ETC CM Report 2026/01

Fuel quality monitoring in the EU in 2024

Fuel quality monitoring under the Fuel Quality Directive

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1 Background and structure of the report

Fuel and fuel combustion products are affecting humans and animals directly and indirectly – for example by inhaling gaseous pollutants or by consuming harmful substances deposited in soil, food, and crops.

To minimise the negative effects on health and the environment from the use of petrol and diesel fuels, EU Member States must report information relating to the quality of petrol and diesel fuels sold for road transport in their territories. More specifically, Member States must sample fuels each year and analyse their technical characteristics to ensure that they are consistent with the requirements of Article 8 of Directive 98/70/EC, relating to the quality of petrol and diesel fuels (the Fuel Quality Directive, FQD).

This report is structured into two main chapters. Chapter 2 provides an overview of the information for the EU while Chapter 3 describes the different national fuel quality monitoring systems. Member State specific information can be found in both chapters – in Chapter 2 in the form of several overviews and in Chapter 3 as country fact sheets.

Details on the parameters, reported in accordance with Article 8 and their effects on the environment and human health, can be found in EEA-Report No 05/2019[(1)].

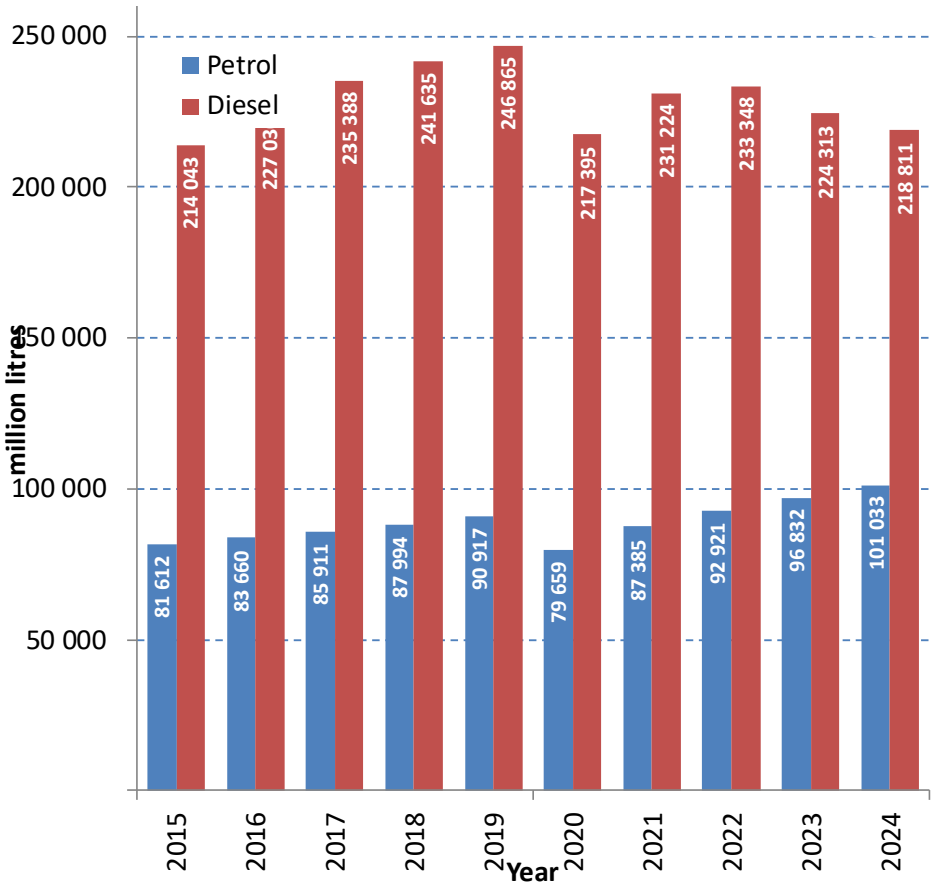
(1) https://www.eea.europa.eu/publications/quality-and-greenhouse-gas-intensities-1

2 Quality of fuels

2.1 Fuel sales

Sales of fuels used for road transport in the EU (EU-27) continue to be dominated by diesel: 68,4 % (218 811 million litres) of fuel sold was diesel and 31.6 % was petrol (101 033 million litres) in 2024 (2). Petrol sales increased by 4.3 % in 2024 while diesel sales decreased by 2.5 % when compared with 2023 (Figure 2.1).

Figure 2.1 EU-27 petrol and diesel fuel sales in 2024 (million litres)



The proportion of diesel in total fuel sales has decreased over the years, from 72.4 % of total sales in 2015 to 68.4 % in 2024 (Figure 2.1).

This reflects a decrease of freight tonnes kilometres in Europe[3]. While sales of diesel fuel increased by 15.3 % between 2015 and 2019 and sales of petrol fuels also increased by 11.4 % during the same period, there was a decrease in both diesel and petrol fuel sales in 2020 by 11.9 % and 12.4 % respectively. This was most likely a consequence of the pandemic of Covid-19. In 2024, there was an increase, compared to 2020, in petrol by 26.8 % and in diesel by 0.7 % while a comparison of the entire time series (2015–2024) for the EU-27 shows that petrol and diesel increased by 23.8 % and 2.2 % respectively.

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(2) Fuels other than petrol and diesel are disregarded here, as the reporting under Article 8 of the Fuel Quality Directive (FQD) is limited to petrol and diesel, for which fuel specifications are laid down in Annexes I and II of the FQD.

(3) EU transport in figures – Statistical pocketbook 2024 (https://transport.ec.europa.eu/facts-funding/studies-data/eu-transport-figures-statistical-pocketbook/statistical-pocketbook-2024_en)

Table 2.1 Categories of fuel grades[4] of petrol in 2022, 2023, 2024 and corresponding sales and shares for 2022, 2023 and 2024

2022	Million litres	Share	2023	Million litres	Share	2024	Million litres	Share
Minimum RON >= 91	7	0.01 %	Minimum RON >= 91	10	0.01 %	Minimum RON >= 91	9	0.01%
Minimum RON >= 95	88 366	95.1 %	Minimum RON >= 95	91 975	94.98 %	Minimum RON >= 95	95 388	94.41%
Minimum 95 < RON < 98	0.1	0.0001 %	Minimum 95 < RON < 98	0	0.0 %	Minimum 95 < RON < 98	0	0.0%
Minimum RON >= 98	4 548	4.9 %	Minimum RON >= 98	4 847	5.01 %	Minimum RON >= 98	5 635	5.58%
	92 921			**96 832**			**101 033**	

The majority of petrol sales in 2024 comprised of fuels with a petrol grade research octane number (RON) of equal or greater than 95, which accounted for 94.41 % of the total petrol fuel sale. Fuels with RON ≥ 98 represented 5.58 % of sales, while the same fuel grade with RON ≥ 91[5] accounted for only 0.01 %.

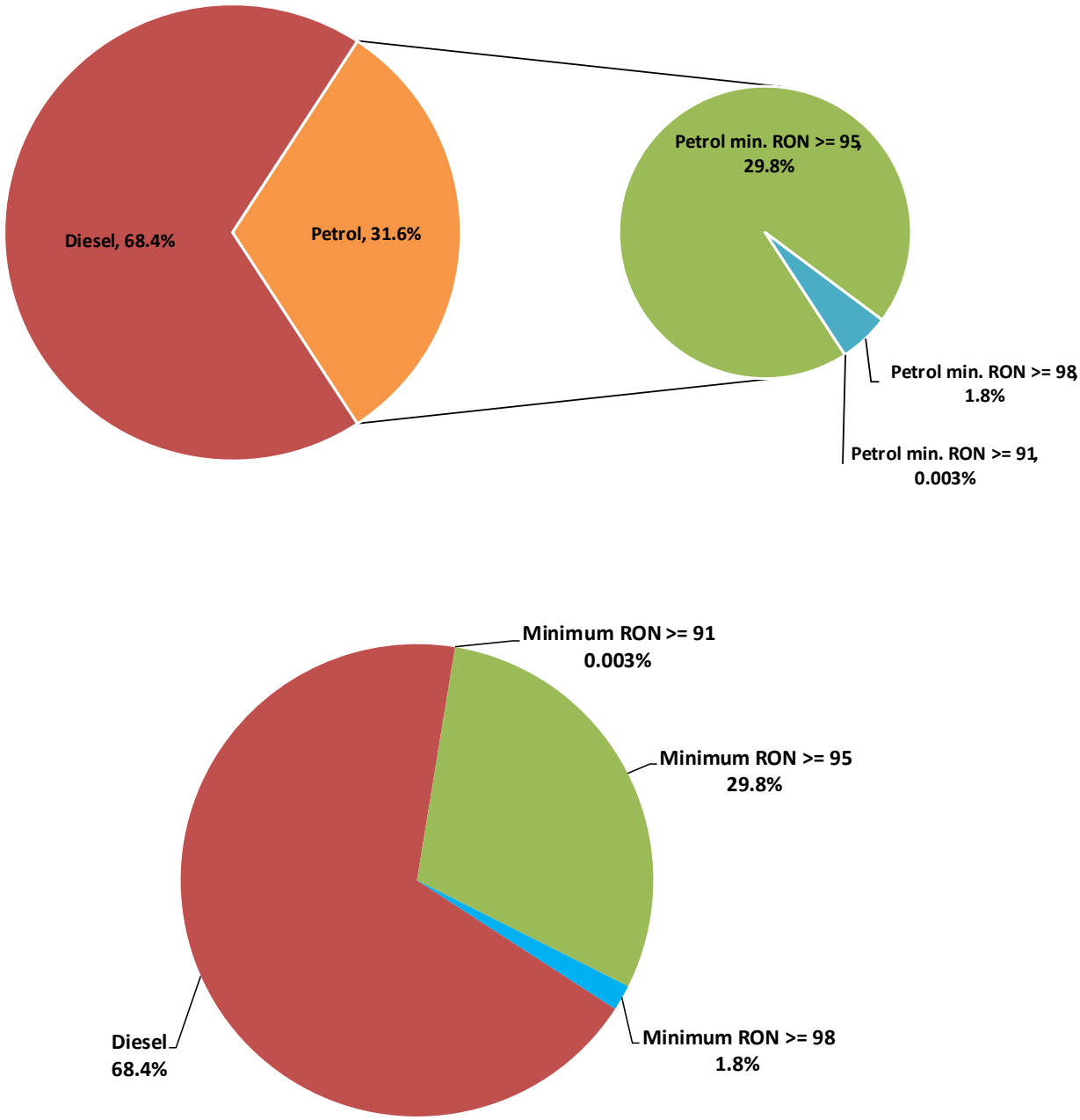
There are no significant changes in the distribution of petrol fuel grades between 2023 and 2024 while small changes were realised in the categorisation (Table 2.1) of the petrol fuel grades in the template[6] provided by the EEA to be used by the Member States for their Article 8 reporting under the FQD.

(4) The RON categories are non-overlapping. Each fuel grade corresponds to a specific minimum RON range and higher RON categories are not included within lower ones.

(5) Austria and Denmark reported an insignificant proportion of fuel grade RON >= 91 (0.01 % in total, out of the total sales of petrol for 2024).

(6) Category 95 < RON < 98 was removed completely and all other fuel grades relate to the definition of RON91, RON95, etc. to harmonize the reporting and remove some potential inconsistencies amongst countries.

Figure 2.2 EU-27 petrol and diesel fuel sales, 2024 (% litres)



Diesel fuel consumption is dominant (> 60 % of total fuel sales) in most Member States, apart from Cyprus, Greece, and the Netherlands (Table 2.2).

The 11 Member States with the highest volumes of fuel sold account for 84 % of total EU sales, while the remaining 16 Member States with the lowest volumes account for 16 % of total EU fuel sales.

Table 2.2 Fuel sales by Member State and fuel grades in 2024[7]

Member State	Minimum RON ≥ 91	Minimum RON ≥ 95	Minimum RON ≥ 98	Total petrol	Total diesel
		million litres			
Austria	0.1	2,044	181	2,225	6,701
Belgium	0	3,039	555	3,594	6,624
Bulgaria	0	675	54	728	2,978
Croatia	0	724	31	756	2,410
Cyprus	0	410	44	454	424
Czech Republic	0	2,281	124	2,405	6,372
Denmark	9.3	1,562	102	1,673	2,703
Estonia	0	175.04	103	278	943
Finland	0	1,359	383	1,742	2,650
France	0	14,918	0	14,918	33,974
Germany	0	22,413	1,194	23,607	38,364
Greece	0	2,407	524	2,931	3,475
Hungary	0	1,689	341	2,030	4,463
Ireland	0	1,456	0	1,456	3,484
Italy	0	11,601	0	11,601	29,244
Latvia	0	185	33	218	1,226
Lithuania	0	439	17	456	1,702
Luxembourg	0	453	84	537	1,149
Malta	0	116	4	120	188
Netherlands	0	5,900	0	5,900	4,890
Poland	0	6,756	888	7,645	21,399
Portugal	0	1,569	130	1,700	5,343
Romania	0	1,039	179	1,217	3,941
Slovakia	0	758	113	871	2,283
Slovenia	0	555	25	580	1,956
Spain	0	8,209	458	8,667	25,749
Sweden	0	2,657	68	2,725	4,174
EU27	**9**	**95,388**	**5,635**	**101,033**	**218,811**

2.2 Use of biocomponents

In 2024, close to 100 % of all diesel and petrol fuels sold in the EU were declared as containing biocomponents[8] (Figure 2.3[9]). Only Latvia reported diesel with 0 % biofuel content (also Iceland and Norway from the non-EU countries) which has a share of 0.4 % out of total sales of diesel. Austria, Latvia, Lithuania, Malta and Slovakia reported 283 million litres of petrol in total with 0 % biofuel content (and Norway from the non-EU countries) and have a share of 0.28 % out of total sales of petrol [10].

Of petrol sold in the EU in 2024, 56.7 % was of the product type E5 (i.e., up to 5 % ethanol content by volume and in which the ethanol is derived from biofuels or is of biogenic origin). A total of 42.4 % was E10 (i.e., up to 10 % ethanol content by volume). Petrol with no ethanol content (previously reported as E0) has been included in E5 since 2020 due to its decreasing share [11]. Only 0.9 % of petrol was E+ (i.e., > 10 % ethanol content by volume, reported by France and Latvia). This refers mainly to E85, which is used

[7] The RON categories are non-overlapping. Each fuel grade corresponds to a specific minimum RON range and higher RON categories are not included within lower ones.

[8] According to the FQD, the fuel grades refer to the maximum content of Biofuel in this specific fuel. There are no requirements of a minimum content. As a consequence, a volume of fuel sold as type E5, E10 etc may or may not contain Biofuel.

[9] This includes bioethanol directly blended into petrol or converted to ETBE and then blended into petrol.

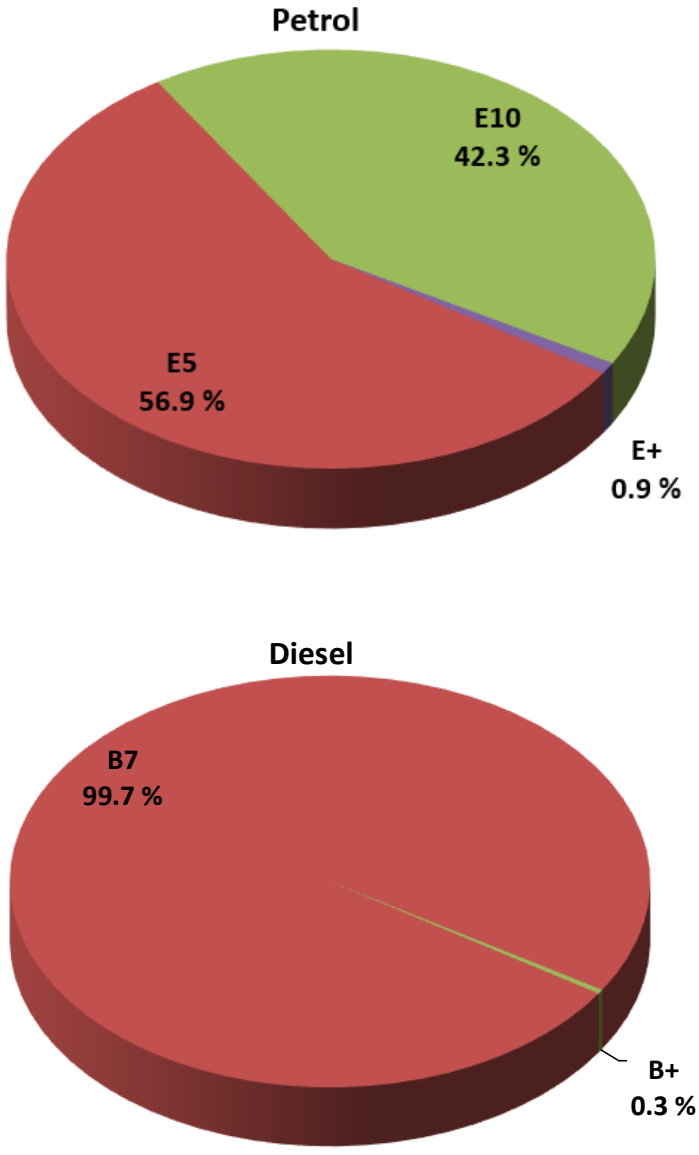
[10] Due to the low share of these fuels, they were left out of Figure 2.3 (they are included in E5).

[11] 0.28 % – coming from Austria, Latvia, Lithuania, Malta, and Slovakia in 2024.

in engines modified to accept a higher content of ethanol. Such flexi-fuel vehicles are designed to run on any mixture of petrol and ethanol with up to 85 % ethanol by volume.

Of diesel sold in the EU in 2024, 99.7 % was of the B7 product type (i.e., containing up to 7 % fatty acid methyl esters, FAME) and 0.3 % was of the B+ product type (i.e., containing more than 7 % FAME). Diesel with no FAME content (previously reported as B0) is included in B7 since 2020, only Latvia reported diesel quantity with no FAME content [12] (also Iceland and Norway from the non-EU countries).

Figure 2.3 Use of biocomponents in petrol and diesel fuels sold in the EU-27 in 2024 (% litres)



The share of petrol declared as containing ethanol (E5 and E10) in the EU has increased over the last ten years, from about 92 % in 2015 to about 99 % in 2024, as illustrated in Figure 2.4. The share of non-ethanol-containing petrol (E0) has decreased significantly over the past years and stabilised for the past three years at 0.3-0.4 %.

[12] 0.4% out of the total diesel sold in 2024.

The decrease in the use of fuel grades with biofuel content of up to 5 % (E5) between 2019 and 2024 is due to the change in the geographical scope [13] (almost 16 % effect) and due to the increase of Member States that sold petrol fuel grades with up to 10 % of biofuel content (from 11 % in 2015, to 42 % in 2024). In detail, 12 Member States[14] sold fuel grades with E10 in 2014 in comparison to 20 Member States in 2024 (all except from Croatia, Spain, Ireland, Italy, Malta, Poland and Portugal).

Almost all diesel fuels are declared to contain different levels of biodiesel over the same period. The share of B+ changes significantly between 2014 and 2018 because of changes in the French legislation allowing the share of biodiesel to be above 7 % between 2015 and 2017. For 2024, the share of B+ increased from 0.2 % to 0.3 % compared to 2023. Only Latvia reported diesel without any biofuel content for 2024 that holds 0.4 % out of total diesel sales.

Whereas the use of different biocomponents results in lower overall greenhouse gas (GHG) emissions, the reductions achieved depend greatly on the feedstock used to produce biofuels as well as on the actual production pathways. Details on this topic can be found in the EEA indicator and ETC reports on Article 7(a) of the FQD [15].

