



HELLENIC PETROLEUM S.A.
ELEFSIS REFINERY

CERTIFICATE OF QUALITY LABORATORY REPORT

PRODUCT: UNLEADED GASOLINE 95 RON (TK-35, 26/4/2006)

PROPERTIES	RESULTS	17/6/2006		METHOD
		RESULTS	17/6/2006	
DENSITY at 15 °C Kg/m ³	750,0	750,8		EN ISO 12185
APPEARANCE	CLEAR BRIGHT	CLEAR BRIGHT		
COLOUR	UNDYED	UNDYED		
DISTILLATION F.B.P. deg C	193	197		prEN ISO 3405
RESIDUE % vol	1,0			prEN ISO 3405
RECOVERED at 70 °C % vol	29	28		prEN ISO 3405
RECOVERED at 100 °C % vol	54	54		prEN ISO 3405
RECOVERED at 150 °C % vol	88	85		prEN ISO 3405
REID VAPOR PRESSURE AT 100°F kpa	59,3	57		prEN 13016
SULFUR mg/Kg	35	37		EN ISO 8754
VOLATILITY INDEX (V.I.)				ISO 3405, EN 12
PHOSPHORUS	NIL	NIL		ASTM - D 2599
ETHERS (5 or more C-atoms) % vol	6,6	6,6		EN 1601
TOTAL ACIDITY mg/KOH/g	NIL	NIL		ASTM - D 974
COPPER CORROSION	1A	1A		EN ISO 2160
LEAD mgr/Kg	2,0			EN 237
RON	96,5	96,5		EN 25164
MON				EN 25163
OXIDATION STABILITY min	>380			ISO 7536
EXISTENT GUMS (WASHED) mg/100ml	3			EN ISO 6246
AROMATICS % vol	33,55	32,22		EN 12177
OLEFINS % vol	10,73	11,14		EN 12177
BENZENE % vol	0,88	0,94		EN 12177
TOTAL OXYGEN %wt	1,22	1,25		prEN 13132
QUINIZARINE mg/l	3,0	3,0		

CHIEF CHEMIST.

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LABORATORY OF PHYSIOLOGY

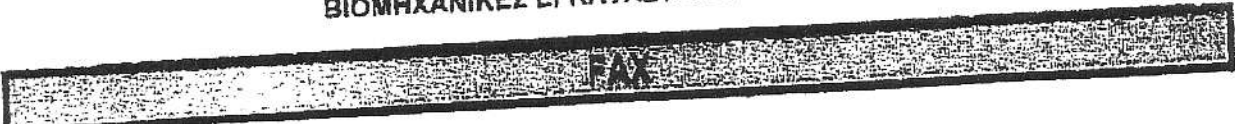
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**ΕΛΛΗΝΙΚΑ
ΠΕΤΡΕΛΑΙΑ**

ΒΙΟΜΗΧΑΝΙΚΕΣ ΕΓΚΑΤΑΣΤΑΣΕΙΣ ΕΛΕΥΣΙΝΑΣ



ΠΡΟΣ : ΠΑΝΕΠΙΣΤΗΜΙΟ ΙΩΑΝΝΙΝΩΝ
ΥΠΟΨΗ : ΚΟΥ ΑΒΔΙΚΟΥ
FAX No. : 26510 97850
ΗΜΕΡΟΜΗΝΙΑ : 01/06/2006
ΑΠΟ : Χ.ΠΑΠΑΧΡΗΣΤΟΥ

Σύνολο σελίδων (συμπεριλαμβανομένου του διαβιβαστικού): (4)



ΘΕΜΑ:

ΕΛΛΗΝΙΚΑ ΠΕΤΡΕΛΑΙΑ Α.Ε. - ΔΙΥΛΙΣΤΗΡΙΟ ΕΛΕΥΣΙΝΑΣ

27ο χλμ Παλ. Εθνικής οδού Αθηνών - Κορίνθου, 192 00 Ελευσίνα, Τηλ. Κέντρο 210-5536000. Fax : 210-5548508, 210-5542245, Ιδρ : 214511 & 226388
 Έδρα : Λ. Αμαλίας 54, 105 58 Αθήνα . Τηλ.: 210-3236601. Αριθμ. Μ.Α.Ε. 244306/β/86/23

	wt %	wt %	wt %
i-butanol	0.08	0.07	0.02
n-butanol	0.31	0.28	0.07
TAME	3.25	3.14	0.51
MTBE	3.43	3.45	0.62
Total	7.05	6.94	1.22

PIPIN

Reformulyzer	gasoline tk-35 (1)	AL
Date Filename	C:\HPCHEM\DATA\ID230506XN\02F0201.D	Via:
Operator	xristina	Injection
Acquired On	5/23/2006 2:33:09 PM	Seq Line
Processed On	5/24/2006 7:32:51 AM	Inj Volume
Sample Name	gasoline tk-35 1	
Instrument Method	WINTERS4.M	
Analysis Method	C:\HPCHEM\METHODS\WINTERS4.M	
Sequence	C:\HPCHEM\SEQUENCES\S030716.S	
Sample Type	Winters4	
Sample Info		

