

ID	Adsorbent	Production area	Particle size(1) /μ m	Aqueous solution			Amount of adsorbent m[g]	Solution volume V[l]	Mixing(2) time [h]	Ion concentration of the solution			Cs adsorption ratio [g/g] ⁽³⁾	Kd(Cs)
				Composition, etc.	pH	Filtration O: Yes X: No				Cs [ppm]	Sr [ppm]	I [ppm]		
001	Vermiculite	South Africa	39.6	Distilled water	6.0	×	0.3	30	24	0.04	0	0	84.0	5.2E+02
002	Vermiculite	South Africa	39.6	Distilled water	6.8	×	0.3	30	24	0.1	0	0	97.9	4.8E+03
003	Vermiculite	South Africa	39.6	Distilled water	6.1	×	0.3	30	24	2	0	0	98.9	8.6E+03
004	Vermiculite	South Africa	39.6	Distilled water	5.8	×	0.3	30	24	10	0	0	99.5	1.9E+04
005	Vermiculite	South Africa	39.6	Distilled water	5.8	×	0.3	30	24	20	0	0	99.4	1.7E+04
006	Vermiculite	South Africa	39.6	Distilled water	5.9	×	0.3	30	24	100	0	0	99.8	5.3E+04
007	Vermiculite	South Africa	39.6	Distilled water	5.6	×	0.3	30	24	200	0	0	99.9	7.1E+04
008	Vermiculite	South Africa	39.6	Distilled water	5.3	×	0.3	30	24	1000	0	0	72.0	2.6E+02
009	Vermiculite	South Africa	39.6	Distilled water	5.3	×	0.3	30	24	2000	0	0	20.0	2.5E+01
010	Vermiculite	China	34.7	Distilled water	6.0	×	0.3	30	24	0.04	0	0	99.4	1.7E+04
011	Vermiculite	China	34.7	Distilled water	6.8	×	0.3	30	24	0.1	0	0	99.2	1.3E+04
012	Vermiculite	China	34.7	Distilled water	6.2	×	0.3	30	24	1	0	0	94.6	1.8E+03
013	Vermiculite	China	34.7	Distilled water	6.1	×	0.3	30	24	2	0	0	89.5	8.5E+02
014	Vermiculite	China	34.7	Distilled water	5.8	×	0.3	30	24	10	0	0	90.5	9.5E+02
015	Vermiculite	China	34.7	Distilled water	5.8	×	0.3	30	24	20	0	0	93.5	1.4E+03
016	Vermiculite	China	34.7	Distilled water	5.9	×	0.3	30	24	100	0	0	95.9	2.3E+03
017	Vermiculite	China	34.7	Distilled water	5.6	×	0.3	30	24	200	0	0	54.5	1.2E+02
018	Vermiculite	China	34.7	Distilled water	5.3	×	0.3	30	24	1000	0	0	55.0	1.2E+02
019	Vermiculite	China	34.7	Distilled water	5.3	×	0.3	30	24	2000	0	0	30.0	4.3E+01
020	Vermiculite treated with HCl	South Africa	19.7	Distilled water	6.2	×	0.3	30	24	1	0	0	96.6	2.8E+03
021	Vermiculite treated with HCl	South Africa	19.7	Distilled water	6.1	×	0.3	30	24	2	0	0	95.5	2.1E+03
022	Vermiculite treated with HCl	South Africa	19.7	Distilled water	5.8	×	0.3	30	24	10	0	0	90.6	9.6E+02
023	Vermiculite treated with HCl	South Africa	19.7	Distilled water	5.8	×	0.3	30	24	20	0	0	86.5	6.4E+02
024	Vermiculite treated with HCl	South Africa	19.7	Distilled water	5.9	×	0.3	30	24	100	0	0	72.0	2.6E+02
025	Heating Vermiculite	South Africa	37.6	Distilled water	6.2	×	0.3	30	24	1	0	0	95.5	2.1E+03