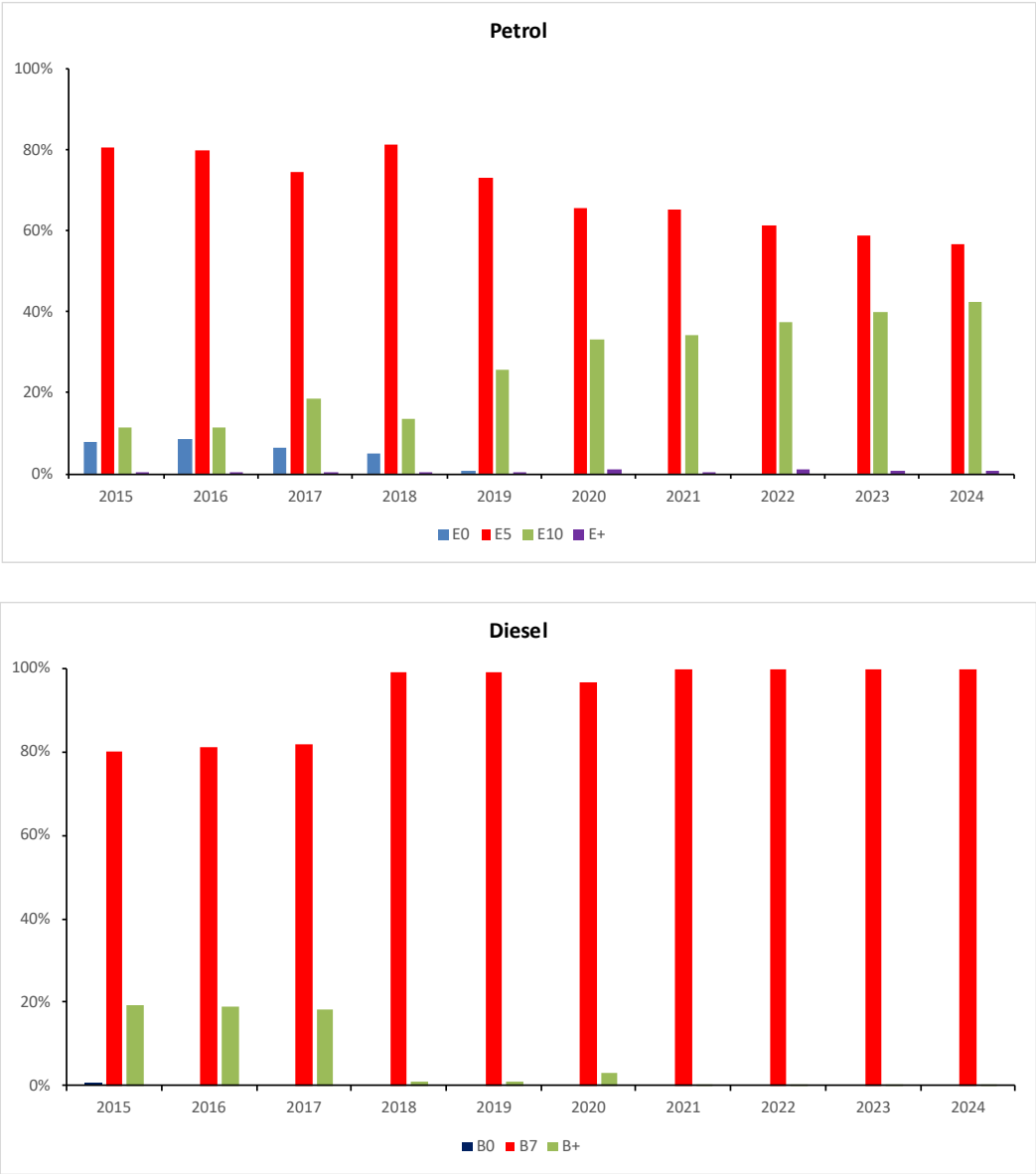
[13] Since 2020 and, the reporting commitments under the Fuel Quality Directive apply only to Northern Ireland (NI) and not the UK as a whole anymore (see Annex 2 of the Withdrawal Agreement, https://eur-lex.europa.eu/eli/treaty/withd_2020/2022-02-22).

[14] Slovenia specified that also fuel grade E10 is being sold, but due to the absence of precise sales data, it is reported together with unleaded petrol (minimum RON >= 95) E5.

[15] https://www.eea.europa.eu/en/analysis/indicators/greenhouse-gas-emission-intensity-of,

https://www.eionet.europa.eu/etcs/etc-cm/products/etc-cm-report-2024-04

Figure 2.4 Biocomponents in petrol and diesel sold in the EU from 2015 to 2024 (% litres)



Note: E+, petrol with > 10 % ethanol content; E0, petrol with no ethanol content; E5, petrol fuel with up to 5 % ethanol content; E10, petrol with up to 10 % ethanol content; B+, diesel fuel with > 7 % biodiesel content; B0, diesel with no biodiesel content; B7, diesel fuel with up to 7 % (% v/v) biodiesel content. From 2020, E0 is included in E5 and B0 in B7, as explained in the reporting template.

2.3 Monitoring systems and sampling methods

Table 2.3 summarises the main information on the operation of the relevant fuel quality monitoring system (FQMS) by the Member States, including the model used, country size and sampling method, as well as the number of samples required.

The information contained in this table is described in more detail below.

Table 2.3 Fuel quality monitoring system summary

Member State	FQMS model	Country size	Summer and winter sampling	Total samples required [a]	
				Petrol	Diesel
Austria	Statistical model A	Small	Yes	100	100
Belgium	National system	Small	Yes	National system	National system
Bulgaria	Statistical model A	Small	Yes	100	100
Croatia	Statistical model C	Small	Yes	100	100
Cyprus	Statistical model C	Small	Yes	100	100
Czech Republic	Statistical model C	Small	Yes	100	100
Denmark	Statistical model C	Small	Yes	100	100
Estonia	Statistical model C	Small	Yes	200	0
Finland	Statistical model A	Small	Yes	100	100
France	Statistical model A	Large	Yes	200	200
Germany	Statistical model B	Large	Yes	400	400
Greece	Statistical model A	Small	Yes	100	100
Hungary	Statistical model C	Small	Yes	100	100
Ireland	Statistical model C	Small	Yes	100	100
Italy	Statistical model A	Large	Yes	200	200
Latvia	Statistical model C	Small	Yes	100	100
Lithuania	Statistical model C	Small	Yes	100	100
Luxembourg	National system	Small	Yes	National system	National system
Malta	Statistical model C	Small	Yes	100	100
Netherlands	Statistical model A	Small	Yes	100	100
Poland	Statistical model B	Large	Yes	520	400
Portugal	Statistical model C	Small	Yes	108	100
Romania	Statistical model A	Small	Yes	200	102
Slovakia	Statistical model C	Small	Yes	100	100
Slovenia	Statistical model C	Small	Yes	100	100
Spain	Statistical model A	Large	Yes	200	200
Sweden	National system	Small	Yes	National system	National system

Note: In large countries, total automotive road fuel sales of > 15 million tonnes per annum; in small countries, total automotive road fuel sales of < 15 million tonnes per annum.
[a] Based on EN 14274:2003.

2.3.1 Statistical models

Member States have to indicate whether their monitoring system is set up using the European Standard EN 14274:2013 statistical model A, B or C (see descriptions in

Table 2.4) and whether it is based on the large or small country framework. Alternatively, they have to indicate if they are using their own nationally defined system.

24 Member States used one of the three statistical models defined by the European Standard EN 14274:2013. Three Member States (Belgium, Luxembourg and Sweden) used a national monitoring system.

Table 2.4 Main types of statistical models used by Member States

Statistical model	Description
European Standard EN 14274	
European Standard EN 14274 **A: macro-regions**	In this model, the regions within the country are grouped (preserving some geographical identity) into macro-regions so that they have similar total sales volumes relative to each other, as well as approximately the same number of supply sources. This approach is recommended, as it is designed to capture fuel variations efficiently and therefore requires a smaller number of samples. If geographical or other circumstances (e.g., force majeure) do not allow fulfilment of the requirements for the design of this preferred model, model B shall be considered the next best model. The minimum overall number of samples per grade and per season is 50 per small country and 100 per large country.
European Standard EN 14274 **B: non-macro-regions**	If the construction of macro-regions (based on fuel supply patterns) is not possible within a country, then the country shall be divided into regions using only geographical and administrative criteria. To ensure that fuel variability is reliably captured, many samples per grade are required: 100 for small countries and 200 for large countries.
European Standard EN 14274 **C: non-region model**	If the country is small and it can be demonstrated that a division into macro-regions or non-macro-regions is not possible, having considered the procedures and provisions given in this European Standard, then the country shall be considered one region for sampling purposes. A total of 50 samples per grade and per season is required.
National model	Some countries have implemented their own models for the FQMS in accordance with their national legislation.

2.3.2 Information on summer and winter fuel grade Sampling

Member States are also requested to define the summer/winter periods implemented in their territories and applying to their FQMS reporting. All Member States provided information for both summer and winter fuel grades. Sampling in both summer and winter periods ensures representability of the samples taken and is also relevant for the vapour pressure of petrol, for which the FQD sets a limit value of up to 60 kPa [16], during the summer period only.

Vapour pressure derogations up to the year 2024 have been granted to eight Member States [17] upon their request, either due to the effect of ethanol blending (for Portugal and Spain) or due to low ambient summer temperature (for Denmark, Estonia, Finland, Ireland, Latvia, Spain and Sweden) [18].

2.3.3 Minimum number of samples

The minimum number of samples specified in EN 14274 refers to the minimum number of samples taken from fuel-dispensing sites to determine fuel quality at the point of use.

For fuel grades with market shares of 10 % and above, the minimum number of fuel-dispensing sites that should be sampled and tested in any country is given in Table 2.5.

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[16] According to Annex I and III of FQD for petrol.

[17] https://climate.ec.europa.eu/eu-action/transport/fuel-quality_en#reducing-air-pollution-and-ensuring-fuel-compatibility > Documentation > Vapour pressure derogations

[18] Guidance note on notifications of exemptions from the vapour pressure requirements for petrol pursuant to Article 3(4) and (5) of Directive 98/70/EC relating to the quality of petrol and diesel fuels (https://climate.ec.europa.eu/document/download/bfaf45a4-69fc-47cf-8716-2bab87d92b67_en?filename=guidance_note_vapour_pressure_en.pdf).

For each fuel grade with a market share of < 10 %, considering petrol and diesel separately, the minimum number of fuel-dispensing sites to be sampled should be calculated in proportion to the number of samples for the corresponding parent grade, using the following equation:

$$N_{grade\ i} = market\ share_{grade\ i} / market\ share_{parent\ grade} \times N_{parent\ grade}$$

Table 2.5 Minimum number of samples per fuel grade in each winter and summer period

		Statistical model		
Fuel grade	**Country size**	**A**	**B**	**C**
Petrol	Small	50	100	50
Petrol	Large	100	200	N/A
Diesel	Small	50	100	50
Diesel	Large	100	200	N/A

2.4 Exceedances of fuel quality limits

Most key fuel parameters in the samples taken in 2024 were within the tolerance limits. In total, 274 non-compliances for petrol and 31 for diesel were reported for 2024 (Table 2.6).

One Member State (Belgium) reported 84 non-compliances for petrol and 14 for diesel in 2024. Despite this large number of non-compliances, it represents only a small fraction of the overall number of samples taken in Belgium, which is 8 048.

18 Member States reported fewer than 10 non-compliances for petrol, 9 of which have reported full compliance (Austria, Bulgaria, Lithuania, Luxembourg, Malta, Romania, Slovakia, Slovenia, and Sweden). Exceedance(s) of the:

- summer vapour pressure was reported in 11 Member States (Belgium, Cyprus, Denmark, France, Germany, Greece, Hungary, Italy, Poland, Portugal, Spain)
- research octane number (RON) was reported in 8 Member States (Belgium, Croatia, Czech Republic, Estonia, Finland, Hungary, Latvia and Portugal),
- motor octane number (MON) was reported in 9 Member States (Belgium, Croatia, Czech Republic, Estonia, Germany, Hungary, Latvia, Poland and Portugal),
- oxygen content was reported in 5 Member States (Belgium, Denmark, France, Netherlands and Spain),
- ethanol was reported in 5 Member States (Denmark, France, Germany, Ireland and Netherlands),
- olefins, aromatics, benzene (hydrocarbon analysis) were reported in 1 Member States (Spain) and
- sulphur content was reported in 4 Member States (Denmark, France, Hungary and Spain).

26 Member States reported fewer than 10 non-compliances for diesel (all except Belgium), 19 of which reported full compliance (all except Belgium, Bulgaria, Denmark, France, Italy, Netherlands, Poland and Spain). Of the seven fuel parameters that require testing and analysis [19], the most common parameters falling outside the specifications were the sulphur content, distillation and the FAME content (in eight Member States), as shown in Table 2.6.

[19] Cetane number, density at 15 ˚C, distillation 95%-point, polycyclic aromatic hydrocarbon (PAH) content, sulphur content, FAME content and manganese content. Note that manganese is a metallic additive used for octane boosting in petrol only. However, the FQD limits the manganese content in all fuels, although it has no application in diesel; hence, most Member States do not routinely test for manganese content in diesel.

All Member States have described the actions taken when non-compliant samples were identified. These included informing the competent authorities, initiating investigations, imposing penalties and fines or re-sampling. For a small number of cases, no action was taken if the non-compliant parameters were found to be very close to the tolerance limits.

Table 2.6 Number of non-compliances for petrol and diesel fuels by country in 2024

Member State	Samples taken (and samples required in brackets)		Number of non-compliances in 2024 (figures for 2023 in brackets)		Parameters outside tolerance limits for non-compliant samples
	Petrol	Diesel	Petrol	Diesel	
Austria	108 (100)	100 (100)	0 (1)	0 (0)	-
Belgium	4 529 (National system)	3 519 (National system)	84 (107)	14 (58)	RON, MON, Vapour pressure, Oxygen content, Diesel: Density at 15 °C, distillation 95 %-point, sulphur content, FAME content
Bulgaria	126 (100)	115 (100)	0 (0)	1 (1)	Diesel: Sulphur content
Croatia	216 (100)	212 (100)	4 (0)	0 (0)	RON, MON
Cyprus	368 (100)	224 (100)	21 (10)	0 (1)	Vapour pressure
Czech Republic	1 005 (100)	1 202 (100)	12 (2)	0 (0)	RON, MON, Ethanol, Distilation evaporated at 100 °C
Denmark	110 (100)	100 (100)	10 (5)	6 (0)	Vapour pressure, Oxygen content, Ethanol, Diesel: Cetane number, Sulphur content
Estonia	272 (200)	190(0)	3 (4)	0 (0)	RON, MON
Finland	245 (100)	133 (100)	2 (12)	0 (0)	RON
France	513 (200)	232 (200)	24 (18)	2 (2)	Vapour pressure, Sulphur content, Oxygen content, Ethanol, Diesel: Sulphur content, FAME content
Germany	844 (836)	393 (400)	4 (6)	0 (0)	MON, Vapour pressure, Ethanol
Greece	221 (100)	115 (100)	3 (7)	0 (0)	Vapour pressure
Hungary	320 (100)	460 (100)	19 (0)	0 (0)	RON, MON, Vapour pressure, Sulphur content
Ireland	100 (100)	100 (100)	10 (5)	0 (0)	Ethanol
Italy	182 (200)	339 (200)	1 (6)	2 (0)	Vapour pressure, Diesel: Distillation - 95-%-Point, FAME content
Latvia	45 (100)	31 (100)	4 (2)	0 (0)	RON, MON
Lithuania	106 (100)	100 (100)	0 (0)	0 (0)	-
Luxembourg	124 (National system)	62 (National system)	0 (0)	0 (0)	-
Malta	107 (100)	102 (100)	0 (0)	0 (0)	-

Member State	Samples taken (and samples required in brackets)		Number of non-compliances in 2024 (figures for 2023 in brackets)		Parameters outside tolerance limits for non-compliant samples
	Petrol	Diesel	Petrol	Diesel	
Netherlands	100 (100)	96 (100)	3 (0)	2 (0)	RON, MON, Distillation (evaporated at 100 &150 C), Olefins, Aromatics, Benzene, Oxygen content, Ethanol, Ethers with ≥ 5 carbon atoms / molecule, Sulphur content, Diesel: Cetane number, Density at 15 oC, Distillation - 95-%-Point, Polycyclic aromatic hydrocarbons (PAH), Sulphur content, FAME content
Poland	633 (520)	487 (400)	2 (5)	1 (0)	MON, Vapour pressure, Diesel: FAME content
Portugal	109 (100)	100 (100)	37 (43)	0 (0)	RON, MON, Vapour pressure
Romania	200 (200)	102 (102)	0 (0)	0 (0)	-
Slovakia	232 (100)	212 (100)	0 (3)	0 (0)	-
Slovenia	145 (0)	126 (0)	0 (0)	0 (0)	-
Spain	287 (200)	287 (200)	31 (4)	3 (0)	Vapour pressure, Benzene, Oxygen content, other oxygenates, Sulphur content Diesel: FAME content
Sweden	0 (National system)	0 (National system)	0 (0)	0 (0)	-
Total			**274 (240)**	**31 (62)**	

2.5 Quality of Member States' reporting in 2024

The EEA is responsible for the quality assurance/quality control (QA/QC) of the data submitted at EU level and is assisted in these checks by the European Topic Centre for Air Pollution and Climate Change Mitigation (ETC/CM).

In 2025, 27 EU Member States plus Iceland, Norway, and Northern Ireland [20] submitted their fuel quality reports, in accordance with the requirements of Article 8 of the FQD, for the reference year 2024.

During the QA/QC procedure, the ETC/CM reviewers posed in total 22 questions to countries, relating to the completeness and consistency of their submitted data sets. The most common findings communicated to countries following the quality checks performed on the information reported were:

- no fuel sales were reported in the regional sampling sheets,
- wrong order of magnitude for fuel sales in litres and tonnes,
- missing values for various fuel parameters,
- exceedances of certain fuel quality parameters (e.g., summer vapour pressure, sulphur content), without specifying the number of samples outside the tolerance limits or providing any explanations or a description of the action taken,
- missing values in case of national limits.

[20] See Withdrawal Agreement including the protocol on Northern Ireland: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02020W/TXT-20201218&from=EN

Most of these issues could be solved directly with the countries during the communication process, by their completing missing information, correcting erroneous values or providing the necessary clarifications to comments. Following the QA/QC procedure, 6 countries submitted revised data sets. The last resubmission was received on the 21st of November 2025. The last first submission was received on the 5th December 2025.

3 Summary of Member States' submissions

3.1 Austria

3.1.1 Country details

Responsible organization:	Umweltbundesamt GmbH Wien (Austrian Environment Agency — AEA)
Country size:	Small
Summer period:	1st May to 30th September
Fuel quality monitoring system (FQMS) used:	EN 14274 statistical model A
Location of sampling:	Refuelling stations / Fuel dispensing sites

3.1.2 Fuel quality monitoring service

Sampling

The organization responsible for sampling is the Agrar Market Austria (AMA), analyzing and reporting activities are performed by the Austrian Environment Agency. Samples are taken from filling stations which are selected by random while the proportion of small and big marketers is constant. Within one year 3 campaigns are undertaken – two in winter (begin and end of the year) and one in summer. All parameters are tested according to the "Methods and Limits" sheet.

Fuel quality monitoring system administration

The FQM Directive is/was implemented by the formerly Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (now BMK - Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology). Both companies, the Agrar Market Austria (AMA) and the Austrian Environment Agency (AEA) are commissioned by the Ministry to perform the FQM in Austria. The samples were taken from the filling stations three times a year (AMA campaigns) and brought to the AEA for analyzing. Reporting starts when all samples of the previous year were tested. After analyzing the samples, non-compliant fuels are reported to the Ministry where further legal actions are taken.

In the beginning Austria set up a Model C cause the ministry stated that there is only one Company responsible for supplying the Austrian marked and the fuel therefore is more or less homogeneous (OMV Refinery) and the FQMS at that time couldn't find evidence that it was different. But in 2011 we shift to the Model A since some parameters indicate, that there are two different supplying refineries which deliver Austrian filling stations with fuels – some amounts come from a German Refinery (OMV Burghausen)- with influence the broader distribution majorly. In general Austria distribution network is based on two refineries and some terminals. However, the latest FQM showed that the difference regarding the measured parameter is hardly recognizable.

National legislation that transposed the Fuel Quality Directive

The transposition of the FQD in national law, as well as the RED, was done by an amendment of the Austrian Fuel Ordinance which was published in 2012 (BGBl. II Nr. 398/2012).

Reporting periods

There is no arctic weather condition in Austria. The transition period is defined between 1st and 31st of October and between the 1st of March and the 30th of April. In this period no samples were taken in Austria.

3.1.3 Sales

Table 3.1 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Regular unleaded petrol (minimum RON ≥ 91) E5 (Normal)	0	127 353.1	95.1	0	0	19 of 19
Unleaded petrol (minimum RON ≥ 95) E10 (Super)	9.41%	2 043 596 238	1 526 362	50	50	19 of 19
Unleaded petrol (minimum RON ≥ 98) E5 (Super Plus)	5.34%	181 239 017	135 563	4	4	19 of 19
Total petrol		**2 224 962 608**	**1 662 020**	**54**	**54**	
Diesel fuel B7 (Diesel)	5.94%	6 700 642 618	5 586 517	50	50	6 of 6
Total diesel		**6 700 642 618**	**5 586 517**	**50**	**50**	

3.1.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of the petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.2 Belgium

3.2.1 Country details

Responsible organization:	Fapetro
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	National system
Location of sampling:	Refuelling stations and terminals

3.2.2 Fuel quality monitoring service

Sampling

The NBN EN 17020 certified organization, Fapetro, is responsible for the reporting of the fuel quality in Belgium. Samples are taken at refueling stations, depots and pomps with private owners. Only samples for refueling stations and depots are reported here.

Belgium is willing to provide further detailed information, used procedures, analysis etc at any time.

