



COMMISSION OF THE EUROPEAN COMMUNITIES

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REPORT FROM THE COMMISSION

**Quality of petrol and diesel fuel used for road transport in the European Union:
Fourth annual report
(Reporting year 2005)**

1. EXECUTIVE SUMMARY

Directive 98/70/EC¹ sets minimum specifications on health and environmental grounds for fuels to be used for vehicles equipped with positive-ignition and compression-ignition engines. Fuel quality is environmentally important because it affects engine pollutant emissions and thus air quality. It also affects the ease and cost with which desired pollutant and greenhouse emission limits can be achieved by manufacturers. Directive 2003/17/EC², amending Directive 98/70/EC, requires a further reduction of the sulphur content of petrol and diesel fuels.

Non-respect of the fuel specification can lead to increased emissions (for example excess oxygenates can increase NO_x emissions) and might damage engine and exhaust after-treatment systems (for example excess sulphur damaging catalysts) leading to higher air pollutant emissions. In order to ensure compliance with the fuel quality standards mandatory under this Directive, Member States are required to introduce fuel quality monitoring systems.

Article 8 of Directive 98/70/EC requires the Commission to publish annually, a report on fuel quality in the Member States. This fourth Commission Report summarises Member States' submissions on the quality of petrol and diesel, as well as the volumes sold, for the year 2005. All Member States except France submitted national reports for 2005.

The monitoring of fuel quality in 2005 shows that the specifications for petrol and diesel laid down in Directive 98/70/EC are in general met and again few exceedances were identified. For petrol the main parameters where exceedances were identified were research octane number (RON)³, summer vapour pressure⁴ and distillation/evaporation at 100/150°C⁵. For diesel the main parameters where exceedances were identified were sulphur content, distillation 95% point, cetane number and density.

Although several Member States reported non-compliant samples, in general far fewer samples exceeded the limit values (and the limits of tolerance for the test methods) compared to previous years. However, several EU-10 Member States reported significant numbers of samples non-compliant with limit values. Belgium reported a higher proportion (~3.5%) of non-compliant samples than other Member States, but has improved compliance levels on previous years.

¹ Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC O.J. L 350, 28.12.1998, p. 58

² Directive 2003/17/EC of the European Parliament and of the Council of 3 March 2003 amending Directive 98/70/EC relating to the quality of petrol and diesel fuels O.J. L 76, 22.3.2003, p. 10

³ Research Octane Number (RON) is a quantitative measure of the maximum compression ratio at which petrol can be used in an engine without some of the mixture self igniting in the engine. Self ignition leads to excess fuel consumption and an increase in Volatile Organic Compound and Carbon Monoxide emissions.

⁴ Vapour pressure is a measure of the propensity of the fuel to evaporate. It is regulated in summer because temperatures at that time of year can lead to high emissions of Volatile Organic Compounds, which are a precursor of ground level ozone. Exceedances will result in increased Volatile Organic Compound emissions.

⁵ The distillation parameter establishes the proportion of the fuel that evaporates at 100°C and 150°C. It limits the range of lighter components that can be blended in the petrol. Exceedances could lead to vapour locks and driveability problems.

Sulphur content for diesel proved a particular problem in 2005 (mainly EU-10), due to the new mandatory <50 ppm level from the start of 2005. Several EU-10 Member States had problems with sales of higher sulphur grades early in the year, and there appeared to be a higher number of samples contaminated with higher sulphur diesel or gas oil than in previous years.

The Commission is not aware of any negative repercussions on vehicle emissions or engine functioning related to these exceedances, but continues to urge Member States to take action in order to ensure full compliance. Most are doing so already, and details of action taken by Member States with regard to non-compliance are included, where provided, in the individual country chapters of the detailed report for 2005⁶. The Commission will continue monitoring compliance with the fuel quality requirements laid down in the Directive and aims to improve its analysis of the data provided from reporting year 2006 onwards.

For the abatement of air pollution and the introduction of new engine technology it is important to note that the share of <10 ppm and <50 ppm sulphur fuels increased significantly from 2001 to 2005 for EU-15. From 2005, it was mandatory for all fuel to meet the <50 ppm sulphur level, and for fuels of <10 ppm sulphur to be introduced in all Member States. Average sulphur content in 2005 is substantially below that reported in 2004 as shown in table 1.

Table 1: Annual trend in average sulphur content in petrol and diesel fuels for the EU

Fuel/Year	Average Sulphur Content, ppm					EU15	EU10
	2001	2002	2003*	2004*	2005*	2005*	2005
<i>Petrol</i>	68	51	37	38	19	19	23
<i>Diesel</i>	223	169	125	113	25	24	37

Includes EU10 country data from 2004. *Excludes France, who did not report in 2003 to 2005.

National fuel quality monitoring systems still differ considerably; however, the Directive requirements are expected to promote greater homogeneity and to improve the quality of reporting.

