

Sample	Total Fe content (XRF) (g kg ⁻¹)	Dithionite soluble Fe-content (g kg ⁻¹)	ϕ (NMR samples) (m ³ m ⁻³)	d_{60}/d_{10} ($\mu\text{m } \mu\text{m}^{-1}$)	d_{GSD} (μm)	r_{eff} (μm)
HB-Z_0 ¹	0.42	0.13	0.39	1.36	1222	261
HB-Z_1 ²	7.20	7.12	0.39	1.44	935	201
HB41_0 ³	0.28	0.10	0.39	1.43	1164	247
HB41_1 ²	2.52	2.39	0.41	1.44	1028	236
HB41_2 ²	7.90	7.85	0.40	1.48	900	197
HB41_3 ²	5.74	5.64	0.40	1.46	823	184
GW3151_0 ^{2,4}	0.28	0.12	0.38	1.69	1037	213
GW3151_1 ²	3.64	3.28	0.38	1.46	1180	244
GW5051_0 ¹	1.26	1.08	0.35	1.68	1010	184
GW5051_1 ²	4.06	3.88	0.36	1.70	856	158
GW3120_0 ^{2,4}	0.49	0.25	0.36	1.74	1123	211
GW3120_1 ²	8.18	8.04	0.36	1.85	917	172
GW3120_2 ²	14.76	14.80	0.39	1.70	717	155
DF0 ³	7.48	5.27	0.36	1.51	1719	328
DF11 ³	10.77	8.26	0.36	1.29	2271	420
DF13A ³	10.77	8.12	0.39	1.29	2269	474
DF13B ³	11.33	9.05	0.37	1.36	2092	404
FD0 ³	5.87	4.45	0.42	1.36	1954	470
FD12A ³	10.00	8.51	0.40	1.43	1925	436
FD12B ³	9.02	7.52	0.38	1.39	1958	404
WS0 ^{3,4}	0.42	0.17	0.42	1.58	1634	391
WS4 ³	8.74	8.40	0.40	1.69	1169	258
WS8 ³	4.69	4.39	0.41	1.57	1586	373

¹ Samples of filter sand and gravel without iron coating taken at dewatering wells excavated in German lignite open pits (HB: Hambach, GW: Garzweiler). ² Samples of filter sand and gravel with natural iron coating taken at dewatering wells excavated in German lignite open pits. ³ Samples of filter sand and gravel with artificial iron coating generated in well clogging experiments (Weidner, 2016) with original material DF0 and FD0 as used in dewatering wells in German lignite mining from three different gravel pits (DF: Dorsfeld, FD: Frimmersdorf, WS: Weilerswist). ⁴ Before analysis these samples were treated with dithionite to remove existing surface iron oxides in order to recreate the original state.