Analysis Conditions

A	3.30
B	3.80
D	4.50
E	3.00
F	1.40

Pump	180
EstVAlcSep	110
OlefinSep1	100
OlefinSep2	150

Sample Density 0.7453 g/ml

Normalized weight percent results

C-nr	Naph.	Paraf.	Cycl Ol.	Olef.	Arom.	Total
3				0.50		0.50
4		1.23		2.48		3.71
5	0.50	12.08	0.20	3.65	1.04	17.47
6	2.88	12.53	0.67	2.03	10.37	18.48
7	1.44	4.63	0.65	1.04	12.77	20.53
8	0.93	1.76	0.23		11.34	14.26
9		1.23	0.05			1.28
10	0.14	0.45	0.26	0.02	2.60	3.47
Total	5.89	33.91	2.06	9.73	39.12	90.71

High boiling aromatics 0.70
 High boiling saturates 1.53
 polynaphthene 0.01
 Total hydrocarbons 92.95

Normalized volume percent results

C-nr	Naph.	Paraf.	Cycl Ol.	Olef.	Arom.	Total
3				0.62		0.62
4		1.62		2.86		4.48
5	0.50	14.70	0.19	4.00	0.88	20.27
6	2.81	14.20	0.64	2.15	8.91	18.71
7	1.40	5.03	0.62	1.08	11.82	19.95
8	0.89	1.85	0.22		9.71	12.67
9		1.26	0.05		2.22	3.53
10	0.13	0.45	0.24	0.02	2.22	3.06
Total	5.74	39.11	1.95	10.73	33.55	91.07

High boiling aromatics 0.62
 High boiling saturates 1.35
 polynaphthene 0.01
 Total hydrocarbons 93.06

Oxygenates results

Oxygenate	Wt%	LV%	O2%
i-butanol	0.08	0.07	0.02
n-butanol	0.31	0.28	0.07
TAME	3.25	3.14	0.51
MTBE	3.43	3.45	0.62
Total	7.05	6.94	1.22

META

Reformulyzer gasoline tk-352 AC

Data Filename : C:\HP\CHEM\DATA\230506k\103P0301.D
 Operator : xristina
 Acquired On : 5/23/2006 5:06:38 PM
 Processed On : 5/23/2006 7:36:52 PM
 Sample Name : gasoline tk-352
 Instrument Method : WINTERS4.M
 Analysis Method : C:\HP\CHEM\METHODS\WINTERS4.M
 Sequence : C:\HP\CHEM\SEQUENCES\030716.S
 Sample Type : Winters4
 Sample Info :

Vial :
 Injection :
 Seq Line :
 Inj Volume : 0.1 µl

Analysis Conditions

A	3.30	Pump	180
B	3.80	Ext/AIsSep	110
D	4.50	OlefnSep1	100
E	3.00	OlefnSep2	150
F	1.40		

Sample Density 0.7410 g/ml

Normalized weight percent results

C-nr	Naph.	Paraf.	Cycl. OI.	Olef.	Arom.	Total
3		0.23				0.03
4		1.64		0.63		2.27
5	0.51	12.95	0.21	2.60		16.26
6	2.85	12.57	0.67	3.62	1.12	20.83
7	1.40	4.52	0.70	1.99	10.08	18.69
8	0.90	1.70	0.06	1.22	13.23	17.13
9		1.17	0.04		10.86	12.06
10	0.14	0.43	0.43	0.09	2.49	3.58
Total	5.79	35.02	2.10	10.15	37.79	90.86

High boiling aromatics 0.66
 High boiling saturates 1.25
 polynaphthene 0.01
 Total hydrocarbons 92.79

Normalized volume percent results

C-nr	Naph.	Paraf.	Cycl. OI.	Olef.	Arom.	Total
3		0.04				0.04
4		2.14		0.77		2.91
5	0.51	15.67	0.20	2.97	0.94	22.46
6	2.77	14.17	0.63	3.91	8.62	17.62
7	1.36	4.89	0.66	2.10	11.31	15.26
8	0.86	1.78	0.06	1.26	9.24	10.46
9		1.19	0.03		2.11	3.15
10	0.13	0.43	0.39	0.09	2.11	3.15
Total	5.61	40.31	1.97	11.14	32.22	91.25

High boiling aromatics 0.58
 High boiling saturates 1.11
 polynaphthene 0.01
 Total hydrocarbons 92.95

Oxygenates results

Oxygenate	Wt%	LV%	OI%
i-butanol	0.10	0.09	0.02
n-butanol	0.39	0.36	0.08
TAME	3.28	3.16	0.52
MIBE	3.44	3.44	0.63
Total	7.21	7.05	1.25

PCHEM/Reformulyzer version 06.31

Tue May 23 19:36:52 2006