-G)*100/I	I=(D+G)/2	J	K	L=I*K/J	M	N	O=I*N/M	P=(L-O)*100/Q	Q=(L+O)/2	
O2	0.0250	760	28	0.6785714	760	28	0.6785714	0.00	0.678571429	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
N2	0.4990	760	540	0.7022963	760	540	0.7022963	0.00	0.702296296	760	592	0.5470519	760	592	0.5470519	0.00	0.547	0.55
CH4	92.0600	760	71336	0.9807895	760	71370	0.9803223	0.05	0.980555884	760	71680	92.4819023	760	71721	92.5348007	0.06	92.508	92.84
C3H8	0.1022	760	9685	0.0080198	760	9683	0.0080215	0.02	0.008020653	760	14100	0.1488042	760	14107	0.1488781	0.05	0.149	0.15
I-C4H10	0.3008	760	37410	0.0061109	760	37415	0.0061101	0.01	0.006110471	760	1003	0.0080642	760	1007	0.0080964	0.40	0.008	0.01
N-C4H10	0.2983	760	37974	0.0059701	760	37986	0.0059682	0.03	0.005969142	760	1608	0.0126294	760	1609	0.0126373	0.06	0.013	0.01
I-C5H12	0.2987	760	46439	0.0048884	760	46442	0.0048881	0.01	0.004888233	760	151	0.0009712	760	152	0.0009776	0.64	0.001	0.00
N-C5H12	0.2997	760	46788	0.0048682	760	46801	0.0048668	0.03	0.004867495	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
CO2	0.1244	760	127	0.7444409	760	127	0.7444409	0.00	0.744440945	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
C2H6	5.9900	760	7955	0.5722690	760	7953	0.5724129	0.03	0.572340970	760	8525	6.4200089	760	8526	6.4207620	0.01	6.420	6.44
C6H14+	0.0000	760	0	0.0000000	760	0	0.0000000	0.00	0.000000000	760	0	0.0000000	760	0	0.0000000	-	0.000	0.00
TOTAL	99.9981		258282			258345					97659	99.6194321		97714	99.6732040		99.646	100.00

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC8_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25STD\29OCT2025STD002.D

Instrument: Agilent 8
Injection Date: Wed, 29. Oct. 2025 6:35:03 AM
Lab. Tech.: AJI

Sample Name: STANDARD
Sample Note: 760 mmHg



Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.42	28	0.0255
Nitrogen - N2	TCD3 C,	1.59	540	0.5011
Methane - C1	TCD3 C,	2.09	71336	92.3800
Propane - C3	FID1 A,	3.58	9685	0.1031
Iso Butane - iC4	FID1 A,	4.10	37410	0.3030
Normal Butane-nC4	FID1 A,	4.47	37974	0.3003
Iso Pentane - iC5	FID1 A,	5.56	46439	0.3006
Normal Pentane -nC5	FID1 A,	6.00	46788	0.3015
Carbon Dioxide - CO2	TCD2 B,	7.89	127	0.1258
Ethane - C2	TCD2 B,	8.77	7955	6.0436
		Total	258282	100.3846