The partition of taken samples is adapted to the volume of fuel sold on the Belgian market.

Belgium controls a lot more parameters than imposed by the European Commission to ensure the quality of the sold fuel and to protect the customer. A template can be obtained, showing in detail the analyzed parameter and method, standard for every fuel type.

Belgium uses the NBN EN ISO 4259-2 standard for the interpretation of the analysis results from 1 January 2009. Samples were taken in compliance with NBN EN ISO 14275 and NBN ISO 3170, latest version.

All the samples are analyzed by laboratories that are NBN EN ISO 17025 certified. All the test methods used, are accredited or the demand for accreditation is in progress.

Fapetro also conducts yearly audits in the laboratories in order to reassure itself of the quality of the reported samples analyzed. Pump labelling is regulated by national legislation. Requirements and test methods are described in the following standards: NBN EN 228 for benzine, NBN EN 590 for diesel B7 and NBN EN 16734 for diesel B10.

Fuel quality monitoring system administration

All the information can be found in the answer above and procedures on demand.

National legislation that transposed the Fuel Quality Directive

Transposition in national law was affected by the Ministerial decree from 24th January 2002 latest version and needs to be seen in relation with the ISO17020 procedures of Fapetro.

Reporting periods

Seasonal periods in Belgium are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st January to 31st March and 1st November to 31st December.

Transition periods are defined as being the months of October and April.

Regarding the results provided for petrol, Fapetro wants to draw special attention to the Belgian annex of the NBN EN ISO 228 mainly for the parameter vapour pressure.

National specifications for the vapour pressure are:

- in summer (kPa): min 45.0 - max 60.0,
- in winter (kPa): min 65.0 - max 95.0,
- two transition periods: the months April and October (kPa): min 45.0 - max 95.0.

3.2.3 Sales

Table 3.2 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (Gasoline 95RON E10)	9.83%	3 039 330 255	2 264 301	1 368	928	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Gasoline 98RON E5)	8.98%	555 147 424	413 585	1 397	836	18 of 18
Total petrol		**3 594 477 679**	**2 677 886**	**2 765**	**1 764**	
Diesel fuel B7 (Diesel B7)	9.21%	6 542 523 032	5 449 922	1 484	2 021	7 of 7
Diesel fuel B+ (Diesel B10–B20–B30)	10.44%	81 067 192	68 839	8	6	5 of 7
Total diesel		**6 623 590 224**	**5 518 761**	**1 492**	**2 027**	

3.2.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.3 and Table 3.4 summarize the parameters for which exceedances were reported for petrol fuels.

Table 3.3 Unleaded petrol (minimum RON ≥ 95) E10 (Gasoline 95RON E10)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research octane number	-	> 95	93.2	98.2	1	180
Motor octane number	-	> 85	84.4	88.1	2	2 296
Vapour pressure, DVPE	kPa	< 60	55.5	65.5	11	1 368

Table 3.4 Unleaded petrol (minimum RON ≥ 98) E5 (Gasoline 98RON E5)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure, DVPE	kPa	< 60	54.2	89.9	68	1 397
Oxygen content	% (m/m)	< 2.7	1.5	3.2	2	2 233

Diesel fuel grades

Table 3.5 summarizes the parameters for which exceedances were reported for the diesel fuel grades measured.

Table 3.5 Diesel fuel B7 (Diesel B7)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Density at 15 °C	kg/m^3	< 845	820.6	846.2	3	3 505
Distillation 95 % point	°C	< 360	337.9	381.5	2	3 505
Sulphur content	mg/kg	< 10	3.0	54.7	2	3 505
FAME content	% v/v	< 7	0.05	7.6	7	3 470

3.3 Bulgaria

3.3.1 Country details

Responsible organization:	Ministry of Environment and Water, State Agency for Metrology and Technical Surveillance of the Ministry of Economy
Country size:	Small
Summer period:	16th April to 15th October
FQMS used:	EN 14274 statistical model A
Location of sampling:	Refuelling stations and terminals

3.3.2 Fuel quality monitoring service

Sampling

The Directorate-General for Quality Control of Liquid Fuels (DG QCLF) staff inspects liquid fuels in a refinery, petroleum depots and terminals, refuelling stations, and road tankers for liquid fuels transport.

In fulfillment the requirements of standard BDS EN 14274 were planned minimum 120 locations for inspection in order to provide 50 petrol samples and 50 diesel fuel samples during the summer and the winter periods. The number of samples of petrol RON≥98 was calculated by means of a formula, according to BDS EN 14274, where the market share of petrol RON≥98 for 2024 was 7.37%.

The locations were chosen by regions, proportionally determined depending on the annual fuels consumption in a region, on a random basis, from the locations' database. Each location has a unique identification number.

Liquid fuels samples were collected every week, according to the requirements of standards BDS EN ISO 3170 and BDS EN 14275. Testing samples taken for liquid fuels quality control, in accordance with the requirements of standard BDS EN 14274, was performed only in the accredited permanently sited laboratory by set of parameters pursuant to the European Directive 98/70/EC and methods determined in standards BDS EN 228 and BDS EN 590.

The full scope of accreditation of DG QCLF laboratories is available on the link:

- In English: https://www.nab-bas.bg/en/registers/laboratoriya-za-izpitvane-na-goriva-smazochni-materiali-i-prisadki-pri-glavna-direktsiya-kontrol-na-kachestvoto-na-technite-goriva-kam-damtn-35-li-11328.html,
- In Bulgarian: https://www.nab-bas.bg/registar/laboratoriya-za-izpitvane-na-goriva-smazochni-materiali-i-prisadki-pri-glavna-direktsiya-kontrol-na-kachestvoto-na-technite-goriva-kam-damtn-35-li-11328.html.

Fuel quality monitoring system administration

Responsible organizations for management and implementation of the FQD are the Ministry of Environment and Water and the State Agency of Metrological and Technical Surveillance (SAMTS) – Directorate General "Quality control of liquid fuels" (DG QCLF).

Directorate General "Quality control of liquid fuels" of SAMTS takes samples of transport and heating liquid fuels, and the Executive Agency "Maritime administration" takes samples from vessels and send them for testing in an accredited laboratory. Control is carried out by inspections of the quality of distributed fuels, inspections of their accompanying documents and by imposing administrative measures when infringements are established.

The Bulgarian monitoring system was created with the help of the European standard BDS EN 14274:2003 for small size country. Until 2014 was used statistical model "B", from 2015 – statistical model "A".

Directorate General "Quality control of liquid fuels" is a public body responsible to take actions where nonconformities are found concerning the liquid fuels' control carried out. Periodically the DG QCLF provides data on the SAMTS website on the number of inspections, the number of non-compliance cases, the number and the type of imposed administrative measures taken for the reference period.

Source of information on the consumption of fuels in the country and by regions is the National Revenue Agency.

Bulgaria provides Annual Fuel Quality Monitoring Data Report by 31st August.

National legislation that transposed the Fuel Quality Directive

The European legislation for the liquid fuels quality was introduced in the Bulgarian legislation by the Clean Ambient Air Act, The Law of Renewable Energy Sources, as well as by the Regulation on the liquid fuels quality requirements, conditions, order and way of their control. The Clean Ambient Air Act and the Regulation on the liquid fuels quality requirements, conditions, order and way of their control introduced the requirements of EN 228 and EN 590. The Law of Renewable Energy Sources set minimum requirements for blending transport liquid fuels with biocomponent. According to Article 47 of the Law of Renewable Energy Sources, persons who place on the market liquid fuels are obliged on release for consumption to provide diesel fuel with minimum 6% (V/V) biodiesel and minimum two percent by volume of biodiesel to be a new generation biofuel and petrol with minimum 9% (V/V) content of bioethanol or ethers, produced from biomass.

Reporting periods

Seasonal periods in Bulgaria are as follows:

- summer: from 16th April to 15th October,
- winter: from 16th October to 15th April.

With the Regulation on the liquid fuel quality requirements, conditions, order, and way of their control were introduced transition periods:

- winter-summer transition period from 16th April to 31st May,
- summer-winter transition period from 16th October to 30th November.

Results included in the Report are for samples taken and tested in the summer and winter periods, with the exception of five samples of petrol RON 95 and seven samples of diesel fuel taken in a transition period from petroleum depots, because in Bulgarian legislation there are not transition periods for manufacturers and importers concerning seasonal specifications of fuels.

3.3.3 Sales

Table 3.6 Total sales and sample number

Fuel grade (name)	Biofuel content (v/v %)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (Unleaded petrol RON 95 E10)	10.00%	674 501 934	505 876	57	58	18 of 18
Unleaded petrol (minimum RON ≥ 98) E10 (Unleaded petrol RON ≥ 98 E10)	10.00%	53,666,133	40 250	6	5	18 of 18
Total petrol		**728 168 067**	**546 126**	**63**	**63**	
Diesel fuel B7 (Diesel fuel B7)	7.00%	2 978 397 361	2 531 638	55	60	6 of 6
Total Diesel		**2 978 397 361**	**2 531 638**	**55**	**60**	

3.3.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of the petrol fuel quality limits were reported.

Diesel fuel grades

Table 3.7 summarizes the parameter for which exceedances were reported for the diesel fuel grades measured.

Table 3.7 Diesel fuel B7 (Diesel fuel B7)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Sulphur content	mg/kg	< 10	5.0	12.0	1	115

3.4 Croatia

3.4.1 Country details

Responsible organization:	Ministry of Environmental Protection and Green Transition
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations and terminals

3.4.2 Fuel quality monitoring service

Sampling

Sampling and Assessment of laboratory reports: Inspection body type A accredited by is norm ISO/IEC 17020 (legal entity that is certified by the Croatian Accreditation Agency).

Analysis of fuel samples: Laboratory accredited by norm ISO/IEC 17025 (legal entity that is certified by the Croatian Accreditation Agency).

Types of locations at which sampling is carried out - petrol stations and terminals.

The fuel quality monitoring system in Croatia is based on the European Standard EN 14274, utilizing the statistical model C (small country) and we carry out a sampling of petrol and diesel fuels on the petrol stations and terminals. The National Fuel Quality Monitoring Program defines the minimum number of samplings at the petrol stations sites for the winter and summer periods (Gasoline 50 W + 50 S and Diesel 50 W + 50 S). The program also defines the minimum number of samplings of gasoline (40 per year) and diesel (50 per year) at the terminals.

Samples and analyze of Petrol Fuels and Diesel Fuels (including Gas Oil and Heating oil) are carried out according to the “Fuel quality monitoring program” which is under the responsibility of Ministry of Environmental Protection and Green Transition.

Frequency of sampling and selection of sampling points in is accordance with "Fuel quality monitoring program”.

Sampling from Terminals by is norm HRN EN ISO 3170; Sampling from Petrol stations by is norm HRN EN ISO 14275; The determination of the concentrations of the fuel quality components is carried out using the valid EN and ISO norms prescribed by FQD and Regulation on the quality of liquid petroleum fuels. Reference method used for the precision of the testing method and the interpretation of test results by norm HR EN ISO 4259.

Fuel quality monitoring system administration

According to the national legislation which transposed the Fuel Quality Directive (Air Protection Law OG No 127/19, 57/22, 136/24; Regulation on the quality of liquid petroleum fuels OG No. 131/21, 83/25), Ministry of Environmental Protection and Green Transition. receives annual reports from distributors to 31st March of the current year for the previous year.

The control and sampling are performed by the legal entity that is accredited according to norm ISO / IEC 17020 and certified by the Croatian Accreditation Agency. Analysis of fuel samples are performed by the legal entities that is accredited according to norm ISO / IEC 17025 and certified by the Croatian Accreditation Agency.

The samples of petrol fuels and diesel fuels are taken each month during the year at refueling stations and terminals, according to the “Fuel Quality Monitoring Program”. The Ministry of Environmental Protection and Green Transition continuously prepares and adopts the “Fuel Quality Monitoring Program” for each following year.

According to the national legislation which transposed the Fuel Quality Directive, the distributors are penalized in case of any exceedance on prescribed fuel quality. Enforcement is under the responsibility of Market Inspection (State Inspectorate, Republic of Croatia).

According to the national legislation which transposed the Fuel Quality Directive, the distributors are also penalized in case of not submitting data to the National database established by the Ministry of Environmental Protection and Green Transition. Enforcement is under responsibility of Environmental Inspection (State Inspectorate, Republic of Croatia). Penalties for all types of misdemeanors are included in the Air Protection Law (OG No. 127/19, 57/22,136/24).

Number of National refineries: 2 (Refinery Rijeka works and Refineries Sisak doesn't work),

Number of distribution terminals: 13.

National legislation that transposed the Fuel Quality Directive

The Fuel Quality Directive 98/70/EC and its amendments (the Directive 2003/17/EC, the Directive 2009/30/EC, the Directive 2011/63/EU, the Directive 2014/77/EC and the Directive (EU) 2015/1513 of the European Parliament) was transposed into Croatian legislation by the Air Protection Law (OG No 127/19, 57/22, 136/24) and by the Regulation on the quality of liquid petroleum fuels (OG No. 131/21, 83/25).

The Act on Air Protection defines the obligations of adopting a national fuel monitoring program, procedures of the state inspectorate during inspections, types of misdemeanors and number of fines.

The Regulation on the quality of liquid petroleum fuels prescribes the limit values of the ingredients and/or characteristics of the quality of liquid petroleum fuels, the method of determining and monitoring the quality of liquid petroleum fuels, the conditions for the work of the laboratory for sampling and laboratory analysis of the quality of liquid petroleum fuels, the method of proving the conformity of the product, the name and labeling of the product, the method and deadlines for submitting reports on the quality of liquid petroleum fuels, the format of the report and the method of submitting data to the competent authorities of the European Union.

Reporting periods

Seasonal periods in Croatia are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st October to 30th April.

Samples were taken and tested regardless of the transition periods.

In 2024, 28 samples for the purposes of FQMS were taken and tested, including 216 samples of petrol (RON 95 - 205 samples and RON 100 - 11 samples) and 212 samples of diesel fuel. According to the national legislation which transposed the Fuel Quality Directive, the distributors are penalized in case of any exceedance on prescribed fuel quality.

Enforcement is under responsibility of Market Inspection (State Inspectorate, Republic of Croatia). Penalties are included in the Air Protection Law (OG No. 127/19, 57/22, 136/24). According to the national legislation which transposed the FQM Directive, the distributors are penalized in the case for not submitting data to the National database established by Ministry of Environmental Protection and Green Transition. Enforcement is under responsibility of Environmental Inspection (State Inspectorate, Republic of Croatia). Penalties are included in the Air Protection Law (OG No. 127/19, 57/22, 136/24).

3.4.3 Sales

Table 3.8 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (RON=95)	5.00%	724 379 746	546 907	97	108	18 of 18
Unleaded petrol (minimum RON ≥ 95) E5 (RON=98)	5.00%	51 660	39	0	0	0 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (RON=100)	5.00%	31 333 728	23 657	3	8	18 of 18
Total Petrol		**755 675 134**	**570 603**	100	116	
Diesel fuel B7 (B7)	7.00%	2 409 527 611	2 036 051	91	121	6 of 6
Total Diesel		**2 409 527 611**	**2 036 051**	91	121	

3.4.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.9 summarizes the parameters for which exceedances were reported for the diesel fuel grades measured.

Table 3.9 Unleaded petrol (minimum RON ≥ 95) E5 (Gasoline 95RON E5)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research octane number	-	> 95	94.4	96.8	1	205
Motor octane number	-	> 85	84.4	86.3	3	205

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.5 Cyprus

3.5.1 Country details

Responsible organization:	Energy Service, Ministry of Energy, Commerce and Industry
Country size:	Small
Summer period:	16th April to 15th October
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.5.2 Fuel quality monitoring service

Sampling

The Energy Services of the Ministry of Energy, Commerce and Industry (ES) is responsible for the sampling, analysis and reporting of fuel quality.

Fuel sample analyses are conducted by the Mobile Laboratory of ES, the laboratory of the Cyprus Petroleum Storage Company (CPSC) and accredited private laboratories.

Samples of all fuel grades were predominantly collected from petrol stations and private installations of large consumers by MECI Inspectors on a weekly basis.

The statistical and analytical results of the 2024 Fuel Quality Monitoring System (FQMS) Report are based primarily on samples taken from retail sites.

The Mobile Laboratory of ES carried out the vast majority of the tests required for fuel quality monitoring in 2024, mainly at petrol stations. The CPSC Laboratory and the private laboratories performed additional tests, primarily for verification purposes and for parameters that cannot be measured by the Mobile Lab.

Fuel quality monitoring system administration

The Energy Service of the Ministry of Energy, Commerce and Industry is the competent authority responsible for monitoring fuel quality within the Republic of Cyprus. The majority of the data and analysis presented in this report are based on samples of petrol and diesel collected from retail stations and other installations located in areas under the effective control of the government. Samples are taken by Ministry Inspectors as part of a weekly surveillance program, which is prepared by the Chief Inspector and/or the Assistant Chief Inspector.

When non-compliant samples are identified, the Chief Inspector, appointed by the Minister of Energy, Commerce and Industry, is responsible for prohibiting the sale of off-specification fuels at retail sites, preventing their use in private installations or vehicles, and for issuing administrative fines to the persons responsible for the retail site, installation or storage tank. For monitoring purposes, Cyprus is treated as a single region.

The supply and import of petrol and diesel are undertaken by a subset of the companies operating in the sector, while distribution and retail are carried out by multiple marketing companies. Cyprus does not have its own refinery.

National legislation that transposed the Fuel Quality Directive

The provisions of the fuel quality directive correlated with the fuel specifications have been transported to national legislation by:

LAW 106(I)/2022

Decrees (KDP) P.I.252/2015 + P.I. 200/2016, P.I.326/13, P.I.315/2019, P.I. 6/2014, P.I.392/2022

Reporting periods

Seasonal periods in Cyprus are as follows:

- summer: from 16th April to 15th October,
- winter: from 16th October to 15th April.

The transition period from summer to winter and vice versa is set to six weeks. Samples are taken and tested during these transition periods. The changes in the value of vapour pressure within the transition periods are monitored (if the results are gradually complied with the seasonal specifications) and reported within the annual fuel quality report. Although samples are taken also in winter period, the results of VP reported here are only for the summer period, as required.

3.5.3 Sales

Table 3.10 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (Unleaded Gasoline-Petrol RON 95)	5.00%	410 142 009	301 575	108	86	19 of 19
Unleaded petrol (minimum RON ≥ 98) E5 (Unleaded Gasoline-Petrol RON 98)	5.00%	42 140 697	30 986	96	76	19 of 19
Unleaded petrol (minimum RON ≥ 98) E10 (Unleaded Gasoline-Petrol RON 100)	5.00%	1 402 000	1 031	2	0	19 of 19
Total Petrol		**453 684 706**	**333 592**	**206**	**162**	
Diesel fuel B7 (Eurodiesel)	7.00%	423 743 671	353 120	134	90	7 of 7
Total Diesel		**423 743 671**	**353 120**	**134**	**90**	

3.5.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.11 and Table 3.12 summarize the parameters for which exceedances were reported for petrol fuels.

Table 3.11 Unleaded petrol (minimum RON ≥ 95) E5 (Unleaded Gasoline-Petrol RON 95)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure, DVPE	kPa	< 60	53.2	78.5	11	108

Table 3.12 Unleaded petrol (minimum RON ≥ 98) E5 (Unleaded Gasoline-Petrol RON 98)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure, DVPE	kPa	< 60	51.3	77.5	10	96

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.6 Czech Republic

3.6.1 Country details

Responsible organization:	Ministry of Industry and Trade
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.6.2 Fuel quality monitoring service

Sampling

The System of the Fuel Quality Monitoring has been carried out since 2001 under management and evaluation of control monitoring data by the Department of Gas Industry and Liquid Fuels at the Ministry of Industry and Trade of the Czech Republic. Since the Czech Republic´s accession to the European Union in May 2004, the National Fuel Quality Monitoring System was able to accept conditions of the European Control System and to be compatible with its hierarchy. Additionally, it has been developed in accordance with current requirements of FQMS.

The fuel quality monitoring has been conducted in accordance with FQMS of the European standard EN 14274 and its national Czech version ČSN EN 14274 with the use of regional model C, in consistency with the Czech national legislation.

The monitoring system of the fuel quality is coordinated by the Ministry of Industry and Trade of the Czech Republic (MIT) in the whole country. The Czech Trade Inspection Authority (CTIA), which comes under the jurisdiction of the Ministry of Industry and Trade of the Czech Republic, performed the sampling of liquid and gas fuels at the service stations, in cooperation with Accredited Inspection and Certification Authority SGS for laboratory testing of all samples, which were used in transport sector over the year 2024. The fuel samples were tested monthly throughout the year 2024. The controlling process of all fuel samples has been carried out by the Czech standards ČSN EN 228 and ČSN EN 590.

