Correction to: Contamination of small urban watercourses on the example of a stream in Krakow (Poland)

Aleksander-Kwaterczak Urszula¹ · Plenzler Dominika¹

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The original article has been published with some errors in tables. The corrected ones are given below:

Table 1 Characterization of water samples from the analysed stream

Element	W1	W2	W3	W4	W5	Min. value	Max. value	Average art.	Threshold limit values
pH	7.43	7.66	7.55	7.63	7.69	7.43	7.69	–	6.6–8.0
EC (μS/cm)	925	1023	827	879	1000	827	1023	931	550
S _{O2} (%)	98	99	100	100	97	98	100	99	No
Eh (mV)	169	162	138	160	180	138	180	162	No
SM density (mg/dm ³)	2.5	13.9	13.5	7.5	42.7	2.5	42.7	16.02	16.4
Concentration (mg/dm ³)									
RSD (%)									
Ammonium	0.08 4.71	0.11 2.97	0.20 2.08	0.17 3.27	0.17 3.25	0.08	0.20	0.15	0.91
Magnesium	9.28 1.02	9.27 0.90	13.53 0.31	12.24 1.78	12.34 1.77	9.27	13.53	11.33	16.7
Calcium	136.31 0.81	139.20 0.22	159.61 0.47	147.80 2.11	145.59 1.14	136.31	159.61	145.70	65.3
Phosphorus	0.26 5.52	0.40 8.52	1.06 8.92	0.15 6.36	0.66 4.37	0.15	1.06	0.51	0.35
Potassium	0.80 3.03	1.17 2.96	3.79 1.44	3.42 1.33	3.16 2.44	0.80	3.79	2.47	No
Sodium	49.36 0.86	50.11 0.12	31.66 0.86	42.34 2.33	42.00 1.42	31.66	50.11	43.09	No
Silicon	12.62 0.71	12.73 0.37	23.58 0.96	19.72 0.16	19.37 0.36	12.62	23.58	8.95	No

The original article can be found online at <https://doi.org/10.1007/s12665-019-8509-4>.

✉ Aleksander-Kwaterczak Urszula
aleksa@geol.agh.edu.pl

¹ Faculty of Geology, Geophysics and Environmental Protection, AGH University of Science and Technology, Al. Mickiewicza 30, Krakow, Poland

continued

Element	W1	W2	W3	W4	W5	Min. value	Max. value	Average art.	Threshold limit values
Fluorides	0.03 <i>7.83</i>	0.04 <i>7.10</i>	0.04 <i>8.13</i>	0.04 <i>7.45</i>	0.04 <i>7.82</i>	0.03	0.04	0.04	1.50
Chlorides	128.05 <i>0.13</i>	128.18 <i>0.12</i>	70.14 <i>0.24</i>	80.74 <i>0.21</i>	82.81 <i>0.20</i>	70.14	128.18	97.98	68.0
Nitrates	3.33 <i>5.71</i>	2.85 <i>6.67</i>	0.71 <i>16.76</i>	2.97 <i>6.39</i>	2.65 <i>7.17</i>	0.71	3.33	2.50	5.0
Nitrites	0.02 <i>45.01</i>	0.02 <i>35.15</i>	0.01 <i>43.11</i>	0.23 <i>3.91</i>	0.24 <i>3.75</i>	0.01	0.24	0.10	0.03
Sulfur	75.35 <i>0.48</i>	74.37 <i>0.48</i>	59.26 <i>0.61</i>	70.07 <i>0.51</i>	71.13 <i>0.50</i>	59.26	75.35	70.04	111.4
Phosphates	0.02 <i>18.00</i>	0.06 <i>5.83</i>	0.12 <i>2.91</i>	0.07 <i>5.00</i>	0.06 <i>6.12</i>	0.02	0.12	0.07	0.10
Carbonates	237.83 <i>0.21</i>	235.96 <i>0.22</i>	342.41 <i>0.15</i>	316.31 <i>0.16</i>	311.38 <i>0.14</i>	235.96	342.41	288.78	No
Concentration ($\mu\text{g}/\text{dm}^3$)									
RSD (%)									
Iron	113.36 <i>3.68</i>	132.13 <i>2.35</i>	646.43 <i>2.29</i>	126.03 <i>1.29</i>	248.90 <i>0.85</i>	113.36	646.43	253.37	No
Manganese	130.55 <i>0.29</i>	133.08 <i>0.66</i>	668.65 <i>0.57</i>	417.41 <i>0.43</i>	412.25 <i>0.45</i>	133.08	668.65	352.39	No
Cadmium	1.47 <i>3.68</i>	1.85 <i>5.15</i>	1.67 <i>6.17</i>	< 0.30	0.55 <i>19.51</i>	< 0.30	1.85	1.39	0.45*
Lead	2.64 <i>4.77</i>	3.19 <i>3.34</i>	1.19 <i>2.10</i>	1.08 <i>4.19</i>	0.81 <i>1.54</i>	0.81	3.19	1.78	14.00*
Nickel	2.77 <i>7.32</i>	3.02 <i>3.21</i>	5.09 <i>2.89</i>	3.67 <i>4.70</i>	3.27 <i>2.36</i>	2.77	5.09	3.56	34.00*
Copper	1.56 <i>4.74</i>	2.00 <i>2.61</i>	1.91 <i>8.22</i>	1.58 <i>1.63</i>	1.40 <i>6.64</i>	1.40	2.00	1.69	50.00
Zinc	< 1.00	< 1.00	6.70 <i>4.48</i>	< 1.00	2.75 <i>14.67</i>	< 1.00	6.70	–	1000.00
Chromium	< 5.00	5.69 <i>6.27</i>	< 5.00	< 5.00	10.56 <i>7.29</i>	< 5.00	10.56	–	50.00