026	Heating Vermiculite	South Africa	37.6	Distilled water	6.1	×	0.3	30	24	2	0	0	85.5	5.9E+02
027	Heating Vermiculite	South Africa	37.6	Distilled water	5.8	×	0.3	30	24	10	0	0	72.0	2.6E+02
028	Heating Vermiculite	South Africa	37.6	Distilled water	5.8	×	0.3	30	24	20	0	0	63.5	1.7E+02
029	Heating Vermiculite	South Africa	37.6	Distilled water	5.9	×	0.3	30	24	100	0	0	68.0	2.1E+02
030	Phlogopite	India	4.4	Distilled water	6.8	×	0.3	30	24	0.1	0	0	99.7	3.1E+04
031	Phlogopite	India	4.4	Distilled water	6.1	×	0.3	30	24	2	0	0	98.1	5.0E+03
032	Phlogopite	India	4.4	Distilled water	5.8	×	0.3	30	24	10	0	0	90.0	9.0E+02
033	Phlogopite	India	4.4	Distilled water	5.8	×	0.3	30	24	20	0	0	80.0	4.0E+02
034	Phlogopite	India	4.4	Distilled water	5.9	×	0.1	30	24	100	0	0	72.0	2.6E+02
035	Phlogopite	India	4.4	Distilled water	5.6	×	0.3	30	24	200	0	0	45.0	8.2E+01
036	Phlogopite	India	4.4	Distilled water	5.3	×	0.3	30	24	1000	0	0	18.0	2.2E+01
037	Phlogopite	India	4.4	Distilled water	5.3	×	0.3	30	24	2000	0	0	10.0	1.1E+01
038	Synthetic fluorine Phlogopite		42.2	Distilled water	6.5	×	0.3	30	24	0.1	0	0	75.0	3.0E+02
039	Synthetic fluorine Phlogopite		42.2	Distilled water	6.2	×	0.3	30	24	1	0	0	10.0	1.1E+01
040	Synthetic fluorine Phlogopite		42.2	Distilled water	6.1	×	0.3	30	24	2	0	0	10.0	1.1E+01
041	Synthetic fluorine Phlogopite		42.2	Distilled water	6.2	×	0.3	30	24	10	0	0	0.0	0
042	Synthetic fluorine Phlogopite		42.2	Distilled water	5.0	×	0.3	30	24	100	0	0	3.0	3.1E+00
043	Synthetic Iron Phlogopite		26.5	Distilled water	6.5	×	0.3	30	24	0.1	0	0	70.0	2.3E+02
044	Synthetic Iron Phlogopite		26.5	Distilled water	6.2	×	0.3	30	24	1	0	0	11.0	1.2E+01
045	Synthetic Iron Phlogopite		26.5	Distilled water	6.1	×	0.3	30	24	2	0	0	5.0	5.3E+00
046	Synthetic Iron Phlogopite		26.5	Distilled water	6.2	×	0.3	30	24	10	0	0	0.0	0
047	Synthetic Iron Phlogopite		26.5	Distilled water	5.0	×	0.3	30	24	100	0	0	0.0	0
048	Muscovite	India	22.3	Distilled water	7.0	×	0.3	30	24	0.04	0	0	96.6	2.8E+03
049	Muscovite	India	22.3	Distilled water	6.8	×	0.3	30	24	0.1	0	0	92.3	1.2E+03
050	Muscovite	India	22.3	Distilled water	6.2	×	0.3	30	24	1	0	0	76.0	3.2E+02
051	Muscovite	India	22.3	Distilled water	6.1	×	0.3	30	24	2	0	0	64.0	1.8E+02
052	Muscovite	India	22.3	Distilled water	5.8	×	0.3	30	24	10	0	0	43.0	7.5E+01
053	Muscovite	India	22.3	Distilled water	5.9	×	0.3	30	24	20	0	0	20.0	2.5E+01
054	Muscovite	India	22.3	Distilled water	5.6	×	0.3	30	24	100	0	0	18.0	2.2E+01