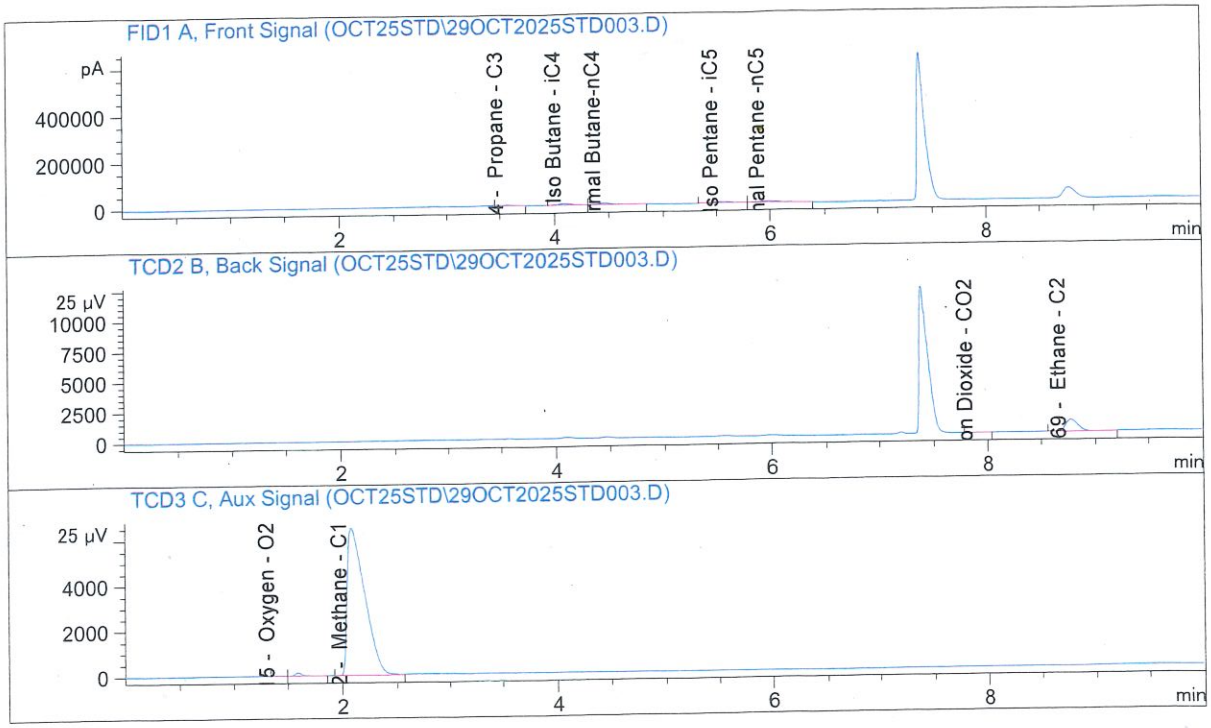
SGS QATAR 6

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC8_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25STD\29OCT2025STD003.D

Instrument: Agilent 8
Injection Date: Wed, 29. Oct. 2025 6:45:59 AM
Lab. Tech.: AJI

Sample Name: STANDARD
Sample Note: 760 mmHg



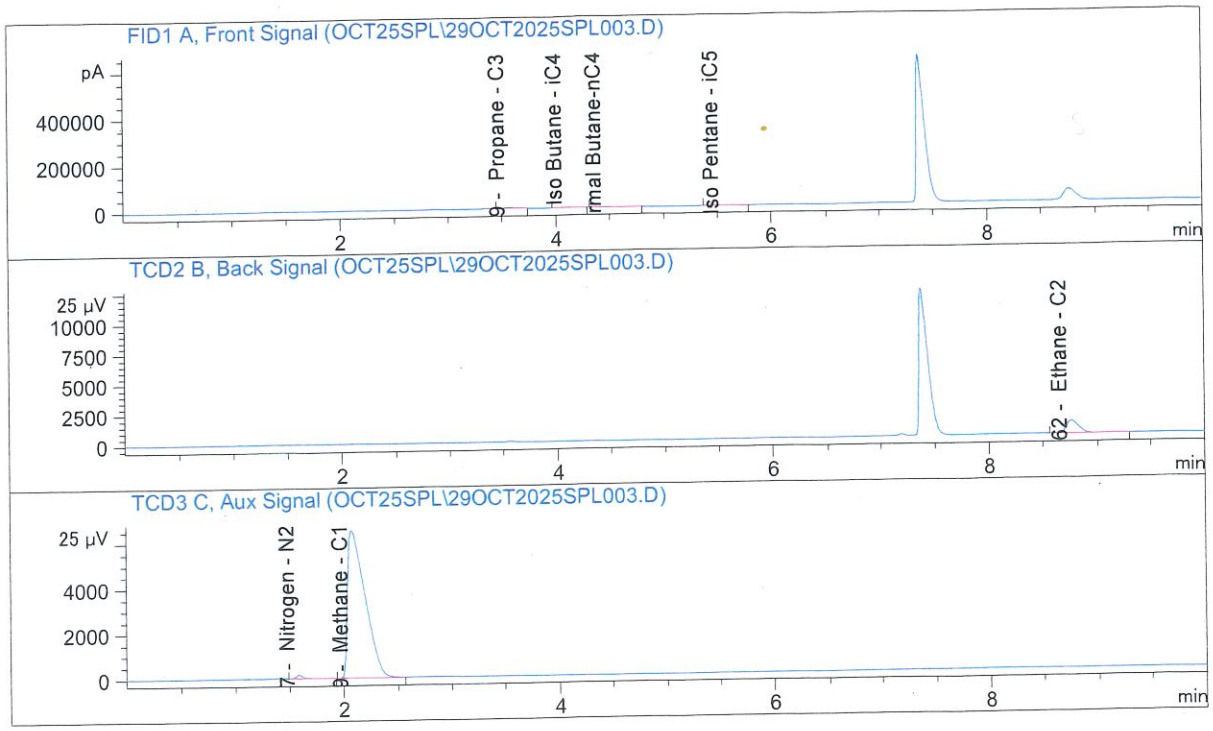
Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.42	28	0.0254
Nitrogen - N2	TCD3 C,	1.59	540	0.5012
Methane - C1	TCD3 C,	2.09	71370	92.4240
Propane - C3	FID1 A,	3.58	9683	0.1031
Iso Butane - iC4	FID1 A,	4.10	37415	0.3030
Normal Butane-nC4	FID1 A,	4.47	37986	0.3004
Iso Pentane - iC5	FID1 A,	5.56	46442	0.3007
Normal Pentane -nC5	FID1 A,	6.00	46801	0.3016
Carbon Dioxide - CO2	TCD2 B,	7.89	127	0.1256
Ethane - C2	TCD2 B,	8.77	7953	6.0417
		Total	258344	100.4267