No lack of normative values

Bold values indicate statistical description of the data or threshold limit values

Italic values indicate standard deviation values

*Values for chemical state

Table 2 Comparison of selected parameters for water in different seasons

Sample number	Date	pH	Eh (mV)	PEW ($\mu\text{S}/\text{cm}$)	Ca (mg/dm^3)	Cl (mg/dm^3)	Cd ($\mu\text{g}/\text{dm}^3$)	Pb ($\mu\text{g}/\text{dm}^3$)	Ni ($\mu\text{g}/\text{dm}^3$)
W1	November	7.43	169	925	136.31	128.05	1.47	2.64	2.77
	June	7.45	212	987	182.54	135.12	0.22	0.93	1.96
W5	November	7.69	180	1000	145.59	82.81	0.55	0.81	3.27
	June	7.84	213	982	185.56	91.38	0.12	0.49	2.61

Table 4 Heavy metal concentrations in suspended matter

Sample number	Density (mg/dm ³)	Cd (mg/kg d.w.)	Cu	Ni	Pb	Zn
SPM1	2.5	0.11	1.42	3.35	< MDL	9.16
SPM2	13.9	0.22	1.61	3.18	< MDL	14.33
SPM3	13.5	0.14	4.73	3.37	< MDL	7.16
SPM4	7.5	0.21	1.51	3.53	0.42	22.74
SPM5	42.7	0.38	3.65	4.86	2.55	48.93
Minimum	2.5	0.11	0.42	3.35	0.00	9.16
Maximum	42.7	0.38	4.73	4.86	2.55	48.93
Arithmetic average	16.0	0.21	2.38	3.66	–	19.86
Geochemical background according to Adamiec (2003)		0.15–0.60	10–40	n.d.	12.5–50.0	0.05–0.20

Bold values indicate statistical description of the data

d.w. dry weight, *MDL* method detection limit, *n.d.* no data

Table 5 Comparison of selected elements for suspended matter in different seasons

Sample number	Date	Density (mg/dm ³)	Cd (mg/kg d.w.)	Cu	Ni	Pb	Zn
SPM1	November	2.5	0.11	1.42	3.35	< MDL	9.16
	June	1.3	0.12	5.17	2.79	< MDL	4.74
SPM5	November	42.7	0.38	3.65	4.86	2.55	48.93
	June	20.9	0.22	1.61	3.18	0.90	22.74

MDL method detection limit, *d.w.* dry weight

Table 6 Characteristic of the bottom sediment

Number of sample	pH	Eh (mV)	EC (μS/cm)	H ₂ O (%)	LOI (%)	CaCO ₃ (g/kg)	Fraction < 0.063 mm (%)	Cd (mg/kg fraction < 0.063mm) (mg/kg raw sediment)	Cu	Ni	Pb	Zn
S1	6.81	– 136	870	19.15	2.96	3.65	72.31	0.12 0.09	16.31 11.79	28.55 20.64	11.97 8.66	100.25 72.49
S2	7.08	– 140	948	15.86	6.06	13.58	53.49	0.16 0.09	25.72 13.76	49.71 26.59	20.95 11.21	180.56 96.58
S3	7.73	– 199	1300	22.05	25.94	57.24	67.25	1.81 1.22	74.92 50.38	26.22 17.63	55.27 37.17	554.11 372.64
S4	7.80	– 217	688	19.37	0.10	24.82	44.79	1.55 0.69	61.59 27.59	29.59 13.25	46.30 20.74	438.73 196.51
S5	7.89	– 197	825	24.53	9.62	32.17	46.33	10.40 4.82	57.88 26.82	32.49 15.05	130.93 60.66	929.24 430.52
Minimum	6.81	– 217	688	19.15	0.10	3.65	44.79	0.12 0.09	16.31 11.79	28.55 20.64	11.97 8.66	100.25 72.49
Maximum	7.89	– 136	1300	24.53	25.94	57.24	72.31	10.40 4.82	74.92 50.38	49.71 15.05	130.93 60.66	929.24 430.52
Arithmetic average	–	–	926	20.19	8.94	26.29	56.83	2.81 1.26	47.28 21.18	33.31 14.92	53.08 23.77	440.58 197.34
Geochemical background for the Vistula River (Helios-Rybicka 1986)								2.0	40.0	40.0	45.0	110.0
Polish geochemical background (Bojakowska and Sokołowska 1998)								0.5	6.0	5.0	10.0	48.0

Bold values indicate statistical description of the data

Table 8 Classification of sediment quality according to C_f contamination factor and degree of contamination (C_d)

Metal	C_f value	Monomial contamination factor
Cd	1.41	Moderate
Cu	1.18	Moderate
Ni	0.83	Low
Pb	1.18	Moderate
Zn	4.01	High
Total (C_d)	8.61	Moderate degree of contamination

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