

# Quality data for petrol and diesel fuel in Iceland in 2014

June 2015



ENVIRONMENT AGENCY  
OF ICELAND

# Table of contents

<b>1.</b>	<b>INTRODUCTION .....</b>	<b>2</b>
1.1.	Background information .....	2
1.2.	Details of those compiling the fuel quality monitoring report .....	2
<b>2.</b>	<b>GENERAL INFORMATION.....</b>	<b>3</b>
2.1.	Short description of the fuel grades and the distribution of fuels in Iceland ....	3
2.2.	Description of fuel quality monitoring system .....	3
2.3.	Total sales of petrol and diesel .....	3
2.4.	Definition of summer period for petrol volatility .....	3
<b>3.</b>	<b>QUALITY DATA FOR PETROL .....</b>	<b>4</b>
<b>4.</b>	<b>QUALITY DATA FOR DIESEL FUEL.....</b>	<b>6</b>

# 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 2014. Directive 98/70/EC is transposed into Icelandic legislation with regulation 560/2007.

## 1.2. Details of those compiling the fuel quality monitoring report

Table 1.1 Details

<b>Reporting year</b>	<b>2014</b>
<b>Country</b>	Iceland
<b>Date report completed</b>	11. June 2015
<b>Institute responsible for report</b>	The Environment Agency of Iceland
<b>Address of institute</b>	Sudurlandsbraut 24, Reykjavik, Iceland
<b>Person responsible for report</b>	Bergthora H. Skuladottir
<b>Telephone no:</b>	+354 591 2000
<b>E-mail:</b>	ust@ust.is

## 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 95.5% of all gasoline sold is Mogas 95/EN228, 4.5% is Mogas 98/EN228.

There are four main oil companies in Iceland; Atlantsolia, Shell, Olis and N1. In 2014 the total amount of fuel delivered to road transport was 310 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 2014 in Iceland are summarized in table 3.1.

Table 2.1 Total sales of petrol and diesel

Fuel grade	National sales total (kilotonnes)
Unleaded petrol (95 ≤ RON ≤ 98), Mogas 95/98/EN228	120,29
Diesel fuel <sup>(1)</sup> (Road transport only)	189,90

<sup>(1)</sup> 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 the year 2014 is shown below.

**Table 3.1 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	29	0,72	0,75	0,73				
Research octane No	—	29	95	97,3	95,9			95	—
Motor octane No	—	29	85	86,8	85,2			85	
Vapour pressure, DVPE	kPa	29	67,4	100	87,4	*	*	*	*
<b>Distillation:</b>									
— evaporated at 100 °C	%(v/v)	29	47,5	63,5	56,2			46	—
— evaporated at 150 °C	%(v/v)	29	87	93,7	89,7			75	—
<b>Hydrocarbon analysis:</b>									
— olefin	%(v/v)	29	2,2	18,4	13,9				18
— aromatics	%(v/v)	29	19	33,1	27,7				42
— benzene	%(v/v)	29	0,71	1	0,9				1
Oxygen content	%(m/m)	29	0,1	0,1	0,1			—	2,7
<b>Oxygenates:</b>									
— Methanol	%(v/v)	29	<=0,5	<=0,5	<=0,5			—	3
— Ethanol	%(v/v)	29	<=0,5	<=0,5	<=0,5			—	5
— Iso-propyl alcohol	%(v/v)	29	<=0,5	<=0,5	<=0,5			—	10
— Tert-butyl alcohol	%(v/v)	29	<=0,5	<=0,5	<=0,5			—	7
— Iso-butyl alcohol	%(v/v)	29	<=0,5	<=0,5	<=0,5			—	10
— Ethers with five or more carbon atoms per molecule	%(v/v)	29	0,1	0,3	0,2			—	15
— other oxygenates	%(v/v)	29	<=0,5	<=0,5	<=0,5			—	10
Sulphur content	mg/kg	29	1,5	10	7,9		10	—	10
Lead content	g/l	29	<=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 3.2 Number of samples in month**

<b>Month</b>	<b>Number of samples</b>
January	3
February	2
March	3
April	4
May	1
June	4
July	3
August	2
September	1
October	2
November	3
December	2
<b>Total</b>	<b>29</b>

# 4. Quality data for diesel fuel

The summary report for the quality monitoring data for diesel fuel in the year 2014 is shown below.

**Table 4.1 Quality monitoring data**

Parameter	Unit	No. of samples	Analytical and statistical results			Limiting value (l)			
			Minimum	Maximum	Mean	National specifications		According to 98/70/EC	
						Minimum	Maximum	Minimum	Maximum
<b>Cetane No</b>	—	27	50,10	53,00	52,0			51	—
<b>Density at 15 °C</b>	kg/m <sup>3</sup>	27	0,825	0,842	0,837			—	0,845
<b>Distillation — 95% point</b>	°C	27	336,1	346	340,4			—	350
<b>Polycyclic aromatic hydrocarbons</b>	%(m/m)	27	1,1	8	2,9			—	11
<b>Sulphur content</b>	mg/kg	27	3	10	8,5		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 4.2 Number of samples in month**

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