Fuel quality monitoring system administration

The fuel sampling was performed according to the requirements of national and European legislation and standards of Fuel Quality Monitoring System in general. If the Czech Trade Inspection Authority controller has been found out some lack in the fuel quality at the service station, the sale of fuels has been banned until corrective measures have been done along with the possibility of financial sanction in accordance with the Act No. 311/2006 Coll for fuels and petrol stations later amended.

The national legislation is transposed by the rules in accordance with the obligations of FQD Directive. The Czech Trade Inspection Authority (CTIA) is the administrative government institution, which comes under the jurisdiction of the Ministry of Industry and Trade of the Czech Republic.

The collected annual data from the fuel quality monitoring of the previous calendar year (2023) have been provided by CTIA in form of annual report to the coordinating office –Department of Gas Industry and Liquid Fuels of the Ministry of Industry and Trade of the Czech Republic (MIT). This Department of MIT is responsible for corresponding work agenda and for reporting to the European Commission on behalf of the EEA from the Czech Republic.

Currently, there are two refineries and about 13 distribution terminals in the Czech Republic, this situation is not changed. Data of annual fuel analyses were taken from the service stations after analyzing in the Accredited Inspection and Certification Authority SGS for laboratory testing of all samples of liquid and gas fuels, which were selling at the Czech trade in the previous year (2024). This information of sailing at the petrol stations in the whole country is provided by Department of Data Support and Analyses, Unit of MIT in cooperation with the Czech Statistical Office.

National legislation that transposed the Fuel Quality Directive.

The Directive FQD is transposed by the national legislation in accordance with the continual guidelines of European legislation. The fuel quality has been monitored by Decree No. 516/2020 Coll on requirements of fuels and the implementation of other provisions of the Fuel Act No. 311/2006 Coll later amended.

Reporting periods

Seasonal periods in Czech Republic are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st October to 30th April.

In 2024, 2 545 samples were analysed including alternative fuels at the service stations in the whole country. Samples are taken and tested during these transition periods.

3.6.3 Sales

Table 3.13 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (BA-95 E5)	5.00%	114 065 508	85 321	16	32	18 of 18
Unleaded petrol (minimum RON ≥ 95) E10 (BA-95 E10)	10.00%	2 167 252 674	1 621 105	458	444	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (BA-98 E5)	5.00%	12 375 668	9 257	19	15	18 of 18
Unleaded petrol (minimum RON ≥ 98) E10 (BA-98 E10)	10.00%	111 386 364	83 317	9	12	18 of 18
Total Petrol		**2 405 080 214**	**1 799 000**	**502**	**503**	
Diesel fuel B7 (Diesel B7)	7.00%	6 371 597 633	5 384 000	600	598	6 of 6
Total Diesel		**6 371 597 633**	**5 384 000**	**600**	**598**	

3.6.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.14 and Table 3.15 summarize the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.14 Unleaded petrol (minimum RON ≥ 95) E5 (BA-95 E5)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Oxygen content	% m/m	< 2.7	0.02	3.5	9	48

Table 3.15 Unleaded petrol (minimum RON ≥ 95) E10 (BA-95 -10)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research octane number	-	> 95	87.5	98.0	1	902
Motor octane number	-	> 85	81.3	87.4	1	902
Distillation – evaporated at 100 °C	% V/V	> 46	44	66.1	1	902

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.7 Denmark

3.7.1 Country details

Responsible organization:	Danish Environmental Protection Agency
Country size:	Small
Summer period:	1st June to 31st August
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.7.2 Fuel quality monitoring service

Sampling

Sampling and analysis is carried out by an accredited laboratory for the branch organization Drivkraft Danmark and the petrol company GOON. All petrol companies except GOON its member of Drivkraft Danmark. The results are sent to the Danish EPA. The laboratory is accredited according to EN 14274 and EN 14275.

Sampling takes place from service stations. Sampling is carried out 3 times a year, spring, summer and autumn. Sampling in spring and autumn covers the winter period. Number of samples is 50 in the summer period and 50 in the winter period for each grade of petrol, if the marked share is at least 10 %, and for diesel fuel. About 50 % of the samples are taken east of the Great Belt and about 50 % west of the Great Belt. The population east and west of the Great Belt is approximately the same.

Drivkraft Danmark sends a proposal to sampling places among the members to approval at the Danish EPA. The Danish EPA decides sampling places for GOON. The Danish EPA makes sure that sampling takes place at all petrol companies and all over the country.

Fuel quality monitoring system administration

The Danish EPA is responsible for implementation of the articles regarding FQMS in the Danish legislation.

Sampling and analyzing is carried out by an accredited laboratory for the Drivkraft Danmark and GOON. Results are sent to the Danish EPA. The Danish EPA controls that the results are in compliance with the Directive. The Danish EPA is responsible to take action in case of non-compliance.

There are 18 terminals and 2 refineries in Denmark.

Some samples are not analyzed for RON, MON, oxygen and oxygenates, because of their little impact on the environment, and lead because lead has not been added to Danish petrol for many years.

National legislation that transposed the Fuel Quality Directive

The Directive is implemented in the Danish Statutory Order no. 860, 19. June 2025.

Reporting periods

Seasonal periods in Denmark are as follows:

- summer: from 1st June to 31st August,
- winter: from 1st September to 31st May.

Denmark has been granted a Vapour Pressure Waiver – until the end of 2030 – because of the low ambient summer temperature. Samples are not taken during the transition period.

3.7.3 Sales

Table 3.16 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Regular unleaded petrol (minimum RON ≥ 91) E10 (Oktan 92 unleaded)	10.00%	9 300 287	7 245	1	1	18 of 18
Unleaded petrol (minimum RON ≥ 95) E10 (Oktan 95 unleaded)	10.00%	1 561 504 926	1 172 600	50	50	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Oktan 98 + unleaded)	5.00%	101 759 000	76 319	3	5	18 of 18
Total Petrol		**1 672 564 213**	**1 256 164**	**54**	**55**	
Diesel fuel B7 (Diesel B7)	7.00%	2 703 485 084	2 055 999	50	50	6 of 6
Total Diesel		**2 703 485 084**	**2 055 999**	**50**	**50**	

3.7.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.17 summarizes the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.17 Unleaded petrol (minimum RON ≥ 95) E10 (Oktan 95 unleaded)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure	kPa	< 70	67.6	73.4	1	50
Oxygen content	% (m/m)	< 3.7	2.1	4.1	2	100
Ethanol	% V/V	< 10	5.6	10.8	7	100

Diesel fuel grades

Table 3.18 summarizes the parameters for which exceedances were reported for the diesel fuel grades measured.

Table 3.18 Diesel fuel B7 (Diesel fuel B7)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Cetane number	-	> 51	48.0	55.8	3	100
Sulphur content	mg/kg	< 10	0.0	13.4	3	100

3.8 Estonia

3.8.1 Country details

Responsible organization:	Ministry of Climate
Country size:	Small
Summer period:	1st June to 30th September
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.8.2 Fuel quality monitoring service

Sampling

Sampling is done according to standard EN 14275 by Estonian Environmental Research Centre, which is also responsible for analysis and reporting of results.

Samples were taken from retail fuel stations and from terminals. Sampling points are selected by way that most of the refueling stations are covered within the period of two years. Samples from all terminals were taken once a year - winter (2 terminals) and summer (4 terminals) period. Samples from terminals were taken according to standard EVS-EN ISO 3170.

Frequency of sampling is done the way that summer/winter period samples from refueling stations are evenly distributed through the respective period.

Fuel quality monitoring system administration

Estonian Ministry of Climate is responsible for managing and implementing the FQD. Fuel sampling and analysis is contracted privately with

Estonian Environmental Research Centre and annual report deadline is in the middle of June. When non-compliant samples occur, the responsible public body of taking actions is Estonian Tax and Customs Board. This public body is informed immediately by e-mail. If necessary, new samples are taken by Tax and Customs Board. The system has been designed in 2004-2005 using EN 14274 model C.

In Estonia no national refineries exist, but six (6) distribution terminals for gasoline and diesel fuel and three (3) for liquified gas.

National legislation that transposed the Fuel Quality Directive

Elements of the Directive requirements are described in national regulation by Ministry of the Environment regulation (Regulation No 73 of 20th December 2016).

Reporting periods

Seasonal periods in Estonia are as follows:

- summer: from 1st June to 30th September
- winter: from 1st December to 28th/29th February.

Estonia has been granted a Vapour Pressure Waiver because of the low ambient summer temperature (maximum is 70 kPa). Transition periods are from 1st October to 30th November and from 1st March to 30th

May. Samples are taken also during the transition periods, but those results are excluded from reporting FQD.

3.8.3 Sales

Table 3.19 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (RON 95)	1.67%	175 037 704	129 528	119	58	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (RON 98)	1.02%	102 762 134	76 044	110	56	18 of 18
Total Petrol		**277 799 838**	**205 572**	**229**	**114**	
Diesel fuel B7 (B7)	3.25%	943 259 056	782 905	165	63	6 of 6
Total Diesel		**943 259 056**	**782 905**	**119**	**69**	

3.8.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.20 and Table 3.21 summarize the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.20 Unleaded petrol (minimum RON ≥ 95) E10 (RON 95)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research Octane Number	--	> 95	93.5	97.5	2	140

Table 3.21 Unleaded petrol (minimum RON ≥ 98) E5 (RON 98)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research Octane Number	--	> 98	96.8	99.5	1	132

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.9 Finland

3.9.1 Country details

Responsible organization:	Finnish Customs Laboratory and Finnish Environment Institute (Syke)
Country size:	Small
Summer period:	1st June to 31st August
FQMS used:	EN 14274 statistical model A
Location of sampling:	Refuelling stations

3.9.2 Fuel quality monitoring service

Sampling

Finnish Customs is in charge of the practical realization of the supervision. The Customs' national organization takes fuel samples according to the sampling plan. The samples are analyzed at the Customs Laboratory or by subcontractors whose competence has been confirmed. The Finnish Customs also compiles the report and forwards it to the SYKE for final approval and delivery.

Sampling is done in the whole country according to the sampling plan following the guidelines of the standard EN 14274:2013 model A. The country has been divided into 3 macro-regions with about the same sales volumes and variability factors. There is one refinery and 12 terminals in operation. The number of retail sites in macro-regions 1, 2 and 3 are in total about 2335. The sampling places are selected randomly, however, ensuring that all distribution chain companies are included. All samples are taken at retail sites.

The grades investigated are unleaded RON 95 E10 and RON 98 E5 sulphur free (max. 10 mg/kg) petrol and sulphur free (max. 10 mg/kg) diesel fuel. The fuels were furthermore divided into summer and winter grade. Since the sales, for RON 99 octane petrol is small (less than 2% in 2018) it was excluded from the actual sampling. In addition, there was no quality under RON 95 octane on the market.

The sampling aims to comply, when applicable, with the requirements of standard EN 14275:2013. The sampling is done by trained personnel. One-litre metal containers and five litre plastic containers approved for this purpose are used as sampling containers. Petrol containers are stored in cool place in laboratory to avoid possible evaporation of light components. Before the vapour pressure analysis for petrol samples, the sampling containers are cooled according to the requirements of the method. The analyses are conducted at the Customs Laboratory, which is a testing laboratory accredited by FINAS Accreditation Service. In 2023, subcontractors were used for octane numbers (EN ISO 5164:2014 and EN ISO 5163:2014 methods) of petrol and cetane number (EN ISO 5165:2020 method) of diesel.

Except for the lead and FAME methods, all other methods of analysis used (including those subcontracted) were reference methods according to the standards EN 228 and EN 590. Sulfur of petrol and diesel (standard EN ISO 20846:2019), density of diesel (standard EN ISO 12185:1996), vapour pressure of petrol (standard EN 13016-1:2018), polycyclic aromatics content of diesel (EN ISO 12916:2019+A1:2021) and aromatics, olefins, benzene, oxygenates and oxygen contents of petrol (standard EN ISO 22854:2021) methods have been accredited by FINAS Accreditation service.

Other test methods used by the laboratory have been tested and validated according to quality procedure of customs laboratory. These test methods are distillation of petrol and diesel (standard EN ISO 3405:2019), FAME in-house method and lead in-house method. FAME method is based on ATR technique. If needed, the laboratory has the ability to confirm the FAME content of the sample with the EN 14078:2014 method. The lead method used by the laboratory is based on EDXRF technique. The sensitivity of the method used, however, is better than the limit indicated in the quality requirements. If needed, the laboratory has the ability to confirm the lead content of the sample with the EN 237:2004 method according to the directive (Petroleum products, Petrol).

Determination of low lead concentrations by atomic absorption spectrometry) in cases where the result is near or exceeds the quality limit. The authenticity accuracy and reproducibility value R of the standard methods used by the laboratory have been verified by international PT comparative studies.

In 2023, the Customs Laboratory took part in PT tests organized by IIS (Institute for Interlaboratory Studies). The results of the parameters measured in the tests (sulphur, density, distillation, FAME content, vapour pressure, lead, manganese, aromatics, olefins, benzene, oxygenates, total oxygen and polycyclic aromatics content) were acceptable.

In 2001 - 2022, the laboratory has also taken part in these IIS PT tests with acceptable results.

Fuel quality monitoring system administration

Relating to 2022 the Ministry of the Environment is responsible for transposition of the Directive into the national legislation, approving annual sampling plans and giving general guidance. Finnish Customs is responsible for the practical implementation and fuel quality monitoring as explained above. The Customs Laboratory, for example, analyzes the samples. However, subcontractors whose competence has been confirmed can be used. The annual reporting according to the year 2024 is performed by the Finnish Environment Institute (Syke), for that from the year 2023 on Syke is the responsible for monitoring the quality of transport fuels and for annual reporting and giving general guidance.

In case of non-compliant samples, the analyses will be repeated as soon as possible. If non-compliance is confirmed, Syke contacts the fuel supplier/oil company to get a detailed account. If clear reason for non-compliance is not found, if there's no signs of intentional offending action, and the case is not a serious one, a written procedure is often considered appropriate and sufficient. When non-compliant samples are repeatedly found, remark or formal complaints may also be given.

According to Paragraph 175 (Rectification of a violation or negligence) of the Environmental Protection Act 527/2014 a supervisory authority may prohibit a party from continuing or repeating a procedure violating existing regulations or order a party to fulfil its duty in some other way. If there is a risk that non-compliant fuel can cause damage to the vehicle (lead, sulphur) and the fuel is still on the market, it is possible to order the fuel supplier to remove the product from the market.

According to Paragraph 183 (Decision to prohibit or require action on substances, preparations, products, equipment and machines) Syke may prohibit the manufacturer, importer or other market supplier from continuing operations that are contradicting existing regulations; prohibit the trading, sale or other supply of products that are in violation of the existing regulations; require the offender to bring the product into compliance with the regulations or otherwise meet its obligations. If a product has been placed on the market, Syke may require the party acting contrary to the existing regulations to remove the product from the market. The Ministry of the Environment is informed about the above-mentioned actions.

National legislation that transposed the Fuel Quality Directive

In general, the fuel quality monitoring is based on the Environmental Protection Act (527/2014), the Government Decree on the quality requirements for petrol and diesel fuel (883/2022). The Government Decree is the principal transposition act.

Reporting periods

Seasonal periods in Finland are as follows:

- summer: from 1st June to 31st August,
- winter: from 1st September to 31st May.

Sampling of summer and winter qualities is based on the sampling time. For details, see EC decisions K (2011) 714 final, K (2011) 3772 final and the Finnish notification letter on Fuel Quality Vapour Pressure Derogation. Original notification dated on 17th of February 2010, supplementary information on 26th of June 2010 and 6th of September 2010.

3.9.3 Sales

Table 3.22 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales*		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (Moottoribensiini 95 E10)	Max. 10.0 %	1 358 931 600	1 013 761	55	68	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Moottoribensiini 98 E5)	Max. 5.0 %	383 288 400	285 932	56	66	18 of 18
Total petrol		**1 742 220 000**	**1 299 693**	**111**	**134**	
Diesel fuel B7 (Dieselöljy)	Max. 7.0 %	2 649 547 000	2 138 915	64	69	6 of 6
Total diesel		**2 649 547 000**	**2 138 915**	**64**	**69**	

3.9.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.23 summarizes the parameter for which exceedances were reported for the petrol fuel grades measured.

Table 3.23 Unleaded petrol (minimum RON ≥ 95) E10 (Moottoribensiini 95 E10)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research Octane Number	--	> 95	94.5	98.6	2	38

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.10 France

3.10.1 Country details

Responsible organization:	Ministry of Energy Transition
Country size:	Large
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model A
Location of sampling:	Refuelling stations

3.10.2 Fuel quality monitoring service

Sampling

The service provider that carried out the sampling and analyses in 2024 on behalf of the Directorate General for Energy and Climate (DGEC) is the company SGS FRANCE selected by a European call for tenders, launched in 2022 to cover the period 2023 - 2026. **SGS FRANCE**, which is responsible for inspections and analyses, is audited once a year by the DGEC. The DGEC is responsible for reporting based on the information provided by the service provider.

Inspections are carried out across the entire national territory and concern petrol fuels (gasoline) and diesel. Their purpose is to verify, as close as possible to the end user, that the regulatory technical specifications are met. The inspection points are service stations, which are selected by random draw carried out by the DGEC from a database listing French service stations, updated annually.

The annual inspection plan covers approximately 200 samples of SP95 or SP98, 200 samples of diesel, 200 samples of SP95-E10, and 87 samples of E85, distributed roughly equally between winter and summer. Since sales of B10 diesel do not exceed 1% of total diesel sales, only three samples were taken. XTL diesel has been authorized for sale at public service stations since summer 2024, and two samples were taken at the end of 2024.

Each inspection campaign at service stations extends over a full calendar year and is organized into quarterly programs, except for the Overseas Departments (DOM), where sampling is conducted once a year due to the absence of seasonal variation. The sampling campaign in the DOM can therefore be scheduled at any time of the year.

Fuel quality monitoring system administration

At the Ministry of Energy, the DGEC (Directorate General for Energy and Climate) is responsible for implementing the directives relating to fuel quality and the sulphur content of marine fuels, as well as for operating the monitoring system. The service provider that carries out sampling and analyses on behalf of the DGEC is the company SGS FRANCE, selected through a European tender. The public contract was renewed in 2023 for a maximum duration of four years, following a European tender launched in 2022.

The inspections are primarily intended to verify the compliance of fuels placed on the market. They make it possible to identify deviations, analyze them, and implement appropriate corrective measures. Distributors are informed by the DGEC of any deviations identified and must provide explanations as well as corrective and preventive measures. During the measurement campaign (four per year in mainland France and one in the Overseas Departments), the DGEC may explicitly request additional sampling and analyses in light of any anomalies or non-compliance observed.

The Directorate General for Competition, Consumer Affairs and Fraud Control (DGCCRF) retains its role of occasional intervention and records infringements. In cases of serious or repeated breaches, DGCCRF is formally notified, and sales of the product concerned by a non-compliance may be suspended.

Within the meaning of Articles 3.2.2 and 5.3.3 of standard NF EN 14274, France is classified as a large country and uses Model A. The monitored regions consist of five macro-regions: Normandy–Île-de-France Zone, North-East Zone, South Zone, South-West Zone, and West Zone, as well as the Overseas Departments (DOM): Martinique, Guadeloupe, French Guiana, Réunion, and Mayotte. In 2024, inspections were carried out in Réunion and Mayotte.

In 2024, France had seven operational refineries (six in mainland France and one in Martinique) and one biorefinery, La Mède. In 2021, the Grandpuits refinery was closed in order to be converted into a biorefinery. As of 1st January 2024, France had approximately 180 civilian oil depots with a storage capacity greater than 400 m^3 distributing fuels and fuel oils, and around 10,000 service stations in mainland France.

National legislation that transposed the Fuel Quality Directive

The fuel quality requirements, as defined in the amended Fuel Quality Directive 2009/30/EC, have been transposed into ministerial decrees relating to fuel specifications (one decree for each type of fuel), as well as into decisions establishing the test methods applicable to these specifications.

The ministerial decrees and decisions are amended as necessary whenever there are changes to Directive 98/70/EC.

Reporting periods

For petrol, the regulatory transition periods (inter-seasons) are as follows:

- from 16th March to 30th April,
- from 1st to 31st October.

Generally, samples are not taken in April and October.

In 2024, following unit shutdowns in refineries and maintenance work at certain storage depots, the transition to summer-grade fuel was slowed down in some regions. Some depots experienced difficulties in meeting summer specifications before 1st May 2024, and temporary derogations were granted to allow the sale of gasoline stocks that did not comply with summer specifications, thereby helping to avoid supply shortages that could have caused consumer panic.

No inspections of summer petrol quality were scheduled before 1st June 2024.