2. INTRODUCTION

The specifications for petrol and diesel sold in the European Union are laid down in annexes to Directive 98/70/EC and, from 1 January 2005, only one set of fuel specifications applies. The Directive also requires Member States to report summaries of the quality of fuels sold in their territories. From 2004 onwards, Member States are required to report on their monitoring in accordance with European Standard, EN 14274⁷, or with systems of equivalent confidence. Article 8 of Directive 98/70/EC, as amended by Article 1(5) of Directive 2003/17/EC, requires the Commission to forward the results of Member States' fuel quality

⁶ See http://ec.europa.eu/environment/air/pdf/fqm_summary_2005.pdf

⁷ EN 14274:2003 - Automotive fuels - Assessment of petrol and diesel quality - Fuel Quality Monitoring System (FQMS).

reporting. In compliance with this request, this fourth Commission Report summarises the quality of petrol and diesel, as well as the volumes sold, in the Community for the year 2005. Previous year's reports can be found on the Commission's web pages⁸.

3. NATIONAL MONITORING SYSTEMS

A number of different approaches have been used to implement Fuel Quality Monitoring Systems (FQMS) across the EU. These range from those based on European Standard EN 14274, with sampling at a range of fuel retail stations, through to national systems. For example, systems in Sweden and the UK integrate sampling and analysis of all refinery or imported batches into the requirements for distribution of fuels within the country. There is also random sampling across the distribution chain throughout the year. The systems active in several Member States were originally designed for other purposes, and this explains some of the variations in coverage and application across the EU. A greater degree of homogeneity was expected from 2004, when the amended Directive requires Member States to: *"establish a fuel quality monitoring system in accordance with the requirements of the relevant European Standard"* (EN 14274 & EN 14275⁹) from 1 January 2004. Since 2001 a significant number of changes have been made to Monitoring Systems. From the EU-15 Member States, 6 have now moved their systems to ones based upon EN 14274 as have 6 of the EU-10 Member States. Portugal has stated it is still in the process of changing its system to comply with EN 14274. Alternative monitoring systems may be permitted by the Directive, provided such systems ensure results of an equivalent confidence. So far only Cyprus, Denmark and Malta have provided information justifying their use of National Systems with reduced sampling. The UK has also provided information on the statistical confidence of its system. Figure 2 summarises the sampling rate across the EU in 2005.

4. 2005 REPORTING

4.1 Fuel Qualities and Volumes

While a wide variety of octane and sulphur grade petrols were available across the EU in 2005, the majority of sales comprised RON95 (84% of the total, 66% of which was low sulphur and 34% sulphur free¹⁰), see Figure 1 and table in the Annex for full details by Member State (no submission was provided by France for 2003 to 2005 fuel quality monitoring). Of all petrol sold, 61% was low sulphur (<50 ppm) and 39% sulphur free (<10 ppm). Of all diesel sold the equivalent split was 67% and 33%. Compared to 2001 the quantities of <50 ppm and <10 ppm sulphur fuels have increased significantly since in that year they accounted for approximately 20% of all petrol and diesel sales in the EU while they now account for virtually all petrol and diesel sales.

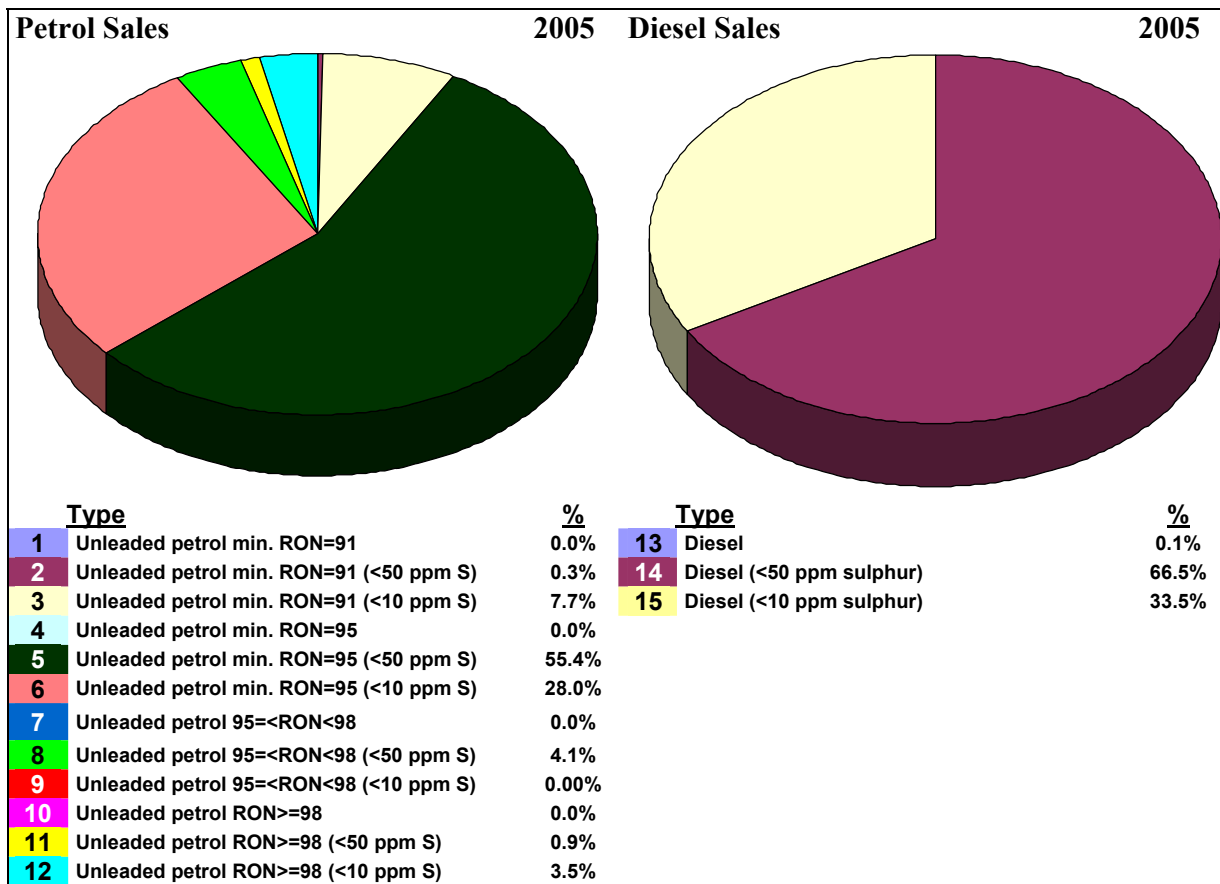
Sales in EU-10 Member States comprised 10.5% and 11.3% of total petrol and diesel sales in the EU respectively (up slightly since 2004). Compared to the EU-15, much lower proportions of sulphur-free petrol grades were sold in the EU-10 (15.5%), but a slightly higher proportion of sulphur-free diesel (36%) was sold.

