

## Features of sulfur content and its changes in coal seams of the Lviv-Volyn basin

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### Relevance

On March 15, 2006, Was adopted the national Energy Strategy for the Period until 2030. This program provides for an increase in the consumption of all fuel and energy resources. The development and industrial use of coal has a negative impact on the environment. When coal is burned as an energy raw material the sulfur content in coal has a particularly detrimental effect on the environment. Therefore problem of studying the spread of sulfur in coal seams and them environmental consequences of their application is relevant for our region and the country as a whole.

### Aims

comprehensive assessment of the sulfur content of the coal seams of the Lviv-Volyn basin by strata  $n_7$  and  $n_8$  and identification of patterns of its change.

### Task

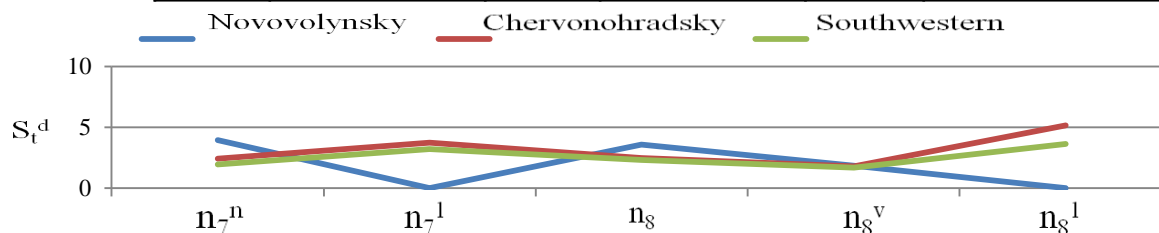
- Analyze the state of coal sulfur research in the Lviv-Volyn basin.
- Identify the features of sulfur content of coal seams of Mezhrichensky, Zabuzhsky, Chervonogradsky and Volynsky deposits.
- Establish regional and local patterns of sulfur change

### Methods

- System analysis of information.
- Methods of statistical processing of laboratory data.
- Methods of spatial data analysis.

	The content of total sulfur				
	$n_7^n$	$n_7^v$	$n_7^{(n^1)}$	$n_8$	$n_8^v$
Tyaglivske deposit	0,36 – 5,54 1,87	0,45 – 9,08 3,2	0,5 – 6,6 2,5	0,4 – 8,26 1,68	0,64 – 96,3 3,8
Lubelsk deposit	0,70 – 4,70 2,03	0,79 – 6,11 1,8	0,7 – 4,6 2,18	0,5 – 4,34 1,74	0,79 – 6,43 3,5
South-Western district	0,53 – 5,12 1,95	0,62 – 7,9 3,2	0,6 – 5,6 2,34	0,4 – 6,3 1,71	0,78 – 8,03 3,65
№7 Velykomostivska S18-860	0,65 – 4,84 2,52	—	—	—	1,57 – 8,46 4,42
№6 Velykomostivska 761-811	0,9 – 4,71 2,31	1,82 – 3,93 2,70	—	—	—
№7 Velykomostivska 715-760	0,27 – 5,97 1,99	1,56 – 7,15 2,61	—	—	—
№8 Velykomostivska 96-148	1,13 – 6,83 2,72	—	—	—	2 – 12,43 8,02
№1 Chervonograd 405-445	—	1,99 – 8,1 3,92	—	1 – 2,9 1,2	—
№1 Novovolynsk	—	—	—	1,12 – 7,67 4,29	—
№5 Novovolynsk	0,65 – 4,25 1,46	—	—	—	—

Section	Tier	Group	Formation	marker limestone	Coal-bearing subformations (Shulga V. and others 1992)
Middle	Bashkir	Upper	Kerchivska	$B_6(B_3)$	Upper high-coal alluvial-lake-swamp-lagoon
		Lower	Poromivska	$B_4(B_1)$	
			Morozovychivska	$B_1(N_{10})$	
			Buzhanska	$N_5$	
Lubelsk	$N_3$				
Lower	Serpukhovsky	Upper	Lyshnyanska	$N_1$	Lower marsh-sea regressive
		Lower	Ivanychivska	$V_3^1$	
	Porystska		$V_2^1$		
	Ustiluzskaya		$V_2$		
	Visean	Upper	Vladimirska	$V_0^2$	
		Lower	Oleskivska	$V_0$	
	Kulychivska				
Tourmey	Upper	Khorivska	$T_0$		



### Conclusion

Based on the distribution of sulfur in coal seams a trend analysis.

In general sulfur and multi-sulfur coal was found in formation  $n_8^v$  for the entire territory of the South-Western district and Velykomostivsky mines.

In each geological area coal seams differ in sulfur content. The maximum sulfur content is characteristic for layers  $n_7^v$  and  $n_8^v$ , the minimum for layer  $n_8$ ;

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