3.10.3 Sales

Table 3.24 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)[21]	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (SP95/SP98)	5.00	5 225 576 000	3 945 298	121	103	18 of 18
Unleaded petrol (minimum RON ≥ 95) E10 (SP95-E10)	10.00	8 804 724 000	6 647 561	101	101	19 of 19
Unleaded petrol (minimum RON ≥ 95) E+ (E85)	85.00	887 525 000	692 264	41	46	4 of 19
Total Petrol		**14 917 825 000**	**11 285 123**	**263**	**250**	
Diesel fuel B7 (Diesel B7)	7.00	33 748 831 000	28 517 757	122	105	7 of 7
Diesel fuel B+ (Diesel B10)	10.00	225 212 000	175 665	2	1	7 of 7
Total Diesel		**33 974 043 000**	**28 693 422**	**124**	**106**	

(21) Maximum biofuel content

3.10.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.25, Table 3.26 and Table 3.27 summarize the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.25 Unleaded petrol (minimum RON ≥ 95) E5 (SP95/SP98)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour Pressure, DVPE	kPa	< 60	50	65.4	5	121
Oxygen content	% (m/m)	< 2.7	0.27	3.4	2	224
Ethanol	% V/V	< 5	0.0	7.7	1	224
Sulphur content	mg/kg	< 10	1.3	17.6	5	224

Table 3.26 Unleaded petrol (minimum RON ≥ 95) E10 (SP95-E10)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure, DVPE	kPa	< 60	52.7	63.8	7	101
Oxygen content	% m/m	< 3.7	2.7	4.0	2	202

Table 3.27 Unleaded petrol (minimum RON ≥ 95) E+ (E85)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure, DVPE	kPa	>35 & < 60	33.2	49.0	2	41

Diesel fuel grades

Table 3.28 summarizes the parameters for which exceedances were reported for the diesel fuel grades measured.

Table 3.28 Diesel fuel B7 (Diesel B7)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Sulphur content	mg/kg	< 10	5.4	22.4	1	227
FAME Content	% v/v	< 7	4.2	7.4	1	207

3.11 Germany

3.11.1 Country details

Responsible organization:	German Environment Agency (Umweltbundesamt)
Country size:	Large
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model B
Location of sampling:	Refuelling stations

3.11.2 Fuel quality monitoring service

Sampling

The organizations responsible for the sampling, analysis and reporting at regional level are the 16 governments of the federal states or their federal state agencies. The authorities and organizations which are involved are listed in detail below. The responsibilities are coded as follows:

(a) control and sampling,
(b) analysis of fuel samples,
(c) enforcement and non-compliance action and
(d) implementation.

1	Baden-Württemberg:	Ministerium für Umwelt, Klima und Energiewirtschaft / Referat 44 (Betrieblicher Umweltschutz, Stofflicher Gefahrenschutz, Geologie, Bergbau)	(d)
		Regierungspräsidium Tübingen / Referat 112 (Produktsicherheit Investitionsgüter, ortsbewegliche Druckgeräte)	(a, c)
		Private laboratory	(b)
2	Bayern:	Bayer. Staatsministerium für Umwelt und Verbraucherschutz	(d)
		Bayer. Landesamt für Umwelt	(c)
		Private laboratory	(a, b)
3	Berlin:	Senatsverwaltung für Umwelt, Verkehr und Klimaschutz	(d, c)
		Private laboratory	(a, b)
4	Brandenburg:	Ministerium für Soziales, Gesundheit, Integration und Verbraucherschutz des Landes BB (d)	(d)
		Landesamt für Arbeitsschutz, Verbraucherschutz und Gesundheit des Landes Brandenburg (a, c)	(a, c)
		Private laboratory (b)	(b)
5	Bremen:	Die Senatorin für Klimaschutz, Umwelt, Mobilität, Stadtentwicklung und Wohnungsbau der Freien Hansestadt Bremen	(d, a)
		Gewerbeaufsicht des Landes Bremen	(a, c)
		Private laboratory	(a, b)
6	Hamburg:	Behörde für Umwelt, Klima, Energie und Agrarwirtschaft, Amt für Immissionsschutz und Abfallwirtschaft, Referat für Raffinerien, Tankläger und Reinigungsbetriebe	(d, c)
		Private laboratory	(a, b)

7	Hessen:	Hessische Ministerium für Umwelt, Klimaschutz, Landwirtschaft und Verbraucherschutz, Mainzer Straße 80, 65189 Wiesbaden	(d)
		Regierungspräsidium Darmstadt	(c)
		Private laboratory	(a, b)
8	Mecklenburg-Vorpommern:	Ministerium für Landwirtschaft und Umwelt M-V	(d)
		Landesamt für Umwelt, Naturschutz und Geologie M-V	(a, c)
		Staatliche Ämter für Landwirtschaft und Umwelt	(a, c)
		Private laboratory	(a, b)
9	Niedersachsen:	Niedersächsisches Ministerium für Umwelt, Energie, Bauen und Klimaschutz	(d, a)
		Landkreise und kreisfreie- und große selbstständige Städte	(a, c)
		Private laboratory	(a, b)
10	Nordrhein-Westfalen:	Ministerium für Umwelt, Landwirtschaft, Natur- und Verbraucherschutz NRW	(d)
		Untere Immissionsschutzbehörden: Kreise und Kommunen	(c)
		Private laboratory	(a, b)
11	Rheinland-Pfalz:	Ministerium für Klimaschutz, Umwelt, Energie und Mobilität	(d)
		Struktur- und Genehmigungsdirektion Nord sowie Struktur- und Genehmigungsdirektion Süd	(a, c)
		Private laboratory	(b)
12	Saarland:	Ministerium für Umwelt und Verbraucherschutz	(d)
		Landesamt für Umwelt und Arbeitsschutz	(c)
		Private laboratory	(a, b)
13	Sachsen:	Sächsisches Staatsministerium für Energie, Klimaschutz, Umwelt und Landwirtschaft	(d)
		Landesdirektion Sachsen	(a, c)
		Private laboratory	(b)
14	Sachsen-Anhalt:	Ministerium für Umwelt, Landwirtschaft und Energie (Magdeburg)	(d)
		Landesverwaltungsamt Sachsen-Anhalt	(d)
		Landkreise	(a, c)
		Private laboratory	(a, b)
15	Schleswig-Holstein:	MELUND (Ministerium für Energiewende, Landwirtschaft, Umwelt, Natur und Digitalisierung des Landes Schleswig-Holstein)	(d)
		LLUR (Landesamt für Landwirtschaft, Umwelt und ländliche Räume des Landes Schleswig-Holstein)	(a, c)
		Private laboratory	(a, b)
16	Thüringen:	Thüringer Ministerium für Umwelt, Energie und Naturschutz	(d)
		Thüringer Landesamt für Umwelt, Bergbau und Naturschutz	(d, a, c)
		Private laboratory	(a, b)

The results of the regional sampling are forwarded to the Umweltbundesamt (German Environment Agency – UBA) using the web portal/database https://fqms.umweltbundesamt.de/, where data are collected and subsequently consolidated into a report.

The sampling was carried out at refuelling stations only. The frequency of the sampling is shown on the data sheets.

Selection of the sampling points is the responsibility of each government of the 16 federal states. The quality of petrol and diesel fuels is tested by the competent authorities of the federal states. The overall monitoring of fuel quality also falls within the responsibilities of the federal states' competent authorities, which are district administrations, lower administrative authorities, districts and non-district or independent municipalities. The method for selecting fuel stations may be rotation, random selection or another way, taking into account population distribution and regional aspects. The test methods used to sample the different parameters are presented in "Petrol" and "Diesel" sections of this template.

Fuel quality monitoring system administration

The competent authorities of the federal states monitor the quality of petrol and diesel fuels and are responsible for fuel quality monitoring in general. These authorities include district administrations, lower administrative authorities, districts, non-district municipalities and independent towns.

DIN EN 14274 (Annex C) lays down that model B applies to Germany (non-macro region): Germany is divided into 16 federal states (Bundesländer) which do not comply with fuel distribution patterns. As Germany is categorized as a large country with regard to FQMS, the minimum number of samples is 200 per fuel and period (summer, winter). The share in sampling for the various regions and the resulting number of samples is stipulated in the General Administrative Regulation on the 10th BImSchV, Annex 20. For fuels with less than 10 % market share, DIN EN 14274-2013 defines a smaller number of samples. Please find additional information on the number of samples for fuels with minor market shares for each region at https://www.verwaltungsvorschriften-im-internet.de/pdf/BMU-IGI6-20221219-SF-A020.pdf.

The federal states have to convey their results to the German Environment Agency until April 30th of the following year, where a general report is produced. The German Environment Agency passes this report on to the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety and to the European Commission.

The governments of the federal states and/or the lower-ranking government agencies are responsible for taking action in case of non-compliant samples. The design of the system was defined in DIN EN 14274-2013. It was adopted into legislation by the German 10th BImSchV in 2019. At the beginning of 2024 there were 12 refineries in Germany and 14.442 refueling stations.

National legislation that transposed the Fuel Quality Directive

The elements of the directive are transposed into the German "Zehnte Verordnung zur Durchführung des Bundesimmissionsschutzgesetzes (Verordnung über die Beschaffenheit und Auszeichnung der Qualitäten von Kraft- und Brennstoffen – 10. BImSchV)" i.e. Tenth Ordinance Implementing the Federal Immission Control Act (Tenth BImSchV):

https://www.gesetze-im-internet.de/bundesrecht/bimschv_10_2010/gesamt.pdf.

Reporting periods

Summer, winter, and transition periods are defined by the national annexes of EN 228 and EN 590.

Seasonal periods in Germany are as follows:

- summer: petrol from 1st May to 30th September; diesel from 15th April to 30th September,
- winter: petrol from 16th November to 15th March; diesel from 16th November to 28th February.

Transition periods are as follows:

- Petrol: from 1st October to 15th November and from 16th March to 30th April,
- Diesel: from 1st October to 15th November and from 29th February/1st March to 14th April.

Samples may be taken during the whole year, preferably in the summer or winter period. Transition period samples are excluded in case of petrol and included in case of diesel. The only seasonal parameter in the diesel standard is CFPP which is not reported in the EU-template and thus does not influence the statistics. For petrol, limit breaches might depend on whether the transition period data is assigned to the summer or winter period. Since this would induce flexibility on the number of limit breaches, the transition period data for petrol is excluded from this report.

3.11.3 Sales

Table 3.29 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (Super E5)	5.0	15 934 026 832	11 950 550	216	185	18 of 18
Unleaded petrol (minimum RON ≥ 95) E10 (Super E10)	10.0	6 478 993 136	4 859 257	216	286	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Super Plus)	5.0	1 194 091 681	895 571	21	20	18 of 18
Total Petrol		**23 607 111 649**	**17 705 378**	**453**	**491**	
Diesel fuel B7 (Diesel)	7.0	38 364 362 409	32 226 232	206	187	6 of 6
Total Diesel		**38 364 362 409**	**32 226 232**	**206**	**187**	

3.11.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.30 and Table 3.31 summarize the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.30 Unleaded petrol (minimum RON ≥ 95) E5 (Super E5)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure, DVPE	kPa	< 61.3	54.9	80.5	2	216
Ethanol	% V/V	< 5.3	0.4	5.4	1	400

Table 3.31 Unleaded petrol (minimum RON ≥ 98) E5 (Super Plus)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Motor Octane Number	--	> 87.5	86.6	91.2	1	40

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.12 Greece

3.12.1 Country details

Responsible organization:	General Chemical State Laboratory, Directorate of Energy, Industrial and Chemical Products
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 Statistical Model A
Location of sampling:	Refuelling stations

3.12.2 Fuel quality monitoring service

Sampling

Greece is classified as a small country under the criteria of Article 3.2 of the ELOT EN 14274 standard based on the yearly fuel sales. Model A applies to the whole of the Greek territory. In order to plan fuel sampling activities, the country is divided into three geographical regions:

- Region A consists of Attica.
- Region B includes Thessaly, Macedonia, Epirus, Thrace and Thessaloniki.
- Region C includes Sterea Ellada, Evia, the Ionian Islands, the Peloponnese, Crete and the Aegean Islands.

For Region A the competent authority for fuel sampling is the Fuel Distribution & Storage Inspectorate (KEDAK) of the Ministry of Environment and Energy. For Region B and C the competent authorities for fuel sampling are the regional Chemical Services of the General Chemical State Laboratory in collaboration with the regional Customs Authorities.

Refuelling stations are used as sampling locations while sampling locations are chosen at random.

The number of samples to be tested in each period (summer and winter) for each grade of fuel with annual sales accounting for at least 10% of the fuel market are at least 50. The number of samples to be tested in each period (summer and winter) for each grade of fuel with annual sales accounting for less than 10% of the fuel market are calculated using the following formula:

N(x) = where:

N(x): the number of samples taken from fuel (x) where sales account for less than 10% of the fuel market.

M(x): the share of sales held by fuel (x). [Calculations are made on a rough basis based on past data].

M: the share of sales for the main category of fuel in which fuel (x) belongs.

Based on the sales percentage of various grades of fuels in each region, the Directorate of Energy Industrial and Chemical Products sets the minimum number of fuel samples to be taken from refuelling stations in the area. Optionally, the Directorate of Energy Industrial and Chemical Products may issue a decision requiring that samples taken in each period include fuel samples from refineries. Care is taken to ensure that sampling is carried out in a uniform manner across the entire year.

The competent bodies for sampling send the samples to the accredited laboratories of the General Chemical State Laboratory in Piraeus and Thessaloniki. The samples received from Regions A and C are examined by the Piraeus Chemical Service while the samples from Region B are examined by the Central Macedonia Chemical Service. The laboratories monitor compliance with the requirements of the Decision No. 316/2010 and Decision No.77/2016, relating to petrol and diesel fuels, based on analytical methods which are set out in the ELOT EN 228 and ELOT EN 590 standards respectively.

Following testing and analysis the results are forwarded to the competent authorities who conducted the sampling as well as to the Directorate of Energy Industrial and Chemical Products. When fuel samples do not meet the criteria, the relevant sanctions are imposed by the competent authorities. The Directorate of Energy Industrial and Chemical Products gathers all experimental results in order to prepare (statistical evaluation) and submit the annual report to the European Commission.

Fuel quality monitoring system administration

Directorate of Energy Industrial and Chemical Products of the General Chemical State Laboratory is the Competent Authority for monitoring the quality of fuels (automotive petrol and diesel) within the Greek territory. The system is designed using model A of the ELOT EN 14274 Standard taking into account the yearly fuel sales. The system is implemented in Greece in accordance with the demands of the State Supreme Chemical Council Decision No. 316/2010 (Government Gazette 501/B/2012), as amended by the State Supreme Chemical Council Decision No.77/2016 (Government Gazette 4217/B/2016). Fuel sampling is carried out by public authorities. In the case where non-compliant samples are found, the corresponding sampling authority is responsible for taking actions. Failure to comply with the provisions of the legislation results in imposing sanctions in accordance with the demands of article 10 of the State Supreme Chemical Council Decision No. 316/2010 (Government Gazette 501/B/2012), as amended by the State Supreme Chemical Council Decision No.77/2016 (Government Gazette 4217/B/2016).

National legislation that transposed the Fuel Quality Directive

Fuel Quality Directive 2009/30, (with the exception of Articles 7a to 7e of Directive 98/70/EC as amended by Article 1 of Directive 2009/30/EC), was transposed into Greek law with the State Supreme Chemical Council Decision No. 316/2010 (Government Gazette 501/B/2012), as amended by the State Supreme Chemical Council Decision No.77/2016 (Government Gazette 4217/B/2016).

Reporting periods

Seasonal periods in Greece are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st October to 30th April.

The monitoring system is implemented twice a year, once for the summer period and once for the winter period.

3.12.3 Sales

Table 3.32 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (95 RON)	10.0 %	2 407 245 090	1 799 416	54	61	12 of 18
Unleaded petrol (minimum RON ≥ 98) E10 (Super unleaded (100 RON))	10.0 %	523 552 020	391 355	51	55	12 of 18
Total Petrol		**2 930 797 110**	**2 190 771**	**105**	**116**	
Diesel fuel B7 (Diesel fuel)	7.0 %	3 475 002 174	2 891 202	59	58	4 of 6
Total Diesel		**3 475 002 174**	**2 891 202**	**59**	**58**	

3.12.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.33 and Table 3.34 summarize the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.33 Unleaded petrol (minimum RON ≥ 95) E10 (95 RON)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure, DVPE	kPa	< 60	28.7	64.3	1	54

Table 3.34 Unleaded petrol (minimum RON ≥ 98) E10 (Super unleaded (100 RON))

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure, DVPE	kPa	< 60	54.1	70.0	2	51

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.13 Hungary

3.13.1 Country details

Responsible organization:	HEXUM Laboratories Private Company Limited by Shares
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.13.2 Fuel quality monitoring service

Sampling

The Fuel Quality Monitoring System in Hungary is in line with / equivalent to the system proposed by CEN.

The preparation of this Report is regulated by Decree No. 17/2017 (V. 26.) of the Ministry of National Development „the quality requirements of automotive fuels (hereinafter referred to as: the Decree). From January 2024 on, HEXUM Laboratories Private Company Limited by Shares is commissioned by the Hungarian Hydrocarbon Stockpiling Association (hereinafter referred to as: MSZKSZ), and performs tasks related to sampling, testing, and compiling the report for the Ministry of Energy (hereinafter referred to as: EM).

The annual number of samples for all fuel quality grades exceeded the minimum number of samples required in FQD. Sampling was carried out in accordance with the Decree, at excise-licensed traders (5-7% of the samples per grade p.a.) and primarily at excise retailers (fuel filling stations). In 2024, the number of fuel filling stations in Hungary was approx. 2100.

Fuel quality monitoring system administration

Ministry of Energy has been assigned to manage and operate the FQD in Hungary. Fuel sampling and testing have been carried out by HEXUM Laboratories Private Company Limited by Shares. Annual data set is provided by 30 May of the consecutive year.

Test results incl. non-compliances were quarterly reported according to the national Decree No. 17/2027 (V.26.). Model C (small country) has been considered best fit for design and implementation.

Hungary has one oil refinery and several distribution terminals. Import via direct trucking to retail station is material.

National legislation that transposed the Fuel Quality Directive

Icn Hungary the fuel quality legislation has been transposed in the Decree No. 17/2017 (V. 26.) of the Ministry of National Development „the quality requirements of automotive fuels".

Reporting periods

Seasonal periods in Hungary are as follows:

- summer: from 1st May to 30th September,
- winter: from 15th November to 28th/29th February.

Transition periods are from 1st March to 30th April and from 1st October to 14th November. No samples were taken during the transition periods.

3.13.3 Sales

Table 3.35 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (ESZ-95)	10.0 %	1 688 880 000	1 275 609	100	100	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (ESZ-98)	5.0 %	341 390 000	256 930	60	60	18 of 18
Total Petrol		**2 030 270 000**	**1 532 539**	**160**	**160**	
Diesel fuel B7 (Dízel gázolaj B7)	7.0 %	4 462 950 000	3 738 617	230	230	6 of 6
Total Diesel		**4 462 950 000**	**3 738 617**	**230**	**230**	

3.13.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.36 and Table 3.37 summarize the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.36 Unleaded petrol (minimum RON ≥ 95) E10 (ESZ-95)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research Octane Number	--	> 95	92.8	97.8	1	200
Motor Octane Number	--	> 85	82.8	86.3	10	200
Vapour pressure, DVPE	kPa	< 60	53.9	79.7	5	200
Sulphur content	% V/V	< 10	3.5	12.2	1	200

Table 3.37 Unleaded petrol (minimum RON ≥ 98) E5 (ESZ-98)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research Octane Number	--	> 98	97.4	105.0	1	120
Motor Octane Number	--	> 88	86.8	91.1	1	120

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.14 Iceland

3.14.1 Country details

Responsible organization:	Environment Agency of Iceland (Umhverfisstofnun)
Country size:	Small
Summer period:	1 June to 31 August
FQMS used:	National system
Location of sampling:	Terminals

3.14.2 Fuel quality monitoring service

Sampling

Reporting to Umhverfis- og Orkustofnun (The Icelandic Environment and Energy Agency) was previously based on twofold reporting, including for reporting based on article 7, that now reporting for that article has ceased to exist. For article 8, it is based on the directive no.960/2016 concerning fuel quality. Importers of fuel batches that arrive to Iceland are to take samples of delivered fuels (at depots). The chemical labratory Fjölver (Efnarannsóknarstofan Fjölver ehf.) that operates by ASTM standards gathers information about the sampling results and delivers results to Umhverfis- og orkustofnun by 1st of March every year

Fuel quality monitoring system administration

In Iceland, each fuel batch delivered is controlled by Fjölver labratory and fuel inspection. The testing results are directly compared with the agreed product requirements and are accepted if the results are within specifications given. Thereafter the data of fuel batches is delivered yearly to the Environment and Energy Agency of Iceland (Umhverfis- og orkustofnun). There are four main fuel suppliers in Iceland: Atlantsolía ehf., Skeljungur hf., Olíuverzlun Íslands hf. and N1 hf.