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC8_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25SPL\29OCT2025SPL003.D

Instrument: Agilent 8
Injection Date: Wed, 29. Oct. 2025 10:16:02 AM
Lab. Tech.: AJI

Sample Name: CPC CORR SAMPLE
Sample Note: 760 mmHg



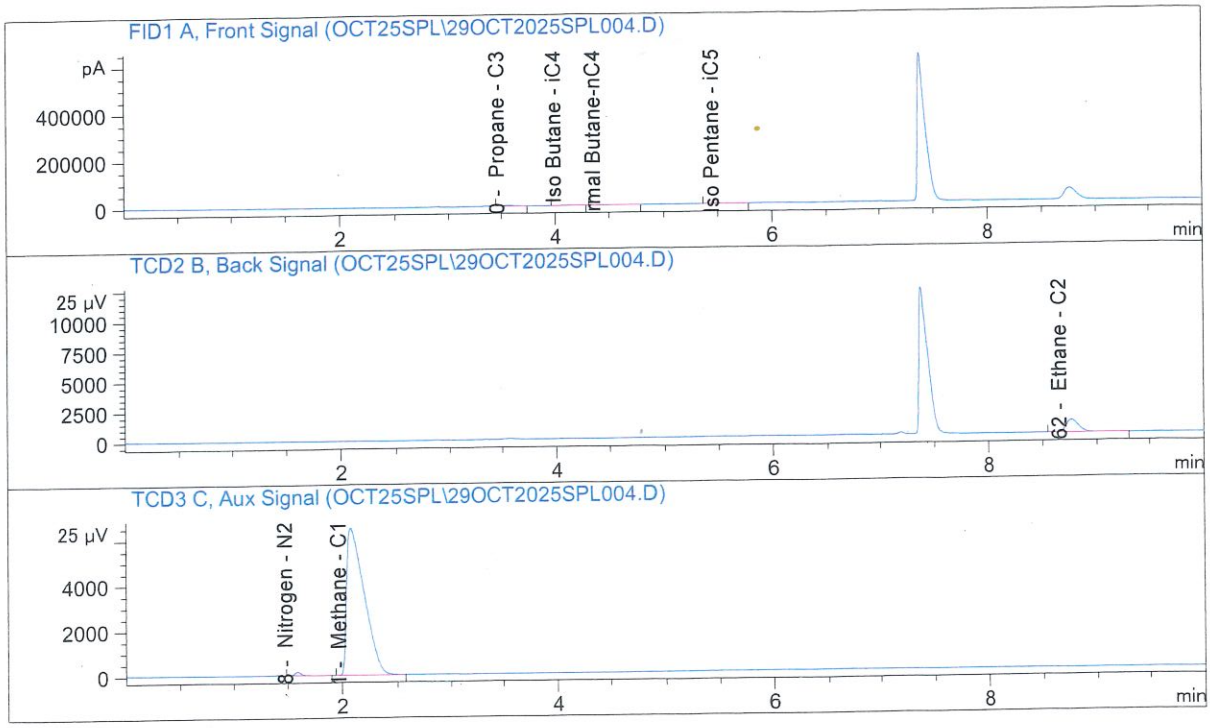
Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.42	0	0.0000
Nitrogen - N2	TCD3 C,	1.59	592	0.5499
Methane - C1	TCD3 C,	2.09	71680	92.8264
Propane - C3	FID1 A,	3.58	14100	0.1502
Iso Butane - iC4	FID1 A,	4.10	1003	0.0081
Normal Butane-nC4	FID1 A,	4.47	1608	0.0127
Iso Pentane - iC5	FID1 A,	5.56	151	0.0010
Normal Pentane -nC5	FID1 A,	6.00	0	0.0000
Carbon Dioxide - CO2	TCD2 B,	7.89	0	0.0000
Ethane - C2	TCD2 B,	8.77	8525	6.4763
		Total	97659	100.0245

