Quality data for petrol and diesel fuel in Iceland 2019

–April 2020

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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 2019. Directive 98/70/EC is transposed into Icelandic legislation with regulation 560/2007.

This report contains the above information for quality of fuel marketed in Iceland in the year 2019.

1.2. Details of those compiling the fuel quality monitoring report

Table 1.1. Details

Reporting year	2019
Country	Iceland
Date report completed	26 April 2020
Institute respomsible for report	The Environment Agency of Iceland
Address of institute	Sudurlandsbraut 24, Reykjavik, Iceland
Person responsible for report	Asta Maack
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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; Atlantsolía ehf, Skeljungur hf., Olíuverzlun Íslands hf. and N1 hf. In 2019 the total amount of fuel delivered to road transport was 345,2 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 laboratory 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 2019 in Iceland are summarized in table 2.1.

Table 2.1 Total sales of petrol and diesel in 2019

Fuel grade	Total national sales (ltr at 15°C)	Total national sales (tonnes)
Unleaded petrol (95≤RON≤98), Mogas 95/98/EN228	168.969.792	123.853
Diesel fuel[1] (Road transport only)	263.667.466	221.389

(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 and diesel fuel

3.1. Quality data for petrol

The summary report for the quality monitoring data for petrol collected in the year 2019 is shown in table 3.1.

Table 3.1. Quality monitoring data

Parameter	Unit	Analytical and statistical results				Limiting value[1]			
						National specification		According to 98/70/EB	
		No. of samples	Minimum	Maximum	Mean	Minimum	Maximum	Minimum	Maximum
Density	kg/L	35	0,7202	0,7519	0,7330				
Research octane No	—	35	95	96,3	95,4	95		93,5	—
Motor octane No	—	35	85	86,2	85,24	85		84,5	
Vapour pressure, DVPE	kPa	35	69,2	100	88,61	*	*	*	*
Distillation:									
— evaporated at 100 °C	%(v/v)	35	50,1	66	60,44	46	—	46	—
— evaporated at 150 °C	%(v/v)	35	88,6	92,9	91,05	75	—	75	—
Hydrocarbon analysis:									
— alken (olefin)	%(v/v)	35	4,3	15,2	11,26	—	18		18,8
— aromatics	%(v/v)	35	20,2	32,9	26,12	—	35		36,5
— benzene	%(v/v)	35	0,81	1,0	0,95	—	1		1,04
Oxygen content	%(m/m)	35	1,6	1,9	1,77		2,7	—	2,7
Oxygenates:									
— Methanol	%(v/v)	-	-	-	-		3	—	3
— Ethanol	%(v/v)	35	4,3	5	4,61		10	—	5
— Iso-propyl alcohol	%(v/v)	-	-	-	-	—	12	—	10
— Tert-butyl alcohol	%(v/v)	-	-	-	-	—	15	—	7
— Iso-butyl alcohol	%(v/v)	-	-	-	-	—	15	—	10
— Ethers with five or more carbon atoms per molecule	%(v/v)	35	<0,1	<0,1	<0,1	—	22	—	15
— other oxygenates	%(v/v)	-	-	-	-	—	15	—	10
Sulphur content	mg/kg	35	5,2	9,5	7,4	—	10	—	10
Lead content	g/l	35	<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 vapous pressure of 70kPa during the summer time.

Table 3.2. Number of petrol samples taken each month

Month	Number of samples taken
January	2
February	2
March	2
April	4
May	3
June	4
July	4
August	3
September	3
October	2
November	3
December	3
Total	**35**

3.2. Quality data for diesel fuel

The summary report for the quality monitoring data for diesel fuel in the year 2019 is shown in table 3.3.

Table 3.3. Quality monitoring data on diesel

Parameter	Unit	Analytical and statistical results				Limiting value[1]			
						National specification		According to 98/70/EB	
		No. of samples	Minimum	Maximum	Mean	Minimum	Maximum	Minimum	Maximum
Cetane No.	—	36	50	55	51,9	51		51	—
Density at 15°C	kg/L	36	0,830	0,853	0,840		0,845	—	0,845
Distillation — 95% point	°C	0	-	-	-		360	—	360
Polycyclic aromatic hydrocarbons	%(m/m)	36	1	7	4		11	—	11
Sulphur content	mg/kg	36	5	10	9		10	—	10
Specific energy NCV. Calc.	MJ/Kg	36	43	43,3	43,1				

(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	2
April	4
May	3
June	4
July	4
August	3
September	3
October	2
November	3
December	4
Total	**36**