National legislation that transposed the Fuel Quality Directive

The requriements of the FQD are transposed into the Icelandic regulation no. 960/2016 and additionally the national laws on chemicals no. 61/2013. Additionally, there is national act on renewable fuels in land transport no. 40/2013. The aim of this law is to increase the share of renewable energy sources in land transport and to reduce the emission of greenhouse gases in a cost-effective and efficient manner.

Reporting periods

Seasonal periods in Iceland are as follows:

- summer: from 1st June to 31st August,
- winter: from 1st September to 31st May.

Samples were taken and tested during the transition period. The results of samples taken during the transition period are reported.

Maximum vapor pressure is 70 kPa during the summer period due to the low ambient summer temperature.

3.14.3 Sales

Table 3.38 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (Unleaded petrol (RON > 95))	9.70%	156 175 793	115 724	13	25	11 of 18
Total petrol		**156 175 793**	**115 724**	**13**	**25**	
Diesel fuel B7	0.00%	270 685 849	226 734	13	25	4 of 6
Total diesel		**270 685 849**	**226 734**	**13**	**25**	

3.14.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of the petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.15 Ireland

3.15.1 Country details

Responsible organization:	Department of the Environment, Climate and Energy
Country size:	Small
Summer period:	1st June to 31st August
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.15.2 Fuel quality monitoring service

Sampling

Samples of petrol and diesel are taken by Fuels for Ireland (formerly known as the Irish Petroleum Industry Association) and are analyzed by ITS Testing Services (UK) Ltd. Reporting is the responsibility of the Department of Climate, Energy, and the Environment.

Samples are taken from refueling stations. Selection of sampling points is on a random basis and is carried out throughout the year. For petrol samples the following test methods were used: R.O.N. EN ISO 5164, M.O.N. EN ISO 5163, Vapour Pressure at 37.8 oC EN 13016-1, Olefins and Aromatics, Benzene, Other oxygenates, Methanol, Ethanol, Iso-Propanol, Iso-Butanol, Tert-Butanol, Ethers (5 or more C atoms) and other oxygenates EN ISO 22854 Proc. A, Sulphur content EN ISO 20846, Lead EN237. For diesel samples the following methods were used Cetane Number EN ISO 5165. Density at 15oC EN ISO 12185, Distillation 95% ISO3405, Polycyclic Aromatics EN 12916, Sulphur Content EN ISO 20846 F.A.M.E. BS EN 14078.

Fuel quality monitoring system administration

The Department of Climate, Energy, and the Environment has responsibility for managing and implementing the FQMS. Samples of petrol and diesel are taken by Fuels For Ireland and are analysed by ITS Testing Services (UK) Ltd.

Reporting is the responsibility of the Department of Climate, Energy, and the Environment. Samples are taken from refuelling stations. Selection of sampling points is on a random basis and is carried out throughout the year. Annual data is provided by Fuels For Ireland for the winter period in January of each year and for the summer period in September of each year. When non-compliant samples have been discovered it is the responsibility of the Department of the Climate, Energy, and the Environment to report, manage and monitor the non-compliance.

All non-compliances are reported on the annual Fuel Quality Data Report and follow up action also reported. Ireland uses EN 14274 statistical model C as a small country. Whitegate Oil Refinery in Co Cork is Ireland's only refinery. There are five distribution terminals in Ireland.

National legislation that transposed the Fuel Quality Directive

European Communities Act 1972 (Environmental Specifications for petrol, diesel fuels and gas oils for use by non-road mobile machinery, including island waterway vessels, agricultural and forestry tractors, and recreational craft) Regulations 2011 (SI No 155 of 2011).

Reporting periods

Seasonal periods in Ireland are as follows:

- summer: from 1st June to 31st August;
- winter: from 1st September to 31st May.

Under EC Decision of the 5th of October 2020, on the request from Ireland for a derogation pursuant to Article 3(4) and (5) of Directive 98/70/EC, as amended by Directive 2009/30/EC, Ireland is permitted to place on the market (during the summer period) petrol with a maximum vapour pressure of 70 kPa (derogation) until the end of 2030.

3.15.3 Sales

Table 3.39 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5	3.0%	1,456,287,011	1,078,731	50	50	18 of 18
Total petrol		**1,456,287,011**	**1,078,731**	**50**	**50**	
Diesel fuel B7	7.0%	3,484,062,538	2,945,108	50	50	6 of 6
Total diesel		**3,484,062,538**	**2,945,108**	**50**	**50**	

3.15.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.40 summarizes the parameter for which exceedances were reported for the petrol fuel grades measured.

Table 3.40 Unleaded petrol (minimum RON ≥ 95) E5

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Ethanol	% V/V	< 10	8.8	10.9	10	100

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.16 Italy

3.16.1 Country details

Responsible organization:	Ministry of Environment and Energy Security
Country size:	Large
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model A
Location of sampling:	Refuelling stations

3.16.2 Fuel quality monitoring service

Sampling

The monitoring system was set up using Statistical Model A of EN 14274 (large country framework, five macro-regions). A total of 182 petrol samples and 339 diesel fuel samples were analyzed. The distribution of samples throughout the national territory was: 16,6% north-west; 18,4% north-east; 21,5% center; 17,3% south; and 26,2% islands. The test methods required for fuel quality monitoring were performed by laboratories that regularly participate in one or more national inter-laboratory proficiency testing schemes, and that are accredited according to EN ISO 17025 or certified according to ISO 9000 standards.

The proficiency testing schemes include all test methods listed in the FQMS. According to the requirements of EN 14274, analytical results for petrol and diesel fuel were reported separately for each season and for each grade. Selection of sampling points is on a random basis but in accordance with the sales in each macroregion; in 2024 the sampling was carried out at refueling stations only. Sample of petrol and diesel are taken by independent supervisory bodies

Fuel quality monitoring system administration

Italy established a fuel quality monitoring system, in accordance with the requirements of the European standard EN 14274:2003, by decree 3 February 2005. The competent authority for the system of monitoring fuel quality is the Ministry of Environment and Energy Security .

The fules quality monitoring (sampling and measurements) was carried out by independent supervisory bodies on behalf of the main oil companies. The supervisory bodies have to forward their results to the Italian National Institute for Environmental Protection and Research when a general report is produced. On the basis of this report the Ministry of the Environment and Energy Security produced data for the European Commission.

National legislation that transposed the Fuel Quality Directive

The FQD was transposed by the Legislative Decree of 21st of March 2005, n. 66 to the national law.

Reporting periods

Seasonal periods in Italy are as follows:

- summer: petrol from 1st May to 30th September; diesel from 16th March to 14th November,
- winter: petrol from 16th November to 15th March; diesel from 15th November to 15th March.

No samples were taken during the transition period.

3.16.3 Sales

Table 3.41 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (Benzina E5)	1.40%	11 601 043 880	7 149 887	73	109	18 of 18
Total Petrol		**11 601 043 880**	**7 149 887**	**73**	**109**	
Diesel fuel B7 (Diesel B7)	3.88%	29 244 490 210	25 393 448	203	136	6 of 6
Total Diesel		**29 244 490 210**	**25 393 448**	**203**	**136**	

3.16.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.42 summarizes the parameter for which one exceedance was reported for the petrol fuel grades measured.

Table 3.42 Unleaded petrol (minimum RON ≥ 95) (Benzina E5)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure	kPa	< 60	49.7	67.2	1	57

Diesel fuel grades

Table 3.43 summarizes the parameters for which one exceedance was reported for the diesel fuel grades measured.

Table 3.43 Diesel fuel B7 (Diesel B7)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Distillation -- 95-%-Point	°C	< 360	331.5	377.3	1	336
FAME content	% v/v	< 7	0.0	7.5	1	247

3.17 Latvia

3.17.1 Country details

Responsible organization:	The State Construction Control Bureau of Latvia (SCCB)
Country size:	Small
Summer period:	1st June to 31st August
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations and terminals

3.17.2 Fuel quality monitoring service

Sampling

Bureau was responsible for the supervision and control of the fulfillment of transport energy conditions till the end of 2024, including the organizing of fuel quality monitoring and reporting about fuel quality. The data on fuel quality conformity assessment included in this report has been obtained by Bureau based on the fuel quality monitoring performed in 2024.

An agreement was concluded between the Bureau and the accredited laboratory which carries out fuel testing and conformity assessment. Fuel sampling is performed at refueling stations in all regions of Latvia. Sampling points are selected randomly.

Fuel quality monitoring system administration

Bureau was responsible for managing and implementing the FQM Directive and performing fuel quality monitoring in Latvia till the end of 2024. Fuel sampling is carried out by an accredited laboratory ltd Latvian Certification Centre with whom the State Construction Control Bureau has concluded a contract.

The State Revenue Service is responsible for taking action when non-compliant samples have been discovered. A fuel quality monitoring system has been established according to the standard EN 14274 model C, taking into account that the total automotive fuel sales in the country are less than 15 million tons per annum. Fuel samples are taken from service stations (selected at random) in all regions of Latvia.

National legislation that transposed the Fuel Quality Directive

The legislation regarding fuel quality has been transposed into the national law by Regulation of Latvia Cabinet Regulation No. 332 "Regulations Regarding Conformity Assessment of Petrol and Diesel Fuel" (hereinafter - Regulation No. 332) which determine the quality requirements for petrol and diesel fuel offered in the Latvian market provided for the operation of the spark ignition internal combustion engines and the compression ignition internal combustion engines, as well as determines the institutions for supervision of the market, procedures for conformity assessment of petrol and supervision of the market and Regulation of Latvia Cabinet Regulation No. 772 ''Regulations Regarding Requirements for Biofuel Quality, Conformity Assessment, Market Supervision and Procedures for Consumer Information'' (hereinafter - Regulation No. 772) which prescribe the quality requirements for biofuel, the procedures by which the production of biofuel and blending thereof with fossil fuel shall be controlled and the procedures by which consumers shall be informed regarding the content of biofuel present at points of sale and the conformity thereof with quality requirements. From 2020 till the 2024 Bureua was responsible for the supervision of the fuel market and performs annual fuel quality monitoring following the amendments of Regulation No. 332.

Reporting periods

Seasonal periods in Latvia are as follows:

- summer: from 1st June to 31st August,
- winter: from 1st November to 1st April.

In Latvia, regulations determine that diesel fuel shall have an admixture of biofuel not less than 6.5 % by volume of the total quantity of petroleum products (obligatory from the 1st of April until the 31st of October (summer period). These requirements do not apply to class zero to four diesel fuel to be used in arctic and severe winter conditions, according to the standard LVS EN 590, which is sold in retail trade between the 1st of November and the 1st of April (winter period).

These periods are used also for petrol fuel, however taking into account that Latvia has been granted a Vapour Pressure Waiver, respectively maximum vapour pressure for petrol must not exceed 70 kPa during the period from June 1 until August 31. Another requirement for petrol fuel is that vapour pressure from September 1 to May 31 does not exceed 100 kPa. Petrol samples taken in April, May, September, and October have been included in the annual fuel quality report and reported within the summer period.

3.17.3 Sales

Table 3.44 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (A-95)	0.0 %	24 086	18	15	15	18 of 18
Unleaded petrol (minimum RON ≥ 95) E10 (A-95 E10)	10.0 %	184 765 654	141 346			
Unleaded petrol (minimum RON ≥ 95) E+ (E85)	85.0 %	92 810	71			
Unleaded petrol (minimum RON ≥ 98) E5 (A-98)	0.0 %	33 072 102	25 300	7	8	18 of 18
Total Petrol		**217 954 652**	**166 735**	**22**	**23**	
Diesel fuel B7 (DD)	0.0 %	798 667 292	666 887	15	16	6 of 6
Diesel fuel B7 (DD B+)	7.0 %	427 664 093	357 100			
Total Diesel		**1 226 331 385**	**1 023 987**	**15**	**16**	

3.17.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.45 summarizes the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.45 Unleaded petrol (minimum RON ≥ 95) E5 (A-95)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research Octane Number	--	> 95	93.0	96.7	2	30
Motor Octane Number	--	> 85	83.0	85.5	2	30

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.18 Lithuania

3.18.1 Country details

Responsible organization:	Ministry of Energy
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.18.2 Fuel quality monitoring service

Sampling

The State Consumer Rights Protection Authority was responsible for sampling and analysis. The organization responsible for reporting is the Ministry of Energy. 106 samples of petrol A-95 (A-98) were taken at the service stations.

Fuel quality monitoring system administration

The Ministry of Energy has responsibility for managing and implementing FQM Directive. Fuel sampling was carried out by The State Consumer Rights Protection Authority. The State Consumer Rights Protection Authority is responsible for taking action where non-compliant samples have been discovered. The system has been designed using the model C from standart EN 14274.

National legislation that transposed the Fuel Quality Directive

Standards of fuel EN 228 and diesel EN 590 are transposed to national legal acts. All acts are related to research of parameters of fuel and diesel samples and are fully transposed to the Lithuanian legislation.

Reporting periods

Seasonal periods in Lithuania are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st October to 30th April.

Samples are also taken during transition periods as there are no filtering and cloud temperatures in provided reports and mentioned indicators are suitable for winter period too. Samples of 1st October - 30th of November and 1st March - 30th of April are also covered by data of winter period.

Vapour pressure waiver has been granted for Lithuania due to the low ambient summer temperature (maximum 70 kPa for the summer period).

3.18.3 Sales

Table 3.46 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (A-95 (RON 95))	10.0 %	438 599 316	329 827	50	50	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (A-98 (RON 98))	0.0 %	17 112 840	12 869	2	4	18 of 18
Total Petrol		**455 712 156**	**342 696**	**52**	**54**	
Diesel fuel B7 (Diesel)	7.0 %	1 702 388 285	1 438 539	50	50	6 of 6
Total Diesel		**1 702 388 285**	**1 438 539**	**50**	**50**	

3.18.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of the petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.19 Luxembourg

3.19.1 Country details

Responsible organization:	Environmental Administration of Luxembourg (Administration de l'environnement)
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	National system
Location of sampling:	Refuelling stations and terminals

3.19.2 Fuel quality monitoring service

Sampling

For 2024, the sampling, analysis and reporting was carried out by three organisations. The samples were taken from refueling stations. The sampling points were randomly selected. Test methods are those specified in EN 228 and EN 590.

Fuel quality monitoring system administration

The fuel sampling, the analysis and reporting is carried out by approved bodies (by the Ministry of Environment). Within one week the results of the analyzed parameters have to be transmitted to the Luxembourg Environment Agency.

In case of a non-compliant sample the approved body has to inform the Environment Agency without delay. After a written warning by the Environment Agency the provider or operator has 48 hours to take the necessary measures. The provider or operator informs the Environment Agency without delay of the measures undertaken. A new sampling has to be taken within the three working days following the written warning.

In 2009, the Luxembourg Environment Agency worked out, in collaboration with the Austrian federal Environment Agency, a concept in order to improve, respectively to establish a national fuel quality monitoring system for Luxembourg.

A two-day workshop was held with the intention of bringing all stakeholders together and to discuss different proposals as well as creating a possible way forward. Besides the project partners, various representatives, for instance from the mineral oil industry, fuels laboratories or other EU countries where a FQMS was already established, attended the meeting.

The main outcome was:

- it's possible to reduce the number of samples for diesel to a minimum amount of 86 samples a year instead of 100 (EN 14274),
- it's possible to reduce the number of samples for petrol grades (RON 95, RON 98) to a minimum amount of 66 samples instead of 2 x 100 (EN 14274),

without degrading the informative value and quality of the monitoring system. The following considerations have been taken into account during design and implementation:

1. Country specific data such as population, surface, number of passengers car and buses, number of Petrol stations, fuel sales /grade,
2. Economy,
3. Supply points and distribution patterns of fossil fuel.

Luxembourg does not have any refineries on its territory, therefore it is dependent from imports of petrol and diesel from other Member States, mainly from Belgium, the Netherlands and Germany (by truck, train or ship).

Fuel stations at the closer border regions are delivered directly by truck from terminals in Belgium (Liege, Feluy/Brussels) and from terminals in Germany (Trier), a few are supplied by the terminal in Mertert, whereas midland fuel stations are normally delivered from a terminal in Bertrange (composed of several big tanks). The inland terminals in Bertrange and Mertert are delivered directly or indirectly by ship or train from refineries in Belgium, the Netherlands or Germany.

National legislation that transposed the Fuel Quality Directive

The directive 98/70/CE amended by the directive 2009/30/CE is entirely transposed into national law by the Grand-ducal ordinance of 16th May 2012 concerning the quality of petrol and diesel fuels and the sustainable use of biofuels (Règlement grand-ducal du 16 mars 2012 concernant la qualité de l'essence et des carburants diesel et l'utilisation durable des biocarburants, Mém. A - 55, 26 mars 2012, p.626, www.legilux.lu).

Reporting periods

Seasonal periods in Luxembourg are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st October to 30th April.

The transition periods are regulated by the Grand-ducal ordinance: "Règlement grand-ducal du 16 mars 2012 concernant la qualité de l'essence et des carburants diesel et l'utilisation durable des biocarburants". These transition periods last from 16th April to 30th of April and 16th September to 30th of September. During the transition period no samples were being taken or tested. No arctic derogation has been granted.

3.19.3 Sales

Table 3.47 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (Euro 95)	10.0 %	452 839 856	341 894	31	31	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Euro 98)	5.0 %	83 912 755	63 774	31	31	18 of 18
Total Petrol		**536 752 610**	**405 668**	**62**	**62**	
Diesel fuel B7 (Diesel)	7.0 %	1 149 174 370	976 798	31	31	6 of 6
Total Diesel		**1 149 174 370**	**976 798**	**31**	**31**	

3.19.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of the petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.20 Malta

3.20.1 Country details

Responsible organization:	Regulator for Energy and Water Services (REWS)
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.20.2 Fuel quality monitoring service

Sampling

The organization responsible for the sampling and the reporting is the Regulator for Energy and Water Services (REWS). The samples were analysed in an independent laboratory.

All the samples were taken from refuelling stations.

Sampling is distributed evenly throughout the year. The selection of sampling points is by random sampling. A total of 209 fuel samples were analysed, consisting of 101 unleaded petrol minimum RON 95 samples, 102 diesel samples and 6 unleaded petrol minimum RON 98 samples.

The different parameters of unleaded petrol samples were analysed using test methods specified in the SM EN 228 quality standard and the different parameters of diesel samples were analysed using test methods specified in the SM EN 590 quality standard.

Fuel quality monitoring system administration

REWS is responsible for monitoring the compliance and the reporting as per Article 8 of the FQD.

Fuel samples are lifted throughout the calendar year from randomly selected refuelling stations by the Regulator's compliance officers. Samples are analysed by an independent laboratory.

REWS is responsible for taking action where non-compliant samples are discovered. A procedure is in place so that any non-compliances are investigated by the Regulator. Legal action is taken against the operators of non-compliant refuelling stations. No non-compliances were found in 2024.

Statistical Model C is used.

National legislation that transposed the Fuel Quality Directive

All the actions are carried out by the REWS. The national subsidiary legislation, the Quality of Fuels Regulations, is S.L. 545.18.

Reporting periods

Seasonal periods in Malta are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st October to 30th April.

Fuel samples were taken throughout the whole calendar year.

Samples are also lifted and tested also during the transition period. Any unleaded petrol samples lifted during the transition period are not included in the FQMS.

3.20.3 Sales

Table 3.48 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (Petrol EN 228 minimum RON 95)	0.0 %	115 977 247	86 309	50	51	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Petrol EN 228 minimum RON 98)	0.0 %	3 825 656	2 847	3	3	18 of 18
Total Petrol		**119 802 903**	**89 156**	**53**	**54**	
Diesel fuel B7 (Diesel EN 590)	7.0 %	188 403 725	157 733	51	51	6 of 6
Total Diesel		**188 403 725**	**157 733**	**51**	**51**	

3.20.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of the petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.21 Netherlands

3.21.1 Country details

Responsible organization:	Human Environment and Transport Inspectorate, Ministry of Infrastructure and Water Management
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model A
Location of sampling:	Refuelling stations

3.21.2 Fuel quality monitoring service

Sampling

The inspectors from the Human Environment and Transport Inspectorate of the Ministry of Infrastructure and Water Management are responsible for taking the samples and reporting. The Netherlands has 12 provinces. It was decided to take samples at fuel service stations from different oil companies. Samples were taken in each province based on the number of inhabitants and the number of fuel service stations in each province.

Fuel quality monitoring system administration

The Human Environment and Transport Inspectorate of the Ministry of Infrastructure and Water Management is responsible for managing and implementing the FQD sampling and reporting. The analyses of all parameters type diesel are performed by the laboratory of SGS Nederland B.V. This laboratory also

determines the RON and MON values of petrol. The analyses of the other parameters of petrol are performed by the Dutch Customs Laboratory.