⁸ http://europa.eu.int/comm/environment/air/fuel_quality_monitoring.htm

⁹ EN 14275:2003 - Automotive fuels - Assessment of petrol and diesel fuel quality - Sampling from retail site station pumps and commercial site fuel dispensers.

¹⁰ The term "low sulphur" corresponds to a sulphur content of 50 ppm; the term "sulphur free" to a sulphur content of 10 ppm

Figure 1: EU Fuel sales proportions by fuel type (%)



Similarly to 2001-2004, the largest total sales of fuels (of submissions received) in 2005 were made in Germany, Italy, Spain and the United Kingdom (Figure 3). Diesel sales are dominant in many Member States; however the relative proportions of petrol and diesel vary.

Since 2001 there has been increased homogeneity in the number of grades of fuel reported to be available across the EU (Figure 4). In 2005 there are generally 2-3 petrol grades available, mainly a result of different octane levels (RON category), however separate sulphur-free grades are appearing in some cases (for example Estonia, which has a sulphur-free version of each fuel type). Separate (marked) national sulphur-free (<10 ppm) fuel grades were available in 10 EU15 (only 1 in 2001) and 4 EU10 Member States in 2005 (in others fuel meeting the sulphur limit is available but unmarked at sale).

Figure 2: Fuel Quality Monitoring sampling rate across the EU in 2005 (average number of samples per fuel grade)

