

# Technogenic accumulation of water-soluble fluorine in soils

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Lyudmila Zhichkina<sup>1,a)</sup>, Vladimir Nosov<sup>2,4,5,b)</sup>, Kirill Zhichkin<sup>1,c)</sup>, Larisa Mineeva<sup>3,d)</sup>, and Anna Pshentsova<sup>3,e)</sup>

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<sup>1</sup>Samara State Agrarian University, Kinel, Russia

<sup>2</sup>K.G. Razumovsky Moscow State University of technologies and management, Moscow, Russia

<sup>3</sup>Saratov State Vavilov Agrarian University, Saratov, Russia

<sup>4</sup>Agrarian Technological Institute, Peoples' Friendship University, Moscow, Russia

<sup>5</sup>Academy of the Investigative Committee of the Russian Federation, Moscow, Russia



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[Zhichkina L.](#)<sup>a</sup> , [Nosov V.](#)<sup>b, d, e</sup> , [Zhichkin K.](#)<sup>a</sup> , [Mineeva L.](#)<sup>c</sup> , [Pshentsova A.](#)<sup>c</sup>

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<sup>a</sup> Samara State Agrarian University, Kinel, Russian Federation

<sup>b</sup> K.G. Razumovsky Moscow State University of Technologies and Management, Moscow, Russian Federation

<sup>c</sup> Saratov State Vavilov Agrarian University, Saratov, Russian Federation

<sup>d</sup> Agrarian Technological Institute, Peoples' Friendship University, Moscow, Russian Federation

<sup>e</sup> Academy of the Investigative Committee of the Russian Federation, Moscow, Russian Federation

## TECHNOGENIC ACCUMULATION OF WATER-SOLUBLE FLUORINE IN SOILS

ZHICHKINA LYUDMILA <sup>1</sup>, NOSOV VLADIMIR <sup>2,3,4</sup>, ZHICHKIN KIRILL <sup>1</sup>, MINEEVA LARISA <sup>5</sup>, PSHENTSOVA ANNA <sup>5</sup>

<sup>1</sup> Samara State Agrarian University, Kinel, Russia

<sup>2</sup> K.G. Razumovsky Moscow State University of technologies and management, Moscow, Russia

<sup>3</sup> Peoples' Friendship University, Agrarian Technological Institute, Moscow, Russia

<sup>4</sup> Academy of the Investigative Committee of the Russian Federation, Moscow, Russia

<sup>5</sup> Saratov State Vavilov Agrarian University, Saratov, Russia

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### АННОТАЦИЯ:

The soil cover acts as significant factor influencing the processes in the biosphere, due to the pollutants absorption and fixation. The fluorine and its compounds practical use in economy, as well as its entry into the environment with industrial enterprises emissions, effluents and wastes leads to its accumulation in ecosystems. The research purpose is to analyze soil contamination with fluorine compounds in the Samara region. The studies were carried out on the territory located at a distance of 0.5 and 5 km from the Samara Metallurgical Plant and at the background sites in 2009-2019. The Samara region soil contamination determination with water-soluble fluorine compounds showed that at the site located 0.5 km from «Arkonik SMZ» the maximum content was detected in 2019 and amounted to 4.1 mg/kg, at the site located 5 km away in 2009 - 3.0 mg/kg. In the background plots soil, the fluorine compounds maximum content was noted in 2019. In 2009-2019 the water-soluble fluorine compounds content in the studied soils did not exceed the maximum permissible concentrations. A background values excess was noted in the long-term observations plots, the soil contained 1.8-8.2 F, in the background plots soils - 1.4-8.2 F.

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