The inspectors from the Human Environment and Transport Inspectorate are responsible for enforcing compliance of the fuel supplied in the Netherlands. In the case of non-compliance the offender is warned, the cause is investigated, and if necessary, corrective measures are taken.

National legislation that transposed the Fuel Quality Directive

Air Pollution Fuels Decree of 8 April 2011, laying down the requirements about fuels for the implementation of the Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009 amending the Directive 98/70/EC about the specification petrol, diesel fuel and gas oil and establishing a mechanism to monitor and reduce GHG emissions, amending the Council Directive 1999/32/EC as regards the specification of inland waterway fuels and repealing the Directive 93/12/EEC (PbEU L 140).

The requirements of Annex 1 and 2 of 98/70/EC are implemented in the Netherlands, without change. Only lead content is not tested.

Reporting periods

Seasonal periods in the Netherlands are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st October to 30th April.

No samples were collected during the transition period.

3.21.3 Sales

Table 3.49 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (E10)	10.0 %	5 900 000 000	4 370 000	49	51	12 of 19
Total Petrol		**5 900 000 000**	**4 370 000**	**49**	**51**	
Diesel fuel B7 (Diesel)	7.0 %	4 890 000 000	4 070 000	45	51	6 of 7
Total Diesel		**4 890 000 000**	**4 070 000**	**45**	**51**	

3.21.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.50 summarizes the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.50 Unleaded petrol (minimum RON ≥ 95) E10 (E10)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Oxygen content	--	< 3.7	0.0	4.1	1	100
Ethanol	--	< 10	0.51	11.1	2	100

Diesel fuel grades

Table 3.51 summarizes the parameter for which exceedances were reported for the diesel fuel grades measured.

Table 3.51 Diesel fuel B7 (Diesel)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
FAME content	mg/l	< 7.3	0.2	7.6	2	96

3.22 Norway

3.22.1 Country details

Responsible organization:	Norwegian Environment Agency
Country size:	Small
Summer period:	1st June to 31st August
FQMS used:	National system
Location of sampling:	Refuelling stations

3.22.2 Fuel quality monitoring service

Sampling

From 2012 detailed information is only required every 3 years. Thus, no detailed information is required for 2024. In Norway the fuel quality monitoring system today is based on data from Certificates of Quality. Intertek has been engaged to take the physical samples and perform laboratory analysis. Random samples (32 in summer and 32 in winter period) were collected at petrol stations.

In the summer period (June-August) the samples were taken in the east of Norway (Oslo, Akershus, Østfold og Buskerud) and in the winter period (November-December) the samples were taken in the west of Norway (Rogaland og Vestland).

The samples were collected from different companies, making sure that samples were taken from all companies. Samples were collected according to EN 14274:2013

Fuel quality monitoring system administration

From 2012 detailed information is only required every 3 years. Thus, no detailed information is required for 2024.

Norwegian Environment Agency is responsible for managing the FQM. The Ministry of Climate and Environment is responsible for audits and follows up if non-complied system which has been developed by the business sector is used. The country is small and there are no regional differences in fuel quality in refineries and distribution terminals. The Fuel Quality Monitoring data report is usually provided by the 30th of June.

National legislation that transposed the Fuel Quality Directive

The Fuel Quality Directive is transposed in the Norwegian product regulation which is a regulation under the Product Control Act: https://lovdata.no/dokument/SF/forskrift/2004-06-01-922.

Reporting periods

Seasonal periods in Norway are as follows:

- summer: from 1st June to 31st August,
- winter: from 1st October to 30th April.

Transition periods are from the 1st to the 31st of May and from the 1st to the 30th of September.

Due to the arctic conditions in certain parts of Norway, the maximum vapour pressure is 70 kPa for the summer period. During the winter the maximum vapour pressure is 100 kPa in accordance with the Norwegian Oil Industry Standard.

3.22.3 Sales

Table 3.52 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 ((95 BF) E10)	10.0%	822 334 000	608 527	9	18	15 of 20
Unleaded petrol (minimum RON ≥ 98) E5 (98 BF)	5.0%	72 724 000	53 816	1	2	20 of 20
Total petrol		**895 058 000**	**662 343**	**10**	**20**	
Diesel fuel B7 (B7)	7.0%	2 566 052 000	2 155 484	22	12	6 of 7
Total diesel		**2 566 052 000**	**2 155 484**	**22**	**12**	

3.22.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of the petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.23 Poland

3.23.1 Country details

Responsible organization:	Urząd Ochrony Konkurencji i Konsumentów
Country size:	Large
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model B
Location of sampling:	Refuelling stations

3.23.2 Fuel quality monitoring service

Sampling

The fuel quality monitoring and control system is managed by the President of the Office of Competition and Consumer Protection. Tasks related to system management are carried out with the help of the Trade Inspection, which conducts fuel quality inspections. Fuel quality analysis is carried out by laboratories accredited by the Polish Center for Accreditation for fuel testing with the methods specified in the regulations on test methods.

In order to isolate control activities carried out in order to prepare a report for the European Commission on fuel quality, the name "European part of the fuel quality monitoring and control system" was introduced, which refers to the control of:

- unleaded petrol RON 98, unleaded petrol RON 95, diesel oil,
- liquid biofuels, i.e. diesel oil with 20% ester content (B20) and ester constituting a pure fuel (B100),
- carried out only at petrol stations and plant stations that were selected for inspection,
- consisting in taking fuel samples in the amount specified in the regulation

on the method of monitoring and the European standard PN EN 14 274 - Fuels for motor vehicles - Assessment of the quality of petrol and diesel fuels - Fuel quality monitoring system,

- all quality parameters listed in the directive on the quality of petrol and diesel fuels and some parameters of the so-called listed in the regulation on quality requirements, which are also listed in the standards PN-EN 228 Fuels for motor vehicles - Unleaded petrol - Requirements and test methods, and PN-EN 590 Fuels for motor vehicles - Diesel oils - Requirements and test methods,
- all quality parameters listed in the regulation on quality requirements for liquid biofuels, which are also listed in the PN-EN 14 214 standard Automotive fuels - Fatty acid methyl esters (FAME) for compression-ignition engines - Requirements and test methods,
- consisting in taking one fuel sample of one type at the station. Fuel quality control under the European part of the system covered the following types of liquid fuels traded in Poland, i.e.:
    - unleaded petrol RON 95,
    - unleaded petrol RON 98,
    - diesel.

Fuel quality monitoring system administration

The fuel quality monitoring and control system is managed by the President of the Office of Competition and Consumer Protection. Tasks related to system management are carried out with the help of the Trade Inspection, which conducts fuel quality inspections. Poland has adopted the fuel quality monitoring system specified in the EN 14 274 standard Automotive fuels - Assessment of the quality of petrol and diesel fuels - Fuel quality monitoring system (FQMS) - model B - taking into account the specificity of Polish conditions.

Taking into account the specificity of the Polish market for liquid fuels, in particular due to the low availability of RON 98 unleaded petrol at Polish stations, in the regulation on the method of monitoring, the minimum number of samples for this type of fuel for each monitoring period is 30, not 100, as specified in the EN 14 274 standard. At the same time, due to the fact that in Poland over the past few years, the annual fuel consumption exceeded 15 million tonnes, which classifies Poland as a large country, and due to the comments of the European Commission regarding the insufficient number of samples taken , the number of samples was doubled by taking 200 samples of diesel oil and 95 RON petrol and 60 samples of 98 RON petrol each in each monitoring period.

National legislation that transposed the Fuel Quality Directive

The legal basis for the operation of the fuel quality monitoring and control system in Poland is:

- Act of August 25, 2006 on the fuel quality monitoring and control system (Journal of Laws of 2023, item 846), hereinafter referred to as the "Act",
- Act of 15 December 2000 on the Trade Inspection (Journal of Laws of 2020, item 1706) and implementing acts issued on its basis,
- Regulation of the Minister of Economy of September 21, 2007 on the method of monitoring the quality of liquid fuels, liquid biofuels, as well as templates for reports on these fuels as well as liquefied gas (LPG) and compressed natural gas (CNG) (Journal of Laws of 2019 item 641), hereinafter referred to as the "monitoring regulation",
- Regulation of the Minister of Economy of 9 October 2015 on quality requirements for liquid fuels (Journal of Laws, item 1680, as amended), hereinafter referred to as the "Regulation on quality requirements",
- Regulation of the Minister of Economy of 25 March 2010 on methods of testing the quality of liquid fuels (Journal of Laws of 2017, item 247), hereinafter referred to as the "Regulation on methods of testing the quality of liquid fuels",
- Regulation of the Minister of Energy of 25 May 2016 on quality requirements for liquid biofuels (Journal of Laws of 2016, item 771), hereinafter referred to as the "Regulation on quality requirements for liquid biofuels",
- Regulation of the Minister of Energy of 14 October 2016 on methods of testing the quality of liquid biofuels (Journal of Laws of 2016, item 1802), hereinafter referred to as the "Regulation on methods of testing the quality of liquid biofuels",
- Regulation of the Minister of Climate of April 22, 2020 amending the regulation on quality requirements for liquid fuels (Journal of Laws of 2020, item 727).

Reporting periods

Seasonal periods in Poland are as follows:

- summer: from 1st May to 30th September (petrol),
- winter: from 1st October to 30th April.

Transition periods for petrol are from 1st March to 30th April and from 1st to 31st October and for diesel is from 1st March to 15th April and from 1st October to 15th November. Samples were taken during the transition periods.

The test results of the transitional period are given in the table for the winter period, according to the principle that the summer period for petrol is in the range of May 1st - September 30th (for diesel: April 16th - September 30th), while the remaining time is included in the table for the winter period.

3.23.3 Sales

Table 3.53 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (RON95)	5.00%	6 756 280 000	5 042 000	207	259	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (RON98)	5.00%	888 420 000	663 000	65	102	18 of 18
Total Petrol		**7 644 700 000**	**5 705 000**	**272**	**361**	
Diesel fuel B7 (ON)	7.00%	21 399 300 000	18 135 000	203	284	6 of 6
Total Diesel		**21 399 300 000**	**18 135 000**	**203**	**284**	

3.23.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.54 summarizes the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.54 Unleaded petrol (minimum RON ≥ 95) E5 (RON95)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Motor Octane Number	--	> 85	84.4	86.4	1	466
Vapour pressure	kPa	< 60	55.7	87.4	1	466

Diesel fuel grades

Table 3.55 summarizes the parameters for which exceedances were reported for the diesel fuel grades measured.

Table 3.55 Diesel fuel B7 (ON)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
FAME content	% V/V	> 7.3	0.05	7.6	1	487

3.24 Portugal

3.24.1 Country details

Responsible organization:	Directorate-General for Energy and Geology (DGEG)
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.24.2 Fuel quality monitoring service

Sampling

Bodies performing analysis are selected through a public tender held by ENSE and sampling is performed by ENSE itself. A collection of samples in filling stations is carried out that are taken across the country and all over the year. The selection of filling stations is made by ENSE.

Most of the analysis methods used are those contain through Directive 98/70/EC. The method used for each parameter can be found in the "Test methods and analyzes" tables of Reporting Results tables, where are indicated the number of values exceeded and their values, in the corresponding row of the method of analysis used, or indicated the analytical method used, if a different one.

Fuel quality monitoring system administration

The body responsible at national level for the FQMS is the Ministry of Environment and the Directorate General for Energy and Geology, the body that coordinates, prepares and submits the annual reports. Analysis is performed by entities selected through public tender held by ENSE.

The introduction in the consumption or marketing of fuels that do not meet the specifications in force constitutes an infraction punishable by fine, which involves reporting to the authority responsible for the prosecution.

The end of the refining activity in Matosinhos Refinery in 2021 (in the north) implied the concentration of refining operations in the Sines Refinery (in the south).

National legislation that transposed the Fuel Quality Directive

Decree-Law nº 89/2008, of 30 May, amended by Decree-Law nº 142/2010, of 31st December, Decree-Law nº 214-E/2015, of 30th September and Decree-Law nº 152-C/2017, of 11th December, transposed Fuel Quality Directive, and its successive amendments.

The requirements of FQMS are set out in Articles 13º and 14º of Decree-Law nº 89/2008, of 30th May.

Reporting periods

Seasonal periods in Portugal are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st November to 31st March.

Transition periods are the months of April and October. Analyses are performed in the transition periods, but the results are not included in this annual report, in accordance with the provisions of the European Standard EN 14274. No Arctic derogation granted.

Portugal grants a vapour pressure derogation for petrol, established by the Dispatch nº. 9558/2021, D.R. (Series II) of 30th September: Derogation from the maximum vapor pressure, from 60 kPa to 68 kPa, for fuel grade of petrol “Eurosuper” (I.O.95), containing bioethanol, in the period from 1st May to 30th September.

3.24.3 Sales

Table 3.56 Total sales and sample number

Fuel grade (name)[22]	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (Eurosuper)	3.00%	1 569 291 138	1 170 691	50	51	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Superplus)	3.00%	130 405 836	98 326	4	4	18 of 18
Total petrol		**1 699 696 974**	**1 269 017**	**54**	**55**	
Diesel fuel B7 (Gasóleo)	7.60%	5 343 292 857	4 488 366	50	50	6 of 6
Total diesel		**5 343 292 857**	**4 488 366**	**50**	**50**	

3.24.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.57 and Table 3.58 summarize the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.57 Unleaded petrol (minimum RON ≥ 95) E5 (Eurosuper)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Research Octane Number	--	≥ 95	94.0	96.4	8	101
Motor Octane Number	--	≥ 85	83.8	85.9	25	101
Vapour Pressure, DVPE	kPa	≥ 45 & ≤ 68	52.8	70.1	1	50

(22) The petrol fuel grade Superplus was recategorized from E10 to E5 due to its very low biofuel content. Portugal agreed to this change while stating the following: *'The transposition into national law of Directive 98/70/EC was made by Decree-Law No. 89/2008, of May 30. The specifications of petrol marketed in national territory are set out in article 5 and Annex III of the referred diploma, in its current wording. According to the that decree-law, there are two grades of petrol at national level, Euro Super (also known as I.O 95) and Superplus (also known as I.O 98). Thus, currently, Eurosuper (I.O.95) has a maximum oxygen content of 2.7% (% m/m) and a maximum (bio)ethanol content of 5.0% (% v/v). Superplus (I.O. 98) has a maximum oxygen content of 3.7% (% m/m) and a maximum (bio)ethanol content of 10.0% (% v/v). In these terms, by definition, Superplus (I.O 98) currently corresponds to the grade that allows a maximum bioethanol limit of 10.0%. The legislation establishes maximum limits, and it is up to operators to develop their commercial policies, always in accordance with the specifications established in current legislation, while simultaneously fulfilling the objectives established for the incorporation of biofuels. Given that Eurosuper (I.O.95) has a higher sales volume, the incorporation of bioethanol has a greater representation in this grade. […] Although in the national legislation currently in force, I.O.98 corresponds to the grade that has a maximum bioethanol limit of 10.0%, in practice this grade does not have this percentage of incorporation, for the reasons already explained. […} Therefore, although in legislative terms I.O 98 may correspond to an E10, given the low incorporation of bioethanol, we understand that it can be catalogued as an E5.'* Email dated September 9th 2025 from Directorate-General for Energy and Geology (DGEG)

Table 3.58 Unleaded petrol (minimum RON ≥ 98) E5 (Superplus)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Motor Octane Number	--	≥ 87	86.0	87.7	2	8
Vapour Pressure, DVPE	kPa	≥ 45 & ≤ 60	52.4	65.8	1	4

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.25 Romania

3.25.1 Country details

Responsible organization:	Ministry of Energy
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 Statistical Model A
Location of sampling:	Refuelling stations

3.25.2 Fuel quality monitoring service

Sampling

The sampling was carried out under the macro-regional model. Sampling is under the specifications of SR EN 14274:2013 and SR EN 14275:2013. The sampling activity is carried out by a third party verification which has been designated for sampling, analysis, and reporting, following a public procurement procedure. Samples are taken in refueling stations and, from 2019, in terminals/depots inclusively.

Sampling is planned to be performed twice each year, and in 2023 samples were collected carried out in the winter and summer periods.

Fuel quality monitoring system administration

The Ministry of Energy is responsible for managing and implementing the FQD and FQMS. Fuel sampling activities during the summer and winter periods are carried out by a privately contracted entity. The gathering of information on sales from the fuel suppliers is updated under the Order of the Ministry of Energy (nor. 569/2019).

Romania is a small sized country, using statistical model A (EN 14274) to monitor fuel quality. The country is divided into 4 macro-regions. The public body responsible for taking action where non-compliant samples have been discovered is the National Authority for Protection of Consumers, designated in the national legislation.

National legislation that transposed the Fuel Quality Directive

The Government Decisions no. 928/2012 and 935/2011 were abolished by the Emergency Government Ordinance no. 80/2018 approved by Law no. 311/2018, with the additional specifications of Order of the Ministry of Energy no. 569/2019.

Reporting periods

Seasonal periods in Romania are as follows:

- summer: from 1st May to 30th September,
- winter: from 16th November to 14th March.

No samples were taken during the transition periods.

3.25.3 Sales

Table 3.59 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (Benzină COR-95)	8.00%	1 038 630 104	785 740	50	50	18 of 18
Unleaded petrol (minimum RON ≥ 98) E10 (Benzină COR-98)	8.00%	178 797 179	134 842	50	50	18 of 18
Total Petrol		**1 217 427 283**	**920 582**	**100**	**100**	
Diesel fuel B7[23] (Diesel)	6.50%	3 941 489 129	3 344 774	51	51	6 of 6
Total Diesel		**3 941 489 129**	**3 344 774**	**51**	**51**	

3.25.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of diesel fuel quality limits were reported.

3.26 Slovakia

3.26.1 Country details

Responsible organization:	VÚRUP, a.s.
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

(23) The continued stark decrease of sold B7 in 2024 was explained by Romania to *'reflect the current market trend toward cleaner vehicles, as well as a potential reduction in consumption driven by rising taxes and fuel prices.'* It *'has been intensified by the following factors: - public transport fleets in urban areas are becoming increasingly electrified, - private vehicle acquisitions have benefited from subsidies such as the Rabla and Rabla Plus programs for new electric and hybrid vehicles.'* Email dated April 8th 2026 from the Romanian Ministry of Energy.

3.26.2 Fuel quality monitoring service

Sampling

Organization responsible for sampling, analysis and reporting: VÚRUP, a.s. (Accredited Testing Laboratories & Accredited Inspection Body, accreditation for VÚRUP, a.s. was granted by SNAS, www.snas.sk). Types of locations at which sampling is carried out: refueling stations only.

Frequency of sampling and selection of sampling points: during summer and winter period, selection of sampling points is made by management of Testing Laboratories from database of refueling stations and on the base of S.I.E. suggestions (S.I.E = Slovak Inspection of Environment).

Applied monitoring system is equivalent to the CEN system. All the test methods used for individual petrol and diesel samples are reported in table "Methods&Limits".

Fuel quality monitoring system administration

Public bodies responsible for managing and implementing of the FQD Directive: Ministry of the Environment and Slovak Inspection of the Environment. Fuel sampling is carried out by contracted institution (VÚRUP, a.s.) accredited according to EN ISO/IEC 17020 and EN ISO/IEC 17025 selected by public competition. The annual data on petrol and diesel sales for the year 2024 were provided by the Ministry of the Environment at the end of July 2025.

When non-compliant samples are discovered the Slovak Inspection of the Environment is responsible for taking action (financial punishment). S.I.E.is responsible for all process - to report, manage and monitor all non-compliant samples discovered during monitoring. In Slovakia the EN 14274 model C is applied from August 2004. Number of National refineries: 1, number of distribution terminals: 2 (one refinery in Bratislava-Refinery SLOVNAFT and 2 its terminals).

The Annual Fuel Quality Monitoring Data Report is provided every year in the due date 30th August.

National legislation that transposed the Fuel Quality Directive

The Fuel Quality Directive has been transposed into Slovak national law system in the form of the Decree of Ministry of the Environment of the Slovak Republic No. 251/2023 Coll. on fuel quality.

Reporting periods

Seasonal periods in Slovakia are as follows:

- summer: from 1st May to 30th September,
- winter: from 16th November to 28th/29th February.

Fuel samples were not taken during the transition period, but only during the summer and winter periods. Therefore, only the results of fuel samples taken during these periods are reported within this annual fuel quality report.

3.26.3 Sales

Table 3.60 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (Super 95)	7.70%	757 875 311	568 406	98	97	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Super Plus 98)	0.00%	113 245 736	84 934	13	24	18 of 18
Total petrol		**871 121 047**	**653 340**	**111**	**121**	
Diesel fuel B7 (Diesel)	6.90%	2 283 491 324	1 918 133	100	112	6 of 6
Total diesel		**2 283 491 324**	**1 918 133**	**100**	**112**	

3.26.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of diesel fuel quality limits were reported.

