



UMHVERFISSTOFNUN

Quality data for petrol and diesel fuel in Iceland in 2012

July 2013

Table of contents

1.	INTRODUCTION	1—3
1.1.	Background information	1—3
1.2.	Details of those compiling the fuel quality monitoring report.....	1—3
2.	GENERAL INFORMATION	2—4
2.1.	Short description of the fuel grades and the distribution of fuels in Iceland	2—4
2.2.	Description of fuel quality monitoring system	2—4
2.3.	Total sales of petrol and diesel	2—4
2.4.	Definition of summer period for petrol volatility	2—4
3.	QUALITY DATA FOR PETROL	3—5
4.	QUALITY DATA FOR DIESEL FUEL	4—7

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 2012.

1.2. Details of those compiling the fuel quality monitoring report

Table 1.2 Details

Reporting year	2012
Country	Iceland
Date report completed	26.06.2013
Institute responsible for report	The Environment Agency of Iceland
Address of institute	Sudurlandsbraut 24, Reykjavik, Iceland
Person responsible for report	Bergthora H. Skuladottir
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2. General information

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

In Iceland the main fuel grades are 95 octane (Mogas 95/EN228) and auto diesel. Approximately 95% of all gasoline sold is Mogas 95/EN228, 5% is Mogas 98/EN228.

There are four main oil companies in Iceland; Atlantsoil, Shell, Olis and N1. In 2012 the total amount of fuel delivered to road transport was 275,1 kilotonnes and the distribution of fuel was covered from 35 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 2012 in Iceland are summarized in table 3.1.

Table 3.1 Total sales of petrol and diesel

Fuel grade	National sales total (kilotonnes)
Unleaded petrol (95 ≤ RON ≤ 98), Mogas 95/98/EN228	115,37
Diesel fuel ⁽¹⁾ (Road transport only)	159,73

⁽¹⁾ As specified in Annex II of Directive 98/70/EC.

2.4. Definition 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 for petrol

The summary report for the quality monitoring data for petrol collected in year 2012 is shown below.

Table 4.1 Quality monitoring data

Parameter	Unit	Analytical and statistical results				Limiting value (l)			
		No. of samples	Minimum	Maximum	Mean	National specification, if any		According to 98/70/EB	
						Minimum	Maximum	Minimum	Maximum
Density	kg/l	27	0,72	0,75	0,73				
Research octane No	—	27	95,10	98,90	95,97			95	—
Motor octane No	—	27	85,00	87,00	85,13			85	
Vapour pressure, DVPE	kPa	27	63,50	100,00	89,43	*	*	*	*
Distillation:									
— evaporated at 100 °C	%(v/v)	27	49,40	69,90	61,79			46	—
— evaporated at 150 °C	%(v/v)	27	87,50	93,10	90,23			75	—
Hydrocarbon analysis:									
— olefin	%(v/v)	27	6,40	18,00	12,17		35		18
— aromatics	%(v/v)	27	16,30	35,00	26,12				35
— benzene	%(v/v)	27	0,76	13,60	1,88				1
Oxygen content	%(m/m)	27	0,10	2,70	1,64			—	3,7
Oxygenates:									
— Methanol	%(v/v)	27	<=0,5	<=0,5	<=0,5			—	3
— Ethanol	%(v/v)	27	<=0,5	<=0,5	<=0,5			—	10
— Iso-propyl alcohol	%(v/v)	27	<=0,5	<=0,5	<=0,5			—	12
— Tert-butyl alcohol	%(v/v)	27	<=0,5	<=0,5	<=0,5			—	15
— Iso-butyl alcohol	%(v/v)	27	<=0,5	<=0,5	<=0,5			—	15
— Ethers with five or more carbon atoms per molecule	%(v/v)	27	0,80	14,40	8,33			—	22
— other oxygenates	%(v/v)	27	<=0,5	<=0,5	<=0,5			—	15
Sulphur content	mg/kg	27	2,90	10,00	7,01		10	—	10
Lead content	g/l	27	<=0,003	<=0,003	<=0,003			—	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 70 kPa during the summer time.

Table 4.2 Number of samples in month

Month	Number of samples
January	1
February	2
March	3
April	2
May	1
June	3
July	2
August	3
September	3
October	2
November	3
December	2
Total	27

4. Quality data for diesel fuel

The summary report for the quality monitoring data for diesel fuel in year 2012 is shown below.

Table 5.1 Quality monitoring data

Parameter	Unit	Analytical and statistical results				Limiting value (1)			
		No. Of samples	Minimum	Maximum	Mean	National specifications		According to 98/70/EC	
						Minimum	Maximum	Minimum	Maximum
Cetane No	—	28	50,00	53,00	52,18			51	—
Density at 15 °C	kg/l	28	0,83	0,84	0,84			—	0,84
Distillation — 95% point	°C		n/a	n/a	n/a			—	360
Polycyclic aromatic hydrocarbons	%(m/m)	26	1,00	2,00	1,92			—	8
Sulphur content	mg/kg	28	6,80	10,00	8,87		10	—	10

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

Table 5.2 Number of samples in month

Month	Number of samples
January	1
February	2
March	2
April	1
May	1
June	4
July	3
August	3
September	4
October	2
November	3
December	2
Total	28