



Quality data for petrol and diesel fuel in Iceland 2016

–March 2017



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1. Introduction

1.1. Background Information

With reference to Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel, Article 8(3) and Commission Decision C (2002) 508 of 18 February 2002 we hereby send the report on the quality data of petrol and autodiesel fuels used on the Icelandic market in the year 2016. Directive 98/70/EC is transposed into Icelandic legislation with regulation 560/2007.

This report contains the above information for marine fuel marketed in Iceland in the year 2016.

1.2. Details of those compiling the fuel quality monitoring report

Table 1.1. Details

Reporting year	2016
Country	Iceland
Date report completed	14. March 2017
Institute responsible for report	The Environment Agency of Iceland
Address of institute	Suðurlandsbraut 24, Reykjavik, Iceland
Person responsible for report	Eirikur Thorir Baldursson
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2. General information

2.1. Short description of fuel grades and distribution of fuels in Iceland

In Iceland, the main fuel grades are 95 octane (Mogas 95/EN228) and auto diesel. Over 95% of all gasoline sold is Mogas 95/EN228.

There are four main oil companies in Iceland; Atlantsolia ehf., Skeljungur hf., Olíhverzlun Íslands hf. and N1 hf. In 2016 the total amount of fuel delivered to road transport was 376,8 kilotonnes and the distribution of fuel was covered from multiple depots that are spread around the country.

2.2. Description of fuel quality monitoring system

In Iceland, each fuel batch delivery is controlled by Fjölver surveyor and fuel inspection. The testing results of the fuel products are directly compared with the agreed product requirements and are accepted if the results are within given specifications. The data of delivered fuel batches are reported to the competent authority; The Environment Agency of Iceland.

2.3. Total sales of petrol and diesel

The total sales of petrol and diesel in 2016 in Iceland are summarized in table 2.1.

Table 2.1. Total sales of petrol and diesel

Fuel grade	Total national sales (ltr. at 15°C)
Unleaded petrol (95≤RON≤98), Mogas 95/98/EN228	169.183.706
Diesel fuel ¹ (Road transport only)	207.602.969

1: As specified in Annex II of directive 98/70/EC

2.4. Defination of summer period for petrol volatility

Due to low ambient summer temperatures in Iceland, the summer period is from 1. June to 31. August and the maximum vapour pressure is 70 kPa.

3. Quality data

3.1. Quality data for petrol

The summary report for the quality monitoring data for petrol collected in the year 2016 is shown in table 3.1.

Table 3.1. Quality monitoring data

Parameter	Unit	Analytical and statistical results				Limiting value ¹			
		No. of samples	Minimum	Maximum	Mean	National specification		According to 98/70/EB	
						Minimum	Maximum	Minimum	Maximum
Density	kg/L	41	0,7208	0,7489	0,7282				
Research octane No	—	41	93,5	95,5	94,6	95		93,5	—
Motor octane No	—	41	84,5	85,4	84,9	85		84,5	
Vapour pressure, DVPE	kPa	41	62,6	100	84,2	*	*	*	*
Distillation:									
— evaporated at 100 °C	%(v/v)	41	49,9	62,6	57,6	46	—	46	—
— evaporated at 150 °C	%(v/v)	41	86,8	94,1	89,7	75	—	75	—
Hydrocarbon analysis:									
			0	0					
— olefin	%(v/v)	41	7,8	18,8	14,7	—	18		18,8
— aromatics	%(v/v)	41	20,3	36,4	25,2	—	35		36,5
— benzene	%(v/v)	41	0,74	1,04	1,0	—	1		1,04
Oxygen content	%(m/m)	41	<0,1	<0,1	<0,1		2,7	—	2,7
Oxygenates:									
— Methanol	%(v/v)	41	nil	<=0,5	<=0,5		3	—	3
— Ethanol	%(v/v)	41	nil	<=0,5	<=0,5		10	—	5
— Iso-propyl alcohol	%(v/v)	41	<=0,5	<=0,5	<=0,5	—	12	—	10
— Tert-butyl alcohol	%(v/v)	41	<=0,5	<=0,5	<=0,5	—	15	—	7
— Iso-butyl alcohol	%(v/v)	41	<=0,5	<=0,5	<=0,5	—	15	—	10
— Ethers with five or more carbon atoms per molecule	%(v/v)	41	nil	<0,1	<0,1	—	22	—	15
— other oxygenates	%(v/v)	41	<=0,5	<=0,5	<=0,5	—	15	—	10
Sulphur content	mg/kg	41	2,2	10,0	7,8	—	10	—	10
Lead content	g/l	41	<0,003	<0,003	<0,003	—	0,005	—	0,005

(1) The limiting values are “true values” and were established according to the procedures for limit setting in EN ISO 4259:1995

*Iceland is an outermost region with a maximum vapour pressure of 70kPa during the summer time.

Table 3.2. Number of petrol samples taken each month

Month	Number of samples taken
January	3
February	3
March	3
April	1
May	3
June	4
July	4
August	6
September	2
October	4
November	4
December	4
Total	41

3.2. Quality data for diesel fuel

The summary report for the quality monitoring data for diesel fuel in the year 2016 is shown in table 3.3.

Table 3.3. Quality monitoring data

Parameter	Unit	Analytical and statistical results				Limiting value ¹			
		No. of samples	Minimum	Maximum	Mean	National specification		According to 98/70/EB	
						Minimum	Maximum	Minimum	Maximum
Cetane No.	—	30	51	55	52,07	51		51	—
Density at 15°C	kg/L	30	828,5	841,9	837,0		845	—	845
Distillation — 95% point	°C	30	351,8	351,8	351,8		360	—	360
Polycyclic aromatic hydrocarbons	%(m/m)	30	0,9	<11	2,9		11	—	11
Sulphur content	mg/kg	30	2,5	10	7,7		10	—	10
Specific energy NCV. Calc.	MJ/Kg	30	43,1	43,3	43,2				

(1) The limiting values are “true values” and were established according to the procedures for limit setting in EN ISO 4259:1995

Table 3.4. Number of diesel fuel samples taken each month

Month	Number of samples taken
January	2
February	2
March	1
April	2
May	2
June	4
July	3
August	3
September	3
October	2
November	3
December	3
Total	30