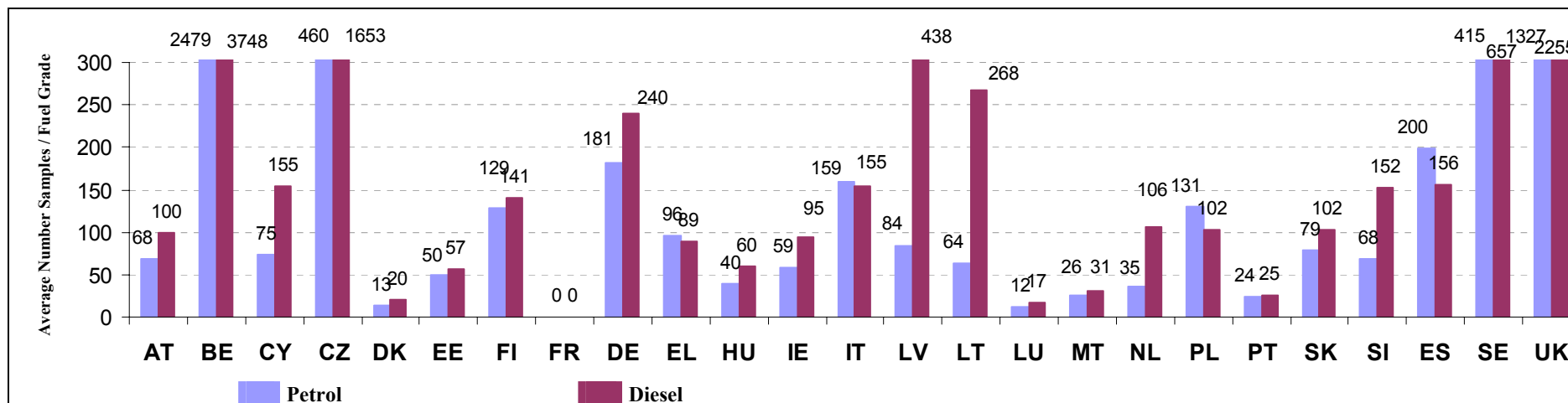


Figure 3: National fuel sales by fuel type across the EU (million litres)*

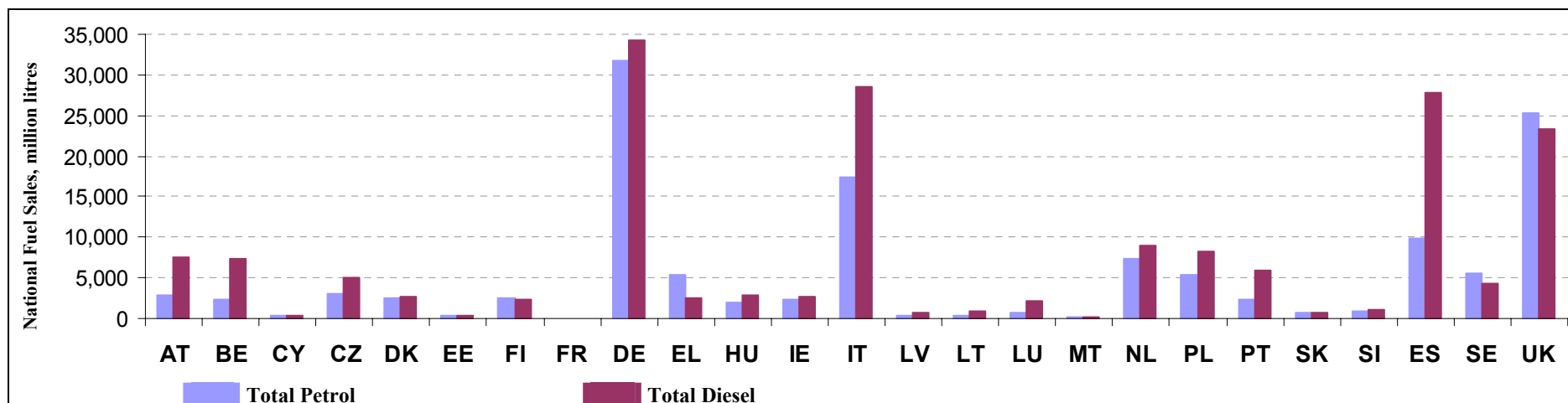


Figure 4: Number of fuel grades available nationally by fuel type across the EU

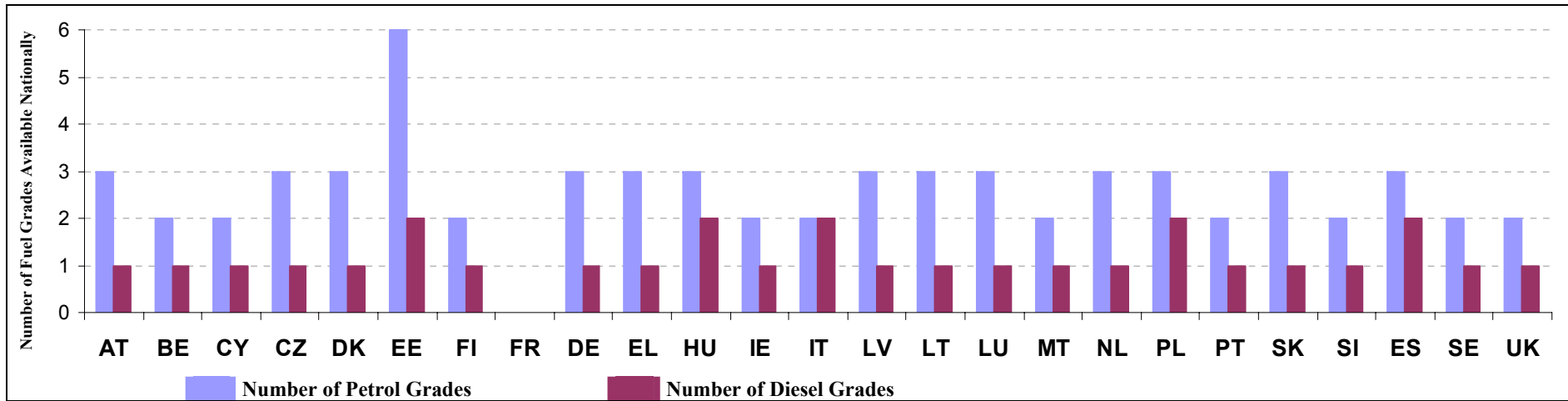


Figure 5: National sales of low sulphur petrol grades across the EU (%)

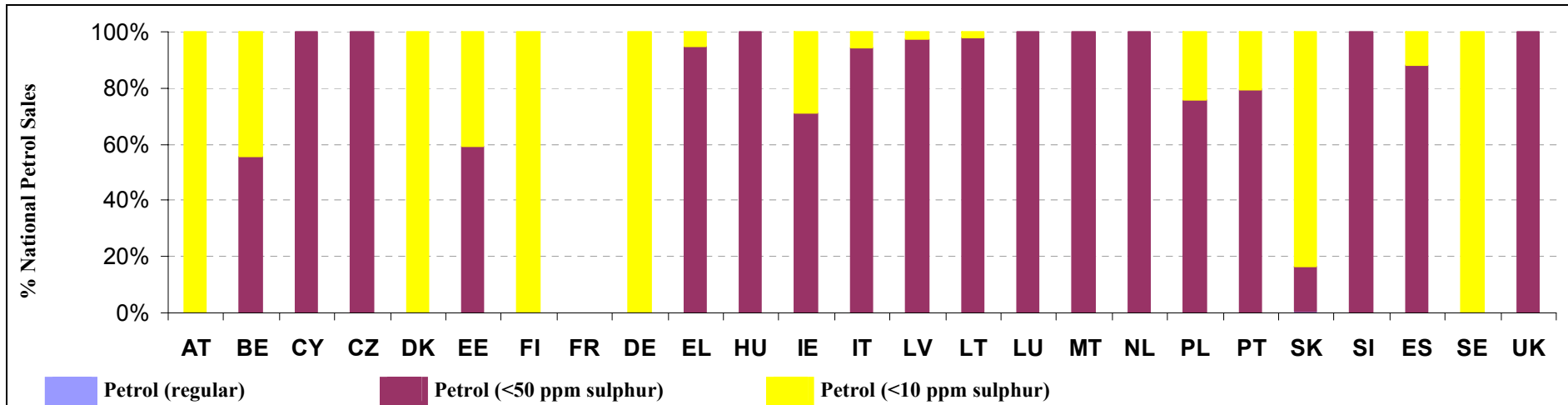


Figure 6: National sales of low sulphur diesel grades across the EU (%)