3.27 Slovenia

3.27.1 Country details

Responsible organization:	Slovenian Environment Agency
Country size:	Small
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model C
Location of sampling:	Refuelling stations

3.27.2 Fuel quality monitoring service

Sampling

The monitoring is carried out by the legal entities, who obtain authorization from the ministry responsible for the environment. The main condition for the authorization is that they are accredited by the Slovenian Accreditation as inspection bodies according to the EN ISO/IEC 17020:2004 and as testing laboratories. They are responsible for the sampling plan, sampling and analysis of fuel (the analyses of samples are carried out by testing laboratories accredited according to EN ISO/IEC 17025:2005), and collecting and processing the data. The publicly available information on legal entities is at the central website of the state administration: https://www.gov.si/teme/kakovost-goriv/.

Slovenian Environment Agency receives annual reports from three independent inspection bodies on regular basis. The samples of Petrol Fuels, Diesel Fuel, and Gas Oil are taken each month throughout the year at refueling stations and depots.

Fuel quality monitoring system administration

1. Legislation, implementation and reporting: Ministry of the Environment, Climate and Energy with body within ministry - Slovenian Environment Agency.

2. Control (non-compliant samples and other discrepancies, that are issued from implementation of legislation) is exercised by the Environment and Energy Inspectorate and by the Slovenian Maritime Administration (body within the Ministry of Infrastructure).

3. The fuel quality monitoring system in Slovenia is based on the European Standard EN 14274:2003, utilising statistical model C (small country).

National legislation that transposed the Fuel Quality Directive

The FQD was transposed into the national law by the Environmental Protection Act and the following regulations (Environmental Protection Act: https://pisrs.si/pregledPredpisa?id=ZAKO8286):

1. Decree on the physical and chemical properties of liquid fuels (Uredba o fizikalno-kemijskih lastnostih tekočih goriv: OJ/Uradni list RS, št. 74/11),
2. Decree amending the Decree on the physical and chemical properties of liquid fuels (Uredba o spremembah in dopolnitvah Uredbe o fizikalno-kemijskih lastnostih tekočih goriv: OJ/Uradni list RS, št. 64/14),
3. Decree amending the Decree on the physical and chemical properties of liquid fuels (Uredba o spremembah in dopolnitvah Uredbe o fizikalno-kemijskih lastnostih tekočih goriv: OJ/Uradni list RS, št. 36/18),
4. Decree amending the Decree on the physical and chemical properties of liquid fuels (Uredba o spremembah in dopolnitvah Uredbe o fizikalno-kemijskih lastnostih tekočih goriv: OJ/Uradni list RS, št. 44/22 – ZVO-2),
5. Rules on the monitoring of physical and chemical properties of liquid fuels (Pravilnik o monitoringu fizikalno-kemijskih lastnosti tekočih goriv: OJ/Uradni list RS št. 76/11),
6. Rules amending the Rules on the monitoring of physical and chemical properties of liquid fuels (Pravilnik o spremembah in dopolnitvah Pravilnika o monitoringu fizikalno-kemijskih lastnosti tekočih goriv: OJ/Uradni list RS št. 56/14),
7. Rules amending the Rules on the monitoring of physical and chemical properties of liquid fuels (Pravilnik o spremembah in dopolnitvah Pravilnika o monitoringu fizikalno-kemijskih lastnosti tekočih goriv: OJ/Uradni list RS št. 35/18) and
8. Rules amending the Rules on the monitoring of physical and chemical properties of liquid fuels (Pravilnik o spremembah in dopolnitvah Pravilnika o monitoringu fizikalno-kemijskih lastnosti tekočih goriv: OJ/Uradni list RS št. 44/22 – ZVO-2).

Reporting periods

Seasonal periods in Slovenia are as follows:

- summer: from 1st May to 30th September,
- winter: from 1st October to 30th April.

There are no transition periods.

3.27.3 Sales

Table 3.61 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (NMB 95)	5.00%	555 407 200	419 330	54	71	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (NMB 98)	5.00%	24 780 400	18 709	9	11	18 of 18
Total petrol		**580 187 600**	**438 039**	**63**	**82**	
Diesel fuel B7 (B7)	7.00%	1 955 877 334	1 651 750	65	112	6 of 6
Total diesel		**1 955 877 334**	**1 651 750**	**65**	**112**	

3.27.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of the petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.28 Spain

3.28.1 Country details

Responsible organization:	Ministry for the Ecological Transition and the demographic challenge
Country size:	Large
Summer period:	1st May to 30th September
FQMS used:	EN 14274 statistical model A
Location of sampling:	Refineries, refuelling stations, and terminals

3.28.2 Fuel quality monitoring service

Sampling

Samples taken at refineries, terminals and service stations (point of delivery to final consumers):

- REFINERIES: Samples have been taken from 5 refineries from different regions of the country.
- TERMINALS: Samples have been taken from around 30 terminals covering the whole country.
- SERVICE STATIONS: Samples have been taken from service stations from different regions of the country.

Samples are taken from storage tanks at atmospheric pressure according to ISO 3170:2004 at or near atmospheric pressure.

Fuel quality monitoring system administration

Model used to consider large country (more than 15 million tons/year).

Model A has been used. The country has been divided into regions considering a similar share of refineries and terminals in each region. In some regions there is more potential variability due to product coming in by ship cargo.

In the country there are 9 refineries and samples were taken from five of them. Samples are taken in more than 30 terminals covering the whole country receiving products from every refinery. When fuels came into the country by ship it has been taken into account in the variability factor.

Samples taken from service stations cover great part of the country.

National legislation that transposed the Fuel Quality Directive

Fuel Quality specification transposed to Spanish legislation in Royal Decree 61/2006 and Royal Decree 1088/2010.

Sampling and analysis are transposed in Art. 7 of RD 61/2006.

Reporting periods

Seasonal periods in Spain are as follows:

- summer: petrol from 1st May to 30th September; diesel from 1st April to 30th September,
- winter: petrol from 1st October to 30th April; diesel from 1st October to 31st March.

Spain according to Directive 98/70/CE and their Royal Decree 1088/210, has a waiver for vapour pressure on petrol then, vapour pressure limits can be increased with bioethanol content.

3.28.3 Sales

Table 3.62 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E5 (Gasolina 95)	3.65%	8 208 655 319	6 172 916	117	137	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Gasolina 98)	3.65%	458 265 878	344 616	14	19	18 of 18
Total petrol		**8 666 921 197**	**6 517 532**	**131**	**156**	
Diesel fuel B7 (Gasóleo A)	7.99%	25 749 219 858	21 758 091	144	143	6 of 6
Total diesel		**25 749 219 858**	**21 758 091**	**144**	**143**	

3.28.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.63 and Table 3.64 summarize the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.63 Unleaded petrol (minimum RON ≥ 95) E5 (Gasolina 95)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour Pressure	kPa	< 60	41.4	77.3	25	253
Benzene	% V/V	< 1.0	0.1	6.0	1	254
Oxygen content	% (m/m)	< 2.7	0.42	3.0	2	254

Other oxygenates	% V/V	< 15	0.0	17.7	1	173
Sulphur content	mg/kg	<10	0.3	40.7	1	254

Table 3.64 Unleaded petrol (minimum RON ≥ 98) E5 (Gasolina 98)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Vapour pressure	kPa	< 60	52.2	76.9	1	33

Diesel fuel grades

Table 3.65 summarizes the parameter for which exceedances were reported for the diesel fuel grades measured.

Table 3.65 Diesel fuel B7 (Gasóleo A)

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
FAME content	% v/v	< 7	0.04	8.3	3	287

3.29 Sweden

3.29.1 Country details

Responsible organization:	The Swedish Transport Agency
Country size:	Small
Summer period:	1st May to 15th September in south Sweden, 16th May to 31st August in north Sweden
FQMS used:	National system
Location of sampling:	Terminals, refuelling stations

3.29.2 Fuel quality monitoring service

Sampling

The Swedish fuel quality model is based on a National system. Drivkraft Sverige (The former Swedish Petroleum and Biofuels Institute) compiles the data at the terminals for this annual Fuel quality Monitoring Report on behalf of The Swedish Transport Agency. The quality assessment system at the terminals consists of compilation of quality data of all batches produced in Sweden and of all import batches for the Swedish market. The number of samples taken per fuel grade at the terminals could be found in the tab Sales as well as in each respective tab, for the respective grade, in column N-samples in this Report. In 2024 there were 581 samples of Unleaded Petrol 95, 135 samples of Unleaded Petrol 98, 861 samples of diesel environmental class 1 (mk1) and 44 samples of diesel environmental class 3 (mk3) taken at the terminals.

In 2024 Unleaded Petrol 95 represented about 97,5 % of the total sales of Petrol in Sweden and diesel mk1 represented about 88,9 % of the total sales of diesel in Sweden. The reported data at the terminals represents more than 98% of the sales of petrol and diesel in Sweden. In 2024 (representing Summer quality), The Swedish Transport Agency, as an assessment of the national monitoring system's equivalency to the CEN system (crosschecking), carried out sampling at actual refueling stations by the help of an accredited test laboratory. Five samples of Unleaded Petrol 95 and five samples of Diesel Mk1, where taken at five actual fuel dispensing sites in five cities distributed across Sweden. The cities were (from north to south); Gävle, Haninge, Norrköping, Eriksberg och Arlöv.

The refueling stations also represented five different fuel companies. The samples where then analyzed according to the same test methods as in this Excel template and to what is required in SS-EN 14274:2003 and SS-EN 14275:2003. The samples from the refueling stations (crosschecking) showed good equivalency for both petrol and diesel with this report based upon quality data of the deliveries to the terminals.

The analysis report for the crosschecking at refueling stations in 2024 is available from The Swedish Transport Agency upon request. The same goes for the analysis reports from 2012-2023. The Swedish Transport Agency plans to do a similar crosschecking at actual refueling stations in the summer of 2025 to also verify the upcoming 2025 FQMS Report.

Fuel quality monitoring system administration

The Swedish Transport Agency is responsible for managing and implementing FQM Directive in Sweden. This FQMS Report is thus under the responsibility of The Swedish Transport Agency including compilation of quality data at the terminals. Sampling and subsequent analysis of the additional national monitoring is carried out by accredited laboratories. The Swedish Transport Agency verified the reliability of the compilation of Drivkraft Sverige (The former Swedish Petroleum and Biofuel Institute) for this 2024 fuel quality report. The sampling at the actual refueling stations in 2024 (representing Summer quality), showed good conformity for both petrol and diesel with the data at the terminals in this annual Fuel Quality Monitoring Report. From authority side we are confident that Drivkraft Sverige (The former Swedish Petroleum and Biofuel Institute) compilation of quality data for the FQMS Report gives a correct picture of the fuel quality situation in the country in 2024. There are no indications that the fuel quality was a problem in 2024.

Fuels and fuel quality are managed through the national Swedish legislation; "Drivmedelslag (2011:319) the law" and "Drivmedelsförordning (2011:346)_the regulation". According to 14 § in Drivmedelsförordning (2011:346) The Swedish Transport Agency is the authority responsible for taking action when non-compliant fuel quality samples are discovered. The main reason for Sweden to choose this national system is the considerable costs associated with the extensive sampling in a large, sparsely populated Member State with long geographical distances. There are also substantial annual costs associated with the analysis of the large number of samples per fuel grade required by the statistical model in question according to the European Standard EN 14274:2003. This was agreed by the European Commission, Directorate-General Climate Action and the Swedish Ministry of the Environment and Energy, in October 2014, by means of (EU-pilot 6321/14/CLIM).

There are three national refineries in Sweden, producing automotive fuels and 32 distribution terminals.

It is no problem for Sweden to submit the report on national fuel quality data for the preceding calendar year by 31 August each year.

National legislation that transposed the Fuel Quality Directive

The legislation of the FQD has in Sweden been transposed into the national law Drivmedelslag (2011:319), the national regulation Drivmedelsförordning (2011:346) and regulations adopted by The Swedish Transport Agency; Transportstyrelsens föreskrifter (TSFS 2011:66) och allmänna råd om informationskrav avseende tillsatser i drivmedel and TSFS 2015:14, Föreskrifter om ändring i Transportstyrelsens föreskrifter och allmänna råd (TSFS 2011:66) om informationskrav avseende tillsatser i drivmedel;. The latter requires appropriate information to consumers concerning the biofuel, in particular FAME, content of diesel fuel in Article 4.1 of the FQD. This is according to EU-pilot 6321/14/CLIM. In addition to that TSFS 2011:66 and

TSFS 2015:14 also contain a demand for information to customers about other additives (ethanol content in Article 3.3 and metallic additives in Article 8a of the FQD). The law Drivmedelslag (2011:319) was also amended to incorporate the limit of 2 mg per litre of methylcyclopentadienyl manganese tricarbonyl (MMT) in diesel fuel. This is in accordance with Article 8a.2 of the FQD.

The law; Drivmedelslag (2011:319) contains, among other things, fuel specifications (Article 3 and 4 in the FQD) and standard references among them SS-EN 228. In 4-6 §§ could the environmental classes for petrol (bensin) be found.

There are two environmental classes for petrol in Sweden. Petrol environmental class 1, in the law, equals the former national standard SS 155422. This standard is now included as a national Appendix of EN 228. Under the headline Bensin i miljöklass 2 (Petrol in Environmental class 2) and 6 § is petrol that equals EN 228 and ANNEX 1 of the FQD found. Sweden also has three environmental classes for diesel. Environmental class 1 and 2 for diesel equals the national standard SS 155435. In 8-10 §§ the environmental classes for diesel can be found. Diesel Environmental class 3 and 10 § in the law, equals EN 590 and ANNEX II of the FQD. Environmental class 1 of both petrol and diesel represents the largest volumes of those fuels sold on the Swedish market.

The specific regulation about this annual FQMS Report, Article 8 in the FQD, is found in 19 § of the national law Drivmedelslag (2011:319) and in 7-8 §§ of the national regulation Drivmedelsförordning (2011:346).

Reporting periods

Seasonal periods in Sweden are as follows:

- summer: from 1st May to 15th September in the south and from 16th May to 31st August in the north,
- winter: from 1st November to 15th March in the south and from 16th October to 31st March in the north.

Sweden, by definition in Article 2.5 of the FQD, belongs to the Member States with low ambient summer temperatures and has applied for and been granted a vapour pressure derogation for petrol with a maximum vapour pressure of 70 kPa during the summer period in accordance with Article 3.5 of the FQD.

Transition periods between summer and winter grades for petrol vary between the north and south parts of Sweden. The summer and winter periods are regulated in the national law (Drivmedelslag (2011:319) and the transition periods are taken into account for in this fuel quality report.

Sweden has the same diesel fuel quality the whole year around. There are no winter and summer periods for diesel and no transition periods between winter and summer. The reported data for diesel is therefore only an administrative allocation to facilitate comparison between Member States.

3.29.3 Sales

Table 3.66 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
Unleaded petrol (minimum RON ≥ 95) E10 (Blyfri Mk1 95)	10.00%	2 656 853 000	1 992 640	260	321	18 of 18
Unleaded petrol (minimum RON ≥ 98) E5 (Blyfri Mk 198)	5.00%	67 727 000	50 795	64	71	18 of 18
Total petrol		**2 724 580 000**	**2 043 435**	**324**	**392**	
Diesel fuel B7 (Diesel Mk1)	7.00%	3 709 372 000	3 019 429	440	421	6 of 6
Diesel fuel B7 (Diesel Mk3)	7.00%	464 342 000	377 974	42	2	5 of 6
Total diesel		**4 173 714 000**	**3 397 403**	**482**	**423**	

3.29.4 Exceedances of the fuel quality limits

Petrol fuel grades

No exceedances of the petrol fuel quality limits were reported.

Diesel fuel grades

No exceedances of the diesel fuel quality limits were reported.

3.30 United Kingdom (Northern Ireland)

3.30.1 Country details

Responsible organisation:	UK Department for Transport
Country size:	Large
Summer period:	1st June to 31st August
FQMS used:	National system
Location of sampling:	Refineries, terminals, and refuelling stations

3.30.2 Fuel quality monitoring service

Sampling

Sampling is done at refineries, terminals, and refuelling stations. Samples are done routinely throughout the year and across all regions of the UK, including Northern Ireland; the numbers for each month for Petrol and Diesel are shown on the sheets with the test results. The test methods used are in accordance with EN 228 and EN 590.

Fuel quality monitoring system administration

The Department for Transport has responsibility for implementing the Fuel Quality Directive for Northern Ireland and oversees the fuel quality monitoring system. The fuel quality monitoring system makes use of industry quality analyses on batches of fuel produced in, or imported to, Northern Ireland and the UK, plus samples taken at distribution terminals and forecourts (to check for contamination in the distribution

network). Due to the very large number of samples involved, this approach provides an equivalent, or greater, degree of confidence to EN 14274. There are six operational fuels refineries within the UK and approximately 50 distribution terminals.

National legislation that transposed the Fuel Quality Directive

The Fuel Quality Directive was transposed into UK law under the Motor Fuel (Composition and Content) Regulations 1999 (SI No.3107) with amendments in 2001, 2003, 2007, 2010, 2012 and 2021. The Fuel Quality Directive is listed under the Protocol on Ireland/Northern Ireland, Annex 1, Section 26 (Environment, Energy Efficiency).

Reporting periods

Seasonal periods in the UK are as follows:

- summer: from 1st June to 31st August, during which time the maximum vapour pressure of petrol is 70 kPa,
- winter: from 1st September to 31st May.

The UK Department for Transport has responsibility for implementing the Fuel Quality Directive for Northern Ireland (NI) and oversees the fuel quality monitoring system (FQMS). The existing FQMS, used during the reporting period for this report does not allow disaggregation of NI data from data collected for UK as a whole.

For this submission, the data provided in the tabs 'Petrol [number]' and 'Diesel [number]' is based on fuel quality data for UK as a whole rather than NI only. As fuel sold and used in NI derives from the same refineries and distribution points supplying the whole of UK, we consider the quality of the fuel monitored across the whole of the UK to be an accurate representation of the fuel used in NI. The UK fuel quality monitoring system makes use of industry quality analyses on batches of fuel produced in, or imported to, Northern Ireland and the UK as a whole, plus samples taken at distribution terminals and forecourts (to check for contamination in the distribution network). Due to the very large number of samples involved, this approach provides an equivalent, or greater, degree of confidence to EN 14274.

3.30.3 Sales

Table 3.67 Total sales and sample number

Fuel grade (name)	Biofuel content (% v/v)	Total sales		Samples		Parameters measured
		Litres	Tonnes	Summer	Winter	
No data		No data		448	539	18 of 18
No data		No data		81	91	18 of 18
Total petrol	No data	**15 929 799 160**	**11 833 110**	**529**	**630**	
Diesel fuel B7		No data		1 212	865	6 of 6
Total diesel	No data	**27 346 249 630**	**24 905 210**	**1 212**	**865**	

3.30.4 Exceedances of the fuel quality limits

Petrol fuel grades

Table 3.68 summarizes the parameter for which exceedances were reported for the petrol fuel grades measured.

Table 3.68 Petrol

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Ethanol	% V/V	< 5	4.5	5.5	1	85

Diesel fuel grades

Table 3.69 summarizes the parameters for which exceedances were reported for the petrol fuel grades measured.

Table 3.69 Diesel fuel B7

Parameter	Unit	Limit value	Minimum value measured	Maximum value measured	Number of samples outside tolerance limit	Total number of samples
Distillation -- 95-%-Point	°C	< 360	322.6	363.7	1	1 960
Sulphur content	mg/kg	< 10	2.3	11.8	2	2 068

List of abbreviations

% m/m	Percentage mass per mass
% v/v	Percentage volume per volume
˚C	Degree Celsius
B+	Diesel with > 7 % biodiesel content
B0	Diesel with no biodiesel content
B7	Diesel with up to 7 % biodiesel content
CNG	Compressed natural gas
CO_2	Carbon dioxide
DVPE	Dry Vapour Pressure Equivalent
E+	Petrol with > 10 % ethanol content
E0	Petrol with no ethanol content
E10	Petrol with up to 10 % ethanol content
E5	Petrol with up to 5 % ethanol content
EEA	European Environment Agency
Eionet	European Environment Information and Observation Network
ETBE	Ethyl tert-butyl ether
ETC/CM	European Topic Centre for Air Pollution and Climate Change Mitigation
EU	European Union
FAME	Fatty acid methyl esters
FQD	Fuel Quality Directive
FQMS	Fuel quality monitoring system
GHG	Greenhouse gas
kg	kilogram
kPa	kilopascal
LPG	Liquified petroleum gas
mg	milligram
MON	Motor octane number
N/A	Not available
QA/QC	Quality assurance/quality control
RON	Research octane number

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