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Consumption of hazardous chemicals in the Republic of Serbia, 2011

– Preliminary data –

The data represent the preliminary results of the Survey on Consumption of Hazardous Chemicals in sections Mining and quarrying, Manufacturing, Electricity, gas, steam and air conditioning supply, Water supply and sewerage (divisions: Water collection, treatment and supply; Sewerage), according to toxicity classes.

Total consumption of hazardous chemicals in 2011 increased by 21.7% in comparison with 2010. In the referent period increased was observed in the consumption of toxic chemicals (38.5%), harmful chemicals (32.9%) and cancerogenic, mutagenic and chemicals toxic for reproduction (0.8%), compared with 2010.

In the section of Manufacturing, the consumption of hazardous chemicals in 2011, amounted 697 693 tons, of which according to divisions, the largest share was observed in the divisions of Manufacture of chemicals and chemical products (82.6%) and in the Manufacture of basic metals (8.2%).

Table 1. Consumption of hazardous chemicals in the Republic of Serbia, by toxicity classes, 2009–2011.

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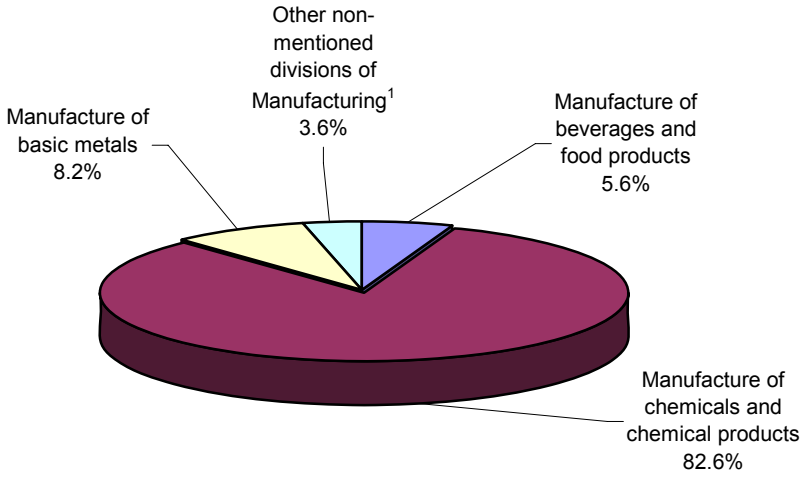
	2009	2010	2011
Total	**434 633**	**587 195**	**714 811**
A – Cangerogenic, mutagenic and chemicals toxic for reproduction	14 013	18 624	18 777
B – Chronically toxic chemicals	3 107	4 126	3 529
C – Very toxic chemicals	106 731	177 691	169 786
D – Toxic chemicals	236 493	305 082	414 152
E – Harmful chemicals	74 289	81 672	108 567

Graph 1. Consumption of hazardous chemicals in the Republic of Serbia, section Manufacturing, 2011



[1)] Manufacture of tobacco products; Manufacture of wood and of products of wood, except furniture; Manufacture of computer, electronic and optical products; Manufacture of furniture; Other manufacturing; Repair and installation of machines and equipment.

In 2011, the total consumption of hazardous chemicals amounted 714 812 tons, whereof, observed by toxicity classes, there were consumed 57.9% of toxic chemicals (D), 23.8% of very toxic (C), 15.2% of harmful (E), 2.6% of cancerogenic, mutagenic and chemicals toxic for reproduction (A), and 0.5% of chronically toxic chemicals (B).

In the section of Manufacturing, the largest consumption of hazardous chemicals was observed in the classes of toxic chemicals (D) 57.4%, very toxic chemicals (C) 23.9% and harmful chemicals (E) 15.5%.

Table 2. Consumption of chemicals in the Republic of Serbia, by activity divisions and toxicity classes, 2011

