

**Table S1:** The calculated kinetic of Si-ions releasing during 168 h of incubations.

<b>Time</b>	<b>Si</b>				
	Fe 0	Fe 1	Fe 2.5	Fe 5	Fe 7.5
<b>0-24</b>	1.08	1.375	1.83	2.20	2.43
<b>24-72</b>	1.77	1.85	2.16	2.10	2.45
<b>72-168</b>	-0.54	0.27	-1.10	-1.07	-1.16
<b>Average</b>	0.77	1.16	0.97	1.08	1.23
<b>Increase compared to MBG-Fe 0</b>	0	51.35	25.70	40.10	60.36

**Table S2:** The calculated kinetic of Na-ions releasing during 168 h of incubations.

<b>Time</b>	<b>Na</b>				
	Fe 0	Fe 1	Fe 2.5	Fe 5	Fe 7.5
<b>0-24</b>	1.75	2	2.25	2.33	2.54
<b>24-72</b>	0.042	0.042	0.041	0.13	0.14
<b>72-168</b>	0.042	0.031	0.031	0.06	0.041
<b>Average</b>	0.61	0.69	0.77	0.84	0.91
<b>Increase compared to MBG-Fe 1</b>	0	13.06	26.70	37.5	48.86

**Table S3:** The calculated kinetic of Ca-ions releasing during 168 h of incubations.

<b>Time</b>	<b>Ca</b>				
	Fe 0	Fe 1	Fe 2.5	Fe 5	Fe 7.5
<b>0-24</b>	0.5	0.75	0.34	0.25	0.25
<b>24-72</b>	0.14	0.12	0.10	0.06	0.09
<b>72-168</b>	0.16	0.10	0.07	0.10	0.04
<b>Average</b>	0.27	0.33	0.17	0.13	0.12
<b>Increase compared to MBG-Fe 0</b>	0	20.51	-37.17	-48.71	-53.84

**Table S4:** The calculated kinetic of P-ions releasing during 168 h of incubations.

<b>Time</b>	<b>P</b>				
	Fe 0	Fe 1	Fe 2.5	Fe 5	Fe 7.5
<b>0-24</b>	-0.09	-0.33	-0.21	-0.21	-0.13
<b>24-72</b>	-0.08	-0.11	-0.10	-0.04	-0.10
<b>72-168</b>	-0.15	-0.13	-0.16	-0.13	-0.11
<b>Average</b>	-0.10	-0.18	-0.15	-0.13	-0.10
<b>Increase compared to MBG-Fe 0</b>	0	78.95	34.90	21.71	-4.60

**Table S5:** The calculated kinetic of Fe-ions releasing during 168 h of incubations.

<b>Time</b>	<b>Fe</b>				
	Fe 0	Fe 1	Fe 2.5	Fe 5	Fe 7.5
<b>0-24</b>	0	0.12	0.33	0.62	1
<b>24-72</b>	0	0.04	0.06	0.16	0.08
<b>72-168</b>	0	0.06	0.11	0.15	0.16
<b>Average</b>	0	0.07	0.17	0.32	0.42
<b>Increase compared to MBG-Fe 1</b>	-	0	122.72	309.10	445.41