



# **Quality data for petrol and diesel fuel in Iceland 2018**

*–June 2019*



# Table of Contents

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



# 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 2018. Directive 98/70/EC is transposed into Icelandic legislation with regulation 960/2016.

This report contains the above information for marine fuel marketed in Iceland in the year 2018.

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

**Table 1.1.** Reporter details

<b>Reporting year</b>	2018
<b>Country</b>	Iceland
<b>Date report completed</b>	25 June 2019
<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>	Eirikur Thorir Baldursson
<b>Telephone no.</b>	+354 591 2000
<b>E-mail</b>	<a href="mailto:ust@ust.is">ust@ust.is</a>

## 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 gasoline sold is Mogas 95/EN228.

There are four main fuel suppliers in Iceland; Atlantsolia ehf., Skeljungur hf., Olíuverzlun Íslands hf. and N1 hf. In 2018 the total amount of fuel delivered for road transport was 367,3 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 2018 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)	Total national sales (tonnes)
Unleaded petrol (95≤RON≤98), Mogas 95/98/EN228	180.769.459	133.125
Diesel fuel <sup>1</sup> (Road transport only)	279.689.377	234.207

(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 lasts from 1 June until 31 August and the maximum vapour pressure during this time 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 2018 is shown in table 3.1.

**Table 3.1.** Quality monitoring data

Parameter	Unit	Analytical and statistical results				Limiting value <sup>1</sup>			
		No. of samples	Minimum	Maximum	Mean	National specification		According to 98/70/EB	
						Minimum	Maximum	Minimum	Maximum
<b>Density</b>	kg/l	39	0,7205	0,7541	0,7366				
<b>Research octane No</b>	—	39	93,7	99,8	95,6	95	—	93,5	—
<b>Motor octane No</b>	—	39	84,5	85,6	85,1	85	—	84,5	
<b>Vapour pressure, DVPE<sup>2</sup></b>	kPa	12	67	70	69,1	*	*	*	*
<b>Distillation:</b>									
— evaporated at 100 °C	%(v/v)	39	49,9	64,7	57,9	46	—	46	—
— evaporated at 150 °C	%(v/v)	39	89,7	93,0	91,6	75	—	75	—
<b>Hydrocarbon analysis:</b>									
— olefin	%(v/v)	39	5,8	17,8	11,8	—	18	—	18,8
— aromatics	%(v/v)	39	19,2	34,7	27,4	—	35	—	36,5
— benzene	%(v/v)	39	0,83	1,03	1,0	—	1	—	1,04
<b>Oxygen content</b>	%(m/m)	39	<0,1	2,0	1,7	—	2,7	—	2,7
<b>Oxygenates:</b>									
— Methanol <sup>3</sup>	%(v/v)	0	—	—	—	—	3	—	3
— Ethanol	%(v/v)	38	3,9	5,1	4,7	—	10	—	5
— Iso-propyl alcohol <sup>3</sup>	%(v/v)	0	—	—	—	—	12	—	10
— Tert-butyl alcohol <sup>3</sup>	%(v/v)	0	—	—	—	—	15	—	7
— Iso-butyl alcohol <sup>3</sup>	%(v/v)	0	—	—	—	—	15	—	10
— Ethers with five or more carbon atoms per molecule	%(v/v)	39	<0,1	<0,1	<0,1	—	22	—	15
— other oxygenates	%(v/v)	0				—	15	—	10
<b>Sulphur content</b>	mg/kg	39	5,2	10,0	7,5	—	10	—	10
<b>Lead content</b>	g/l	39	<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.

(2) Iceland is an outermost region with a maximum vapour pressure of 70 kPa during the summertime.

(3) Not added.

**Table 3.2.** Number of petrol samples taken each month

Month	Number of samples taken
January	4
February	2
March	4
April	2
May	5
June	2
July	3
August	5
September	4
October	2
November	4
December	2
<b>Total</b>	<b>39</b>

### 3.2. Quality data for diesel fuel

The summary report for the quality monitoring data for diesel fuel in the year 2018 is shown in table 3.3.

**Table 3.3.** Quality monitoring data

Parameter	Unit	Analytical and statistical results				Limiting value <sup>1</sup>			
		No. of samples	Minimum	Maximum	Mean	National specification		According to 98/70/EB	
						Minimum	Maximum	Minimum	Maximum
<b>Cetane No.</b>	—	39	51	53	52,6	51	—	51	—
<b>Density at 15°C</b>	kg/l	39	0,824	0,841	0,837	—	0,845	—	0,845
<b>Distillation — 95% point</b>	°C	1	325,8	325,8	325,8	—	360	—	360
<b>Polycyclic aromatic hydrocarbons</b>	%(m/m)	39	0,4	8,0	4,5	—	11	—	11
<b>Sulphur content</b>	mg/kg	39	3,0	10	9,1	—	10	—	10
<b>Specific energy NCV. Calc.</b>	MJ/Kg	39	42,1	43,3	43,2	—	—	—	—
<b>FAME content<sup>2</sup></b>	% v/v	0	—	—	—	—	7	—	7
<b>Manganese<sup>2</sup></b>	mg/l	0	—	—	—	—	2	—	2

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

(2) Not added.

**Table 3.4.** Number of diesel fuel samples taken each month

<b>Month</b>	<b>Number of samples taken</b>
January	3
February	2
March	3
April	2
May	5
June	2
July	3
August	5
September	6
October	2
November	4
December	2
<b>Total</b>	<b>39</b>