QatarEnergy LNG - South Laboratory

Method: C:\CHEM32\1\METHODS\LNGC8_OCT25.M
File Name: C:\CHEM32\1\DATA\OCT25SPL\29OCT2025SPL004.D

Instrument: Agilent 8
Injection Date: Wed, 29. Oct. 2025 10:26:29 AM
Lab. Tech.: AJI

Sample Name: CPC CORR SAMPLE
Sample Note: 760 mmHg



Name	Signal	RT(min)	Area	Amount
Oxygen - O2	TCD3 C,	1.42	0	0.0000
Nitrogen - N2	TCD3 C,	1.59	592	0.5499
Methane - C1	TCD3 C,	2.09	71721	92.8795
Propane - C3	FID1 A,	3.58	14107	0.1502
Iso Butane - iC4	FID1 A,	4.10	1007	0.0082
Normal Butane-nC4	FID1 A,	4.47	1609	0.0127
Iso Pentane - iC5	FID1 A,	5.56	152	0.0010
Normal Pentane -nC5	FID1 A,	6.00	0	0.0000
Carbon Dioxide - CO2	TCD2 B,	7.89	0	0.0000
Ethane - C2	TCD2 B,	8.77	8526	6.4768
		Total	97714	100.0783

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LNG

CORRELATION TEST SAMPLE
SAMPLING QUALITY VERIFICATION

SAMPLE	:	QatarEnergy LNG - CPC Correlation Test Sample 2025
SAMPLE CYLINDER No.	:	First and Last in Series
LOCATION	:	QatarEnergy LNG - SOUTH LABORATORY
ANALYSIS DATE	:	7-Sep-2025
ANALYST	:	ASEP ALAM
ANALYSIS METHOD	:	GC, GPA 2261

COMPONENT	UNIT	CORRELATION SAMPLE		MAX - MIN	CONCLUSION	CORRELATION LIMIT [GPA 2261-64]
		FIRST SAMPLE	LAST SAMPLE			
CH4	% MOL	92.830	92.840	0.01	OK	0.30
C2H6	% MOL	6.450	6.440	0.01	OK	0.10
C3H8	% MOL	0.150	0.150	0.00	OK	0.05
I-C4H10	% MOL	0.010	0.010	0.00	OK	0.03
N-C4H10	% MOL	0.010	0.010	0.00	OK	0.03
I-C5H12	% MOL	0.000	0.000	0.00	OK	0.03
N-C5H12	% MOL	0.000	0.000	0.00	OK	0.03
C6H14	% MOL	0.000	0.000	0.00	OK	0.03
N2	% MOL	0.550	0.550	0.00	OK	0.03
CO2	% MOL	0.000	0.000	0.00	OK	0.03
O2	% MOL	0.000	0.000	0.00	OK	0.03
TOTAL	% MOL	100.000	100.000			

CORRELATION TEST SAMPLE LIST

NO.	DESTINATION	CYLINDER NO	SEAL NO.
1	QatarEnergy LNG, South Lab. (1)	DA8104	170793
2	QatarEnergy LNG, South Lab. (2)	BE 5168	170794
3	QatarEnergy LNG, North Lab.	DL 6131	170792
4	CPC Taichung	Taichung 48	170796
5	CPC Yung-An	Taichung 49	170795

***NOTE:**

After finish analysis, the sample (DA8104) resealed by the Surveyor.
Seal # Q 7015485