ID	Adsorbent	Production area	Aqueous solution					Ion concentration of the solution					Cs adsorption ratio [%] ⁽³⁾	Kd(Cs)
			Particle size ⁽¹⁾ / μ m	Composition, etc.	pH	Filtration O: Yes X: No	Amount of adsorbent m[g]	Solution volume V[mL]	Mixing ⁽²⁾ time [h]	Cs [ppm]	Sr [ppm]	I [ppm]		
055	Na-taeniolite		8.7	Distilled water	6.0	×	0.3	30	24	0.04	0	0	99.7	3.2E+04
056	Na-taeniolite		8.7	Distilled water	6.8	×	0.3	30	24	0.1	0	0	99.4	1.8E+04
057	Na-taeniolite		8.7	Distilled water	6.2	×	0.3	30	24	1	0	0	99.9	1.0E+05
058	Na-taeniolite		8.7	Distilled water	6.1	×	0.3	30	24	2	0	0	99.9	1.0E+05
059	Na-taeniolite		8.7	Distilled water	5.8	×	0.3	30	24	10	0	0	99.9	1.7E+05
060	Na-taeniolite		8.7	Distilled water	5.8	×	0.3	30	24	20	0	0	99.9	1.7E+05
061	Na-taeniolite		8.7	Distilled water	5.9	×	0.3	30	24	100	0	0	100.0	2.3E+05
062	Acid clay		12.8	Distilled water	6.5	×	0.3	30	24	1	0	0	99.5	2.0E+04
063	Acid clay		12.8	Distilled water	6.2	×	0.3	30	24	2	0	0	81.0	4.3E+02
064	Acid clay		12.8	Distilled water	6.1	×	0.3	30	24	10	0	0	92.5	1.2E+03
065	Acid clay		12.8	Distilled water	6.2	×	0.3	30	24	20	0	0	87.0	6.7E+02
066	Acid clay		12.8	Distilled water	5.0	×	0.3	30	24	100	0	0	89.0	8.1E+02
067	Sericite	SHIMANE	6.8	Distilled water	6.0	×	0.3	30	24	0.04	0	0	99.0	9.5E+03
068	Sericite	SHIMANE	6.8	Distilled water	6.8	×	0.3	30	24	0.1	0	0	98.1	5.2E+03
069	Sericite	SHIMANE	6.8	Distilled water	6.2	×	0.3	30	24	1	0	0	87.0	6.7E+02
070	Sericite	SHIMANE	6.8	Distilled water	6.1	×	0.3	30	24	2	0	0	80.0	4.0E+02
071	Sericite	SHIMANE	6.8	Distilled water	5.8	×	0.3	30	24	10	0	0	75.0	3.0E+02
072	Sericite	SHIMANE	6.8	Distilled water	5.8	×	0.3	30	24	20	0	0	45.0	8.2E+01
073	Sericite	SHIMANE	6.8	Distilled water	5.9	×	0.3	30	24	100	0	0	26.0	3.5E+01
074	Sericite treated with HCl	SHIMANE	5.9	Distilled water	6.2	×	0.3	30	24	1	0	0	97.6	4.1E+03
075	Sericite treated with HCl	SHIMANE	5.9	Distilled water	6.1	×	0.3	30	24	2	0	0	93.5	1.4E+03
076	Sericite treated with HCl	SHIMANE	5.9	Distilled water	5.8	×	0.3	30	24	10	0	0	74.0	2.8E+02
077	Sericite treated with HCl	SHIMANE	5.9	Distilled water	5.8	×	0.3	30	24	20	0	0	56.0	1.3E+02
078	Sericite treated with HCl	SHIMANE	5.9	Distilled water	5.9	×	0.3	30	24	100	0	0	21.0	2.7E+01
079	Sepiolite	China	—	Distilled water	6.8	×	0.3	30	24	0.1	0	0	97.0	3.2E+03
080	Sepiolite	China	—	Distilled water	6.2	×	0.3	30	24	1	0	0	89.0	8.1E+02
081	Sepiolite	China	—	Distilled water	6.1	×	0.3	30	24	2	0	0	87.5	7.0E+02
082	Sepiolite	China	—	Distilled water	5.8	×	0.3	30	24	10	0	0	74.0	2.8E+02
083	Sepiolite	China	—	Distilled water	5.8	×	0.3	30	24	20	0	0	50.0	1.0E+02
084	Sepiolite	China	—	Distilled water	5.9	×	0.3	30	24	100	0	0	8.0	8.7E+00
085	Sepiolite treated with HCl	China	—	Distilled water	6.8	×	0.3	30	24	0.1	0	0	99.0	9.9E+03
086	Sepiolite treated with HCl	China	—	Distilled water	6.2	×	0.3	30	24	1	0	0	94.4	1.7E+03
087	Sepiolite treated with HCl	China	—	Distilled water	6.1	×	0.3	30	24	2	0	0	93.0	1.3E+03
088	Sepiolite treated with HCl	China	—	Distilled water	5.8	×	0.3	30	24	10	0	0	84.0	5.3E+02
089	Sepiolite treated with HCl	China	—	Distilled water	5.9	×	0.3	30	24	100	0	0	21.0	2.7E+01
090	Palygorskite	China	—	Distilled water	6.8	×	0.3	30	24	0.1	0	0	99.0	9.9E+03
091	Palygorskite	China	—	Distilled water	6.2	×	0.3	30	24	1	0	0	90.4	9.4E+02
092	Palygorskite	China	—	Distilled water	6.1	×	0.3	30	24	2	0	0	87.5	7.0E+02
093	Palygorskite	China	—	Distilled water	5.8	×	0.3	30	24	10	0	0	73.0	2.7E+02
094	Palygorskite	China	—	Distilled water	5.8	×	0.3	30	24	20	0	0	58.0	1.4E+02
095	Palygorskite	China	—	Distilled water	5.9	×	0.3	30	24	100	0	0	35.0	5.4E+01
096	Allophane		11	Distilled water	6.8	×	0.3	30	24	0.1	0	0	92.0	1.2E+03
097	Allophane		11	Distilled water	6.2	×	0.3	30	24	1	0	0	58.0	1.4E+02
098	Allophane		11	Distilled water	6.1	×	0.3	30	24	2	0	0	40.0	6.7E+01
099	Allophane		11	Distilled water	5.8	×	0.3	30	24	10	0	0	22.0	2.8E+01
100	Allophane		11	Distilled water	5.8	×	0.3	30	24	20	0	0	15.0	1.8E+01
101	Allophane		11	Distilled water	5.9	×	0.3	30	24	100	0	0	0	0

(1) Particle size measurement: Median diameter SHIMADZU SALD-7101

(2) The shaking was used to invert the rotation type stirrer.

(3) ICP-MS