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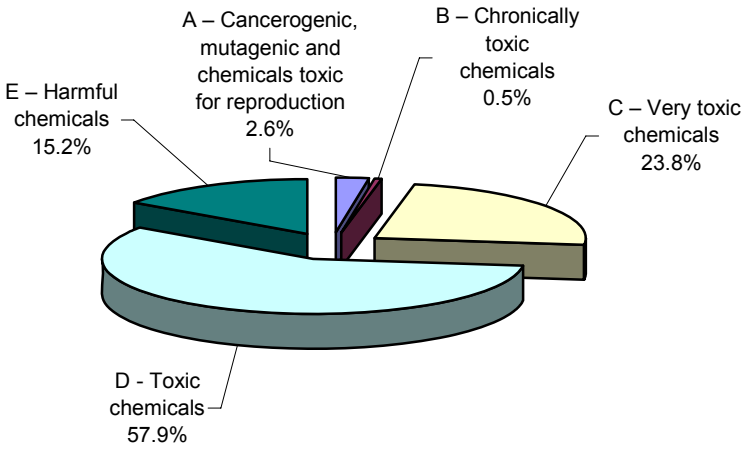
	Total	Toxicity class				
		A	B	C	D	E
Republic of Serbia	**714 811**	**18 777**	**3 529**	**169 786**	**414 151**	**108 567**
Mining and quarrying	1 458	3	1	557	892	6
Manufacturing	697 693	18 641	3 527	166 643	400 531	108 351
Manufacture of food products	15 922	0	136	9 818	5 705	262
Manufacture of beverages	23 217	0	0	2 361	898	19 958
Manufacture of textiles	254	-	-	215	38	1
Manufacture of wearing apparel	90	1	-	11	34	45
Manufacture of leather and related products	258	-	7	45	193	13
Manufacture of paper and paper products	1 619	2	2	118	1 376	122
Printing and reproduction of recorded media	918	847	0	10	1	60
Manufacture of coke and refined petroleum products	3 783	2	0	2 089	615	1 076
Manufacture of chemicals and chemical products	576 104	17 599	2 117	138 369	335 563	82 456
Manufacture of basic pharmaceutical products and pharmaceutical preparations	346	0	10	77	240	19
Manufacture of rubber and plastic products	6 040	157	51	326	4 752	753
Manufacture of non – metallic mineral products	799	0	46	62	270	421
Manufacture of basic metals	57 008	29	2	4 401	50 257	2 318
Manufacture of fabricated metal products, except machinery	860	0	8	63	397	392
Manufacture of electrical equipment	9 821	-	1 073	8 611	37	101
Manufacture of machinery and equipment n.e.c.	198	1	31	1	6	159
Manufacture of motor vehicles and trailers	211	0	0	18	112	81
Manufacture of other transport equipment	99	-	-	-	0	99
Other non-mentioned divisions of Manufacturing [1)]	146	4	41	49	37	14
Electricity, gas, steam and air conditioning supply	7 105	134	1	2 532	4 426	11
Water supply and sewerage	8 555	0	0	54	8 302	199

Graph 2. Consumption of hazardous chemicals in the Republic of Serbia, by toxicity classes, 2011



[1)] Manufacture of tobacco products; Manufacture of wood and of products of wood, except furniture; Manufacture of computer, electronic and optical products; Manufacture of furniture; Other manufacturing; Repair and installation of machines and equipment.

Methodological explanations

The presented data are collected by regular statistical surveys on consumption of chemicals.

The list of hazardous chemicals is created on the basis of chemicals' characteristics that affect human life and health.

According to the toxic properties, hazardous chemicals are grouped in five classes: class A – carcinogenic, mutagenic and reprotoxic, class B – chronically toxic (corrosive, irritative and chemicals that cause sensibilization), class C – very toxic, class D – toxic and class E – harmful.

Carcinogens chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause cancer or increase the risk of it.

Mutagenic chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause genetic changes or increase the risk of them.

Chemicals toxic for reproduction are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause hazardous effects on posterity and/ or decrease male or female reproductive functions, i.e. decrease the capabilities or increase the risk of their appearance.

Corrosive chemicals are chemicals which in contact with living tissue may destroy it.

Irritative chemicals are chemicals which are not corrosive, and which in the short-term, prolonged or repeated contact with skin or mucous membranes can cause its inflammation.

Chemicals that cause sensibilization are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause over sensibility and longer exposure to such chemicals can cause characteristic hazardous effects.

Very toxic chemicals are chemicals which, if inhaled, swallowed or absorbed through the skin, in small quantities, can cause death, acute or chronic health effects.

Toxic chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, in small quantities, cause death, acute or chronic health effects.

Harmful chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, cause death, acute or chronic health effects.

List of chemicals is in compliance with the Regulation on registration, evaluation and authorization of chemicals 1907/06 (REACH – Registration, Evaluation, Authorization and Restriction of Chemical substances).

More detailed methodology are available on the website of SORS:
http://webrzs.stat.gov.rs/WebSite/userFiles/file/Zivotna%20sredina/SMET8/SMET011110C.pdf

Starting from 1999 the Statistical Office of the Republic of Serbia has not at disposal and may not provide available certain data relative to AP Kosovo and Metohia and therefore these data are not included in the coverage for the Republic of Serbia (total).

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