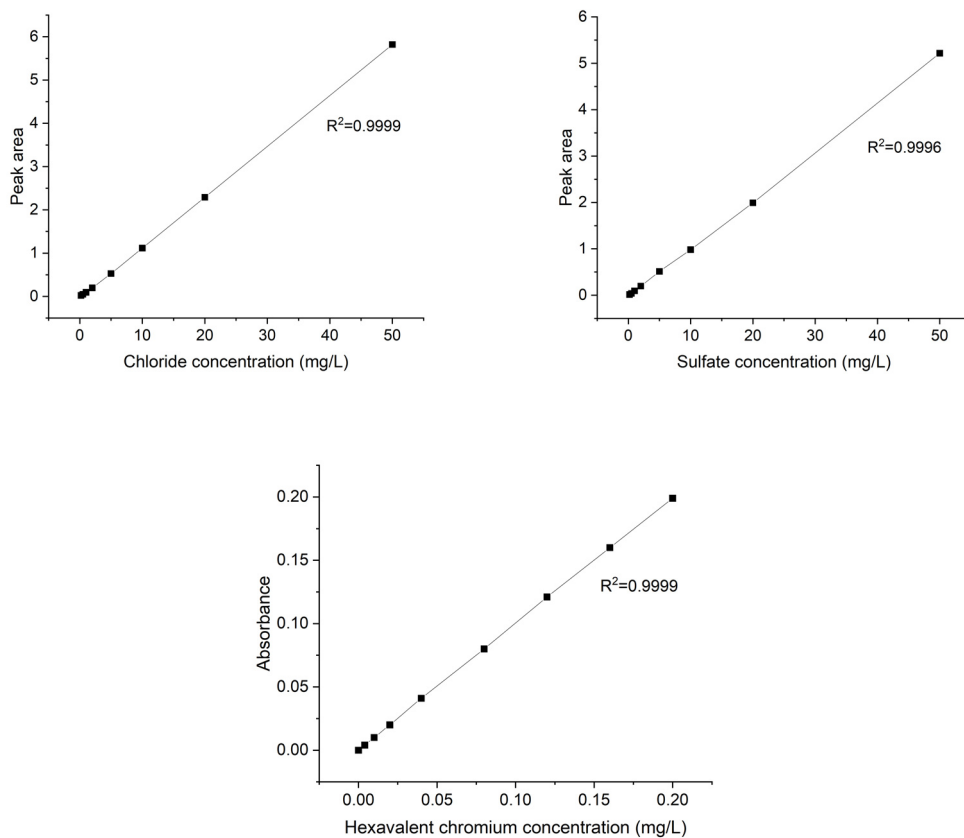


**Table S1.** Organic matter content in mine water.

Organic matter	Content	Unit
COD <sub>Mn</sub>	15.6	mg/L
Formaldehyde	0.05	mg/L
Trichloromethane	$3 \times 10^{-5}$	mg/L
Carbon tetrachloride	$2.1 \times 10^{-4}$	mg/L
Organochlorine	$1.4 \times 10^{-4}$	mg/L
Organic phosphorus	$1.4 \times 10^{-3}$	mg/L
Volatile phenol	0.002	mg/L

**Table S2.** The content of TDS, chlorides, sulphates and Cr<sup>6+</sup> in the initial emulsion.

	TDS	Shlorides	Sulphates	Cr <sup>6+</sup>
Content (mg/mL)	181	1.08	1.29	0.078

**Figure S1.** The standard curves with correlation coefficients for Chloride, Sulfate, and hexavalent chromium (Cr<sup>6+</sup>).