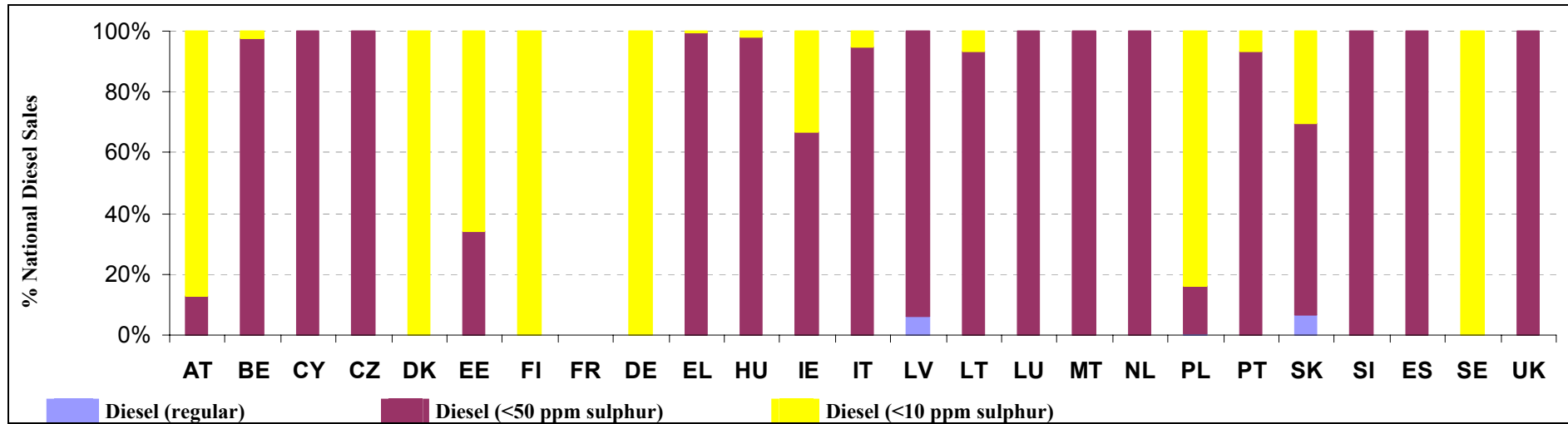
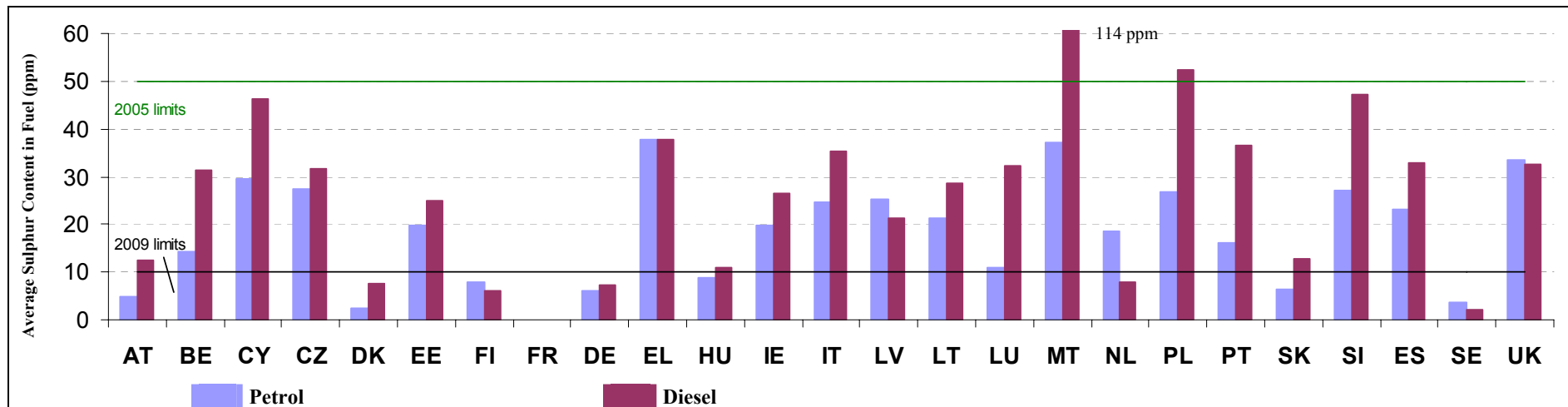


Figure 7: Average sulphur content of petrol and diesel grades across the EU (%)



Low sulphur fuels were available during 2001-2004 in many EU Member States, although mandatory introduction was not required until 2005 (see Figure 5 and Figure 6). Low sulphur (<50 ppm) grades are mandatory from 1 January 2005, as was the introduction of sulphur-free (<10 ppm) fuels. However several Member States are yet to introduce separately marketed (and labelled) sulphur free fuels. Some have not provided sufficient information to judge whether they are available “*on an appropriately balanced geographical basis*”, as required by the Directive, and Cyprus, Malta and the UK have not yet made them available at all.