QatarEnergy LNG

Print Name: DENDI HADIAT

Surveyor
SGS, Qatar

Print Name: JOSEPH CABATAY

SGS QATAR 6

29-10-2025

SGS Stamp and signature is for observation (witnessing) purposes only and it subject to the provisions of the SGS General Conditions of Services [particularly article 2(d)] available at http://www.sgs.com/terms_and conditions.htm

Scott specialty gases

CALIBRATION RvA K 064

ISO/IEC 17025 - Calibration Certificate
Calibrated gas mixture

Certificate Number: 20-35034-003-5803001 Rev-00

Customer:
Name: QATARGAS OPERATING COMPANY LTD.
ATTN: (FOR QATAR LIQ.GAS.CO.LTD
Adress: X32 SOUTH MAIN WAREHOUSE
RAS LAFFAN IND. CITY
STATE OF QATAR

Product: Calibrated gas mixture intended as calibration standard.

Cylinder number: 5803001
Cylinder pressure: 7,9 MPa
Cylinder size: 20 Liter
Valve connection: CGA-350

Calibration method: The composition is determined in accordance with ISO 6143.

Traceability: The measurements have been executed using standards for which the traceability to (inter)national standards has been demonstrated towards the RvA.

Calibration result:

Component	Mole fraction mol/mol	Expanded uncertainty (k=2) mol/mol	Calibration date
Methane	92,06 x 10^{-2}	0,09 x 10^{-2}	6 April 2023
Ethane	5,99 x 10^{-2}	0,06 x 10^{-2}	6 April 2023
Propane	0,1022 x 10^{-2}	0,0020 x 10^{-2}	6 April 2023
Isobutane	0,3008 x 10^{-2}	0,0030 x 10^{-2}	6 April 2023
Butane	0,2983 x 10^{-2}	0,0030 x 10^{-2}	6 April 2023
Isopentane	0,2987 x 10^{-6}	0,0030 x 10^{-6}	6 April 2023
Pentane	0,2997 x 10^{-6}	0,0030 x 10^{-6}	6 April 2023
Carbon Dioxide	0,1244 x 10^{-2}	0,0037 x 10^{-2}	6 April 2023
Nitrogen *	0,499 x 10^{-2}	0,010 x 10^{-2}	3 April 2023
Oxygen *	250 x 10^{-6}	5 x 10^{-6}	3 April 2023

* Outside scope of accreditation.

Uncertainty: The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k = 2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with Publication EA-4/02.

Product handling: Consult ISO 16664 for product handling guidelines.
Minimum utilisation pressure is 0,5 MPa.
Use and store the gas cylinder between -10°C and 40°C.

Stability: Scott Specialty Gases Netherlands B.V. stability studies of similar products have demonstrated stability for 36 months.

Comments: THE NUMBER OF DIGITS USED TO REFLECT THE ACTUAL CONCENTRATION(S) IS INTENDED TO ACCOMODATE THE CUSTOMER, AND MAY EXCEED THE ACTUAL AMOUNT OF SIGNIFICANT DIGITS.

Scott Specialty Gases Netherlands B.V.
Calibration Laboratory
Takkebijsters 48
4817 BL Breda, The Netherlands
ExpertiseCenter.North-West@airliquide.com
Chamber of Commerce Number: 20134663

Scott specialty gases

ISO/IEC 17025 - Calibration Certificate
Calibrated gas mixture

CALIBRATION
RvA K 064

Certificate Number: 20-35034-003-5803001 Rev-00

Customer information: QATARGAS MATERIAL NO.: 1564896
QATARGAS PO ITEM NO.: 00001
DESCRIPTION: GAS,MIX,NATURAL GAS,LEAN,20L,CGA350
TYPE: NATURAL GAS MIXTURE CERTIFIED FOR COMPOSITION LEAN LNG

Issued: Breda, 11 April 2023

Name: H.A.D. Van Vliet
Function: Lab Analyst

RvA is member of the European Co-operation for Accreditation (EA) and is one of the signatories to the EA Multilateral Agreement (MLA) and to the ILAC Mutual Recognition Arrangement (MRA) for the mutual recognition of calibration certificates.

Scott Specialty Gases Netherlands B.V.
Calibration Laboratory
Takkebijsters 48
4817 BL Breda, The Netherlands
ExpertiseCenter.North-West@airliquide.com
Chamber of Commerce Number: 20134663