Member States do not have to fully switch to sulphur-free fuels until 2009. However, for petrol fuels in the EU-15, 4 Member States (Austria, Finland, Germany and Sweden) had already fully moved over to sulphur free petrol in 2005. For diesel fuels in the EU15, 3 Member States (Finland, Germany and Sweden) had fully moved over to sulphur free diesel fuel in 2005 (in Germany it has been available from 2003 and in Sweden virtually all diesel has been sulphur-free since 1999). None of the EU-10 has yet fully switched to sulphur-free fuels.

While separate (or labelled) sulphur-free fuel grades, or separate sales figures were not available in 2005 in some Member States, fuels complying with the <10ppm sulphur criterion were available in many cases, e.g. the Belgium, Ireland and the Netherlands. This can be seen in Figure 7, which presents the average sulphur content of petrol and diesel grades by Member State across the EU. (Average sulphur content is calculated from the mean sulphur content from reporting on the sampled fuels, weighted to the quantities of different petrol or diesel fuel grades sold). The earlier Table 1 demonstrated that the annual average sulphur content of petrol and diesel fuels sold in the EU is decreasing, and together with Figure 7 shows that much of the fuel sold in previous years already complied with the 2005 sulphur limit (<50 ppm sulphur) for petrol and diesel.

4.2 Compliance with Directive 98/70/EC in 2005

Table 2 summarises the compliance of Member States with Directive 98/70/EC for the year 2005 reporting in terms of the results of the analysis of samples against limit values and the reporting format and content. As for 2001 to 2004, the quality of the compliance assessment suffers in a few cases from incomplete information provided by Member States. Details of action taken with regard to limit value non-compliance by Member States are included where provided in the individual country chapters of the detailed report for the year 2005¹¹.

It can be seen that 6 Member States are in complete compliance with Directive 98/70/EC limit values for both petrol and diesel for all samples (compared to 5 in 2001 for the EU-15 and 11 in 2004 for EU-25). With the exception of oxygenates (for 7 Member States, see notes 4 and 5 of the table), 21 Member States also provided complete reporting across the range of parameters specified for monitoring in the Directive.

In 2005, 17 Member States (8 EU-15) reported at least one petrol sample that was non-compliant with Directive 98/70/EC, this is in comparison to 13 Member States in 2004 (6 EU-15). For the EU15, in 2002 and 2003, 9 Member States reported at least one non-compliant sample while 10 did so in 2001. Of these, the main parameters of concern were again research

¹¹ See http://europa.eu.int/comm/environment/air/fuel_quality_monitoring.htm

octane number (38 samples), summer vapour pressure (45 samples) and distillation - evaporation at 100/150°C (9 samples).

For diesel, 13 Member States (4 EU-15) reported at least one sample that was non-compliant with Directive 98/70/EC. This is compared to 4 in 2001, 6 in 2002 and 5 in 2003 from EU-15 Member States and 8 EU Member States in 2004 (2 EU-15). Of these, the parameters of concern were sulphur content (133 samples), distillation 95% point (54 samples), cetane number (6 samples) and density (5 samples).

Although several Member States reported non-compliant samples, far fewer samples exceeded the limit values (and the limits of tolerance for the test methods) compared to previous years. However, several EU-10 Member States reported significant numbers of samples non-compliant with limit values. Belgium has reported a higher proportion of non-compliant samples than other Member States, but has improved compliance levels on previous years. Sulphur content proved a particular problem for this year (mainly EU-10), due to the mandatory <50 ppm level from the start of 2005. Several of the EU-10 had problems with sales of higher sulphur grades early in the year, and there appeared to be a higher number of samples contaminated with higher sulphur diesel or gas oil than in previous years.

Table 2: Summary of Member State compliance with 98/70/EC for 2005 reporting.

Member State	Limit value non-compliance ⁽¹⁾ (95% confidence limits) [Non-compliant samples / Total samples]		Incomplete reporting [Number of parameters not measured / Total]		Late report (Due by 30/6/2006) ⁽²⁾	Notes
	Petrol	Diesel	Petrol	Diesel		
	Austria	4 / 205	3 / 100			
Belgium	232 / 4957	232 / 3748	1 / 18		<6 months	(3)
Cyprus		19 / 155	7 / 18		<1 month	(4)
Czech Republic	45 / 1381	64 / 1653				
Denmark						
Estonia	10 / 300	1 / 114			<4 months	(7)
Finland	2 / 257					
France					Not received	
Germany	6 / 543	1 / 240			<3 months	
Greece	1 / 289		6 / 18		<2 months	(4)
Hungary	7 / 120					
Ireland	3 / 118		6 / 18		<2 months	(5)
Italy	3 / 318	6 / 309				
Latvia	1 / 251	9 / 438			<1 month	(8)
Lithuania	8 / 192	20 / 268				
Luxembourg					<6 months	
Malta	13 / 51	23 / 31		1 / 5	<5 months	(9)
Netherlands	1 / 106					
Poland	16 / 392	15 / 204				
Portugal			7 / 18			(4) (6)
Slovakia	7 / 236	1 / 102				
Slovenia	22 / 136	25 / 152				
Spain					<1 month	
Sweden			6 / 18			(4)
UK					<3 months	
No. Countries	17	13	6	1	12	

Notes:

- (1) It is not possible to confirm whether limit values have been respected in all samples, where reporting data is incomplete. Where it has not been possible to establish from submissions the number of samples exceeding the limit value a '>' symbol indicates that the number of samples exceeding limits is a minimum and might be greater.
- (2) Directive 98/70/EC states that Member States should submit monitoring reports by no later than 30th June each year.
- (3) Oxygen content has not been reported
- (4) Oxygenates (other than ethers with more than 5 carbon atoms per molecule) have not been reported. However, in principle, all substances on the list are measured at once using the oxygenate test methods. However, the system has to be calibrated using a calibration sample, containing the same oxygenates in similar proportions as present in the sample under test. It is not clear in most cases, whether this has been carried out, however Portugal have stated no other oxygenates are added to the fuel. The total organically bound oxygen is calculated from the percentages by mass of the individual components after identification.
- (5) Oxygenates (other than ethers with more than 5 carbon atoms per molecule) have not been reported (see note 4 for more details).
- (6) Portugal also carried out no measurements on lead content this year.
- (7) Estonia also reported 5 samples of sulphur-free petrol and 4 samples of sulphur-free diesel that exceeded the 10ppm sulphur tolerance limits for this class of fuel in national specifications. These non-compliant samples are not included in the total as they are within the mandatory <50ppm limit value for petrol and diesel.
- (8) Quantities of regular diesel <350ppm appear to have been sold in Latvia in early 2005, in non-compliance with the <50 ppm limit value mandatory from start 2005.
- (9) Cetane index has been measured instead of Cetane number

5. CONCLUSIONS

Fuel quality is environmentally important because it affects engine pollutant emissions and thus air quality as well as the ease and cost with which desired pollutant and greenhouse gas emission limits can be achieved by manufacturers. The monitoring of fuel quality in 2005 shows that the specifications for petrol and diesel laid down in Directive 98/70/EC are in general met and very few exceedances were identified. The Commission is not aware of any negative repercussions on vehicle emissions or engine functioning due to these exceedances. The Commission remains concerned about the exceedances and will continue monitoring compliance with the fuel quality requirements laid down in the Directive. In support of this, from 2006 reporting, the Commission intends to carry out more detailed statistical analysis of reported data.

The share of <10 and <50 ppm fuels have been increasing from 2001 to 2004. For 2005 the proportions have increased significantly, with the <50 ppm sulphur limit becoming mandatory, and the requirement for introduction of <10 ppm sulphur fuels across the EU. Zero sulphur fuels were available in the majority of Member States in 2005 (UK, Malta and Cyprus still need to introduce these fuels). However, from current indications there are still cases where the grades do not appear to be labelled in certain Member States.

This lack of labelling could hamper the introduction of vehicles using technology requiring sulphur-free fuels before full mandatory introduction in 2009 since without labelling consumers have no possibility to choose these fuels. This is particularly important for owners of vehicles utilising technology that requires sulphur-free fuel and significantly undermines the value of having fuels meeting this criterion available. As a result the full potential offered for reductions in CO₂ from the road transport sector would not be realised. Belgium, Czech Republic, Ireland, Latvia, Luxemburg and Slovenia are countries where action could be taken to ensure zero sulphur fuels are labelled in future years. Reporting on this labelling could help the automotive industry gain confidence in fuel availability so that vehicles taking full advantage of the zero sulphur content are more widely introduced leading to an environmental gain through lower pollutant and greenhouse gas emissions. In general very limited information has been provided by Member States on the geographical availability of zero sulphur fuels. Most Member States simply stating they were widely available, but provided no supplementary information to provide a measure of the geographical availability.

The fuel quality monitoring systems established at national level differ considerably and require further uniformity in order to provide transparent and comparable results. The implementation of Directive 2003/17/EC has led to improved quality of reporting as it requires Member States to report on monitoring in accordance to the new European Standard, EN 14274, or with systems of equivalent confidence. Where Member States do not report according to EN 14274 format, justification for this must be provided.

ANNEX: 2005 EU fuel sales by fuel type (million litres)

ID No.	Million litres Fuel grade	Austria AU	Belgium BE	Denmark DK	Finland FI	France FR	Germany DE	Greece EL	Ireland IE	Italy IT	Luxembourg LU	Netherlands NL	Portugal PT	Spain ES	Sweden SE	UK UK	EU15 EU15	EU15 % Total
1	Unleaded petrol min. RON=91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0%
2	Unleaded petrol min. RON=91 (<50 ppm S)	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	3	0.0%
3	Unleaded petrol min. RON=91 (<10 ppm S)	738	-	525	-	-	8,884	-	-	-	-	-	-	-	-	-	10,147	8.6%
4	Unleaded petrol min. RON=95	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	0	0.0%
5	Unleaded petrol min. RON=95 (<50 ppm S)	-	1,055	-	-	-	-	4,229	1,646	16,461	524	7,089	-	8,066	-	24,082	63,151	53.4%
6	Unleaded petrol min. RON=95 (<10 ppm S)	1,986	659	1,951	2,232	-	21,849	-	669	979	-	-	-	-	5,104	-	35,429	30.0%
7	Unleaded petrol 95=<RON<98	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	0	0.0%
8	Unleaded petrol 95=<RON<98 (<50 ppm S)	-	-	-	-	-	-	735	-	-	-	-	1,919	575	-	1,273	4,502	3.8%
9	Unleaded petrol 95=<RON<98 (<10 ppm S)	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	0.0%
10	Unleaded petrol RON>=98	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	0	0.0%
11	Unleaded petrol RON>=98 (<50 ppm S)	-	276	-	-	-	-	136	-	-	131	310	-	-	-	-	854	0.7%
12	Unleaded petrol RON>=98 (<10 ppm S)	83	395	16	269	-	992	268	-	-	-	1	495	1,190	384	-	4,094	3.5%
	Petrol (regular)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
	Petrol (<50 ppm sulphur)	0	1,331	0	0	0	0	5,100	1,646	16,461	659	7,399	1,919	8,641	0	25,355	68,510	58.0%
	Petrol (<10 ppm sulphur)	2,807	1,055	2,492	2,501	0	31,725	268	670	979	0	1	495	1,190	5,488	0	49,671	42.0%
	Total Petrol	2,807	2,386	2,492	2,501	0	31,725	5,369	2,315	17,440	659	7,400	2,413	9,831	5,488	25,355	118,181	100.0%
13	Diesel	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	0	0.0%
14	Diesel (<50 ppm sulphur)	976	7,269	-	-	-	-	2,446	1,801	27,081	2,139	9,000	5,476	27,840	-	23,389	107,418	66.9%
15	Diesel (<10 ppm sulphur)	6,535	168	2,782	2,383	-	34,206	9	890	1,467	-	-	403	0	4,270	-	53,113	33.1%
	Total Diesel	7,511	7,437	2,782	2,383	0	34,206	2,455	2,691	28,549	2,139	9,000	5,879	27,840	4,270	23,389	160,530	100.0%

ID No.	Million litres Fuel grade	Cyprus CY	Czech Republic CZ	Estonia EE	Hungary HU	Latvia LV	Lithuania LT	Malta MT	Poland PL	Slovakia SK	Slovenia SI	EU10 EU10	EU10 % Total
1	Unleaded petrol min. RON=91	-	-	-	-	-	-	-	-	-	-	0	0.0%
2	Unleaded petrol min. RON=91 (<50 ppm S)	-	280	14	-	21	80	-	-	28	-	423	3.0%
3	Unleaded petrol min. RON=91 (<10 ppm S)	-	-	5	-	-	-	-	-	73	-	78	0.6%
4	Unleaded petrol min. RON=95	-	-	-	-	-	-	-	9	5	-	14	0.1%
5	Unleaded petrol min. RON=95 (<50 ppm S)	355	2,762	176	1,801	350	355	66	4,130	94	-	10,088	72.4%
6	Unleaded petrol min. RON=95 (<10 ppm S)	-	-	121	-	-	2	-	912	562	-	1,596	11.5%
7	Unleaded petrol 95=<RON<98	-	-	-	-	-	-	-	-	-	-	0	0.0%
8	Unleaded petrol 95=<RON<98 (<50 ppm S)	-	-	-	-	-	-	24	-	-	833	857	6.2%
9	Unleaded petrol 95=<RON<98 (<10 ppm S)	-	-	-	-	-	-	-	-	-	-	0	0.0%
10	Unleaded petrol RON>=98	-	-	-	-	-	-	-	-	-	-	0	0.0%
11	Unleaded petrol RON>=98 (<50 ppm S)	55	27	43	175	36	1	-	-	2	53	393	2.8%
12	Unleaded petrol RON>=98 (<10 ppm S)	-	-	36	4	10	7	-	404	18	-	478	3.4%
	Petrol (regular)	0	0	0	0	0	0	0	9	5	0	14	0.1%
	Petrol (<50 ppm sulphur)	410	3,069	233	1,976	408	436	90	4,130	124	886	11,760	84.4%
	Petrol (<10 ppm sulphur)	0	0	162	4	10	9	0	1,316	652	0	2,152	15.5%
	Total Petrol	410	3,069	394	1,980	418	444	90	5,455	781	886	13,927	100.0%
13	Diesel	-	-	-	-	49	-	-	45	45	-	139	0.7%
14	Diesel (<50 ppm sulphur)	414	5,003	118	2,901	716	888	116	1,273	443	1,010	12,882	63.0%
15	Diesel (<10 ppm sulphur)	-	-	227	59	0	65	-	6,875	215	-	7,441	36.4%
	Total Diesel	414	5,003	345	2,960	765	953	116	8,193	703	1,010	20,461	100.0%

European Union EU	European Union % Total
0	0.0%
426	0.3%
10,225	7.7%
14	0.0%
73,239	55.4%
37,025	28.0%
0	0.0%
5,359	4.1%
1	0.0%
0	0.0%
1,246	0.9%
4,572	3.5%
14	0.0%
80,270	60.8%
51,823	39.2%
132,108	100.0%
139	0.1%
120,299	66.5%
60,553	33.5%
180,991	100.0%