

ID	Adsorbent	Production area	Particle size(1) /μ m	Aqueous solution				Ion concentration of the solution					Sr adsorption ratio [%] ⁽³⁾	Kd(Sr)
				Composition, etc.	pH	Filtratio n O: Yes X: No	Amount of adsorbent m[g]	Solution volume V[mL]	Mixing(2) time [h]	Cs [ppm]	Sr [ppm]	I [ppm]		
001	Vermiculite	South Africa	39.6	Distilled water	6.4	×	0.3	30	24	0	0.1	0	95.0	1.9E+03
002	Vermiculite	South Africa	39.6	Distilled water	5.9	×	0.3	30	24	0	1	0	99.2	1.2E+04
003	Vermiculite	South Africa	39.6	Distilled water	5.8	×	0.3	30	24	0	2	0	99.4	1.7E+04
004	Vermiculite	South Africa	39.6	Distilled water	5.7	×	0.3	30	24	0	10	0	99.6	2.8E+04
005	Vermiculite	South Africa	39.6	Distilled water	5.6	×	0.3	30	24	0	20	0	99.6	2.2E+04
006	Vermiculite	South Africa	39.6	Distilled water	5.5	×	0.3	30	24	0	100	0	96.7	2.9E+03
007	Vermiculite	South Africa	39.6	Distilled water	5.3	×	0.3	30	24	0	200	0	84.0	5.3E+02
008	Vermiculite	South Africa	39.6	Distilled water	5.5	×	0.3	30	24	0	1000	0	32.0	4.7E+01
009	Vermiculite	South Africa	39.6	Distilled water	5.3	×	0.3	30	24	0	2000	0	16.0	1.9E+01
010	Vermiculite	China	34.7	Distilled water	6.4	×	0.3	30	24	0	0.1	0	70.0	2.3E+02
011	Vermiculite	China	34.7	Distilled water	5.9	×	0.3	30	24	0	1	0	85.0	5.7E+02
012	Vermiculite	China	34.7	Distilled water	5.8	×	0.3	30	24	0	2	0	86.0	6.1E+02
013	Vermiculite	China	34.7	Distilled water	5.7	×	0.3	30	24	0	10	0	80.0	4.0E+02
014	Vermiculite	China	34.7	Distilled water	5.6	×	0.3	30	24	0	20	0	80.0	4.0E+02
015	Vermiculite	China	34.7	Distilled water	5.5	×	0.3	30	24	0	100	0	65.0	1.9E+02
016	Vermiculite	China	34.7	Distilled water	5.3	×	0.3	30	24	0	200	0	54.0	1.2E+02
017	Vermiculite	China	34.7	Distilled water	5.5	×	0.3	30	24	0	1000	0	26.0	3.5E+01
018	Vermiculite	China	34.7	Distilled water	5.3	×	0.3	30	24	0	2000	0	12.0	1.4E+01
019	Vermiculite treated with HCl	South Africa	19.7	Distilled water	6.4	×	0.3	30	24	0	0.1	0	99.0	9.9E+03
020	Vermiculite treated with HCl	South Africa	19.7	Distilled water	5.9	×	0.3	30	24	0	1	0	99.5	2.0E+04
021	Vermiculite treated with HCl	South Africa	19.7	Distilled water	5.8	×	0.3	30	24	0	2	0	99.2	1.2E+04
022	Vermiculite treated with HCl	South Africa	19.7	Distilled water	5.7	×	0.3	30	24	0	10	0	96.6	2.8E+03
023	Vermiculite treated with HCl	South Africa	19.7	Distilled water	5.6	×	0.3	30	24	0	20	0	93.0	1.3E+03
024	Vermiculite treated with HCl	South Africa	19.7	Distilled water	5.5	×	0.3	30	24	0	100	0	75.0	3.0E+02
025	Heating Vermiculite	South Africa	37.6	Distilled water	6.4	×	0.3	30	24	0	0.1	0	80.0	4.0E+02
026	Heating Vermiculite	South Africa	37.6	Distilled water	5.9	×	0.3	30	24	0	1	0	92.0	1.2E+03
027	Heating Vermiculite	South Africa	37.6	Distilled water	5.8	×	0.3	30	24	0	2	0	92.5	1.2E+03
028	Heating Vermiculite	South Africa	37.6	Distilled water	5.7	×	0.3	30	24	0	10	0	91.0	1.0E+03
029	Heating Vermiculite	South Africa	37.6	Distilled water	5.6	×	0.3	30	24	0	20	0	88.5	7.7E+02
030	Heating Vermiculite	South Africa	37.6	Distilled water	5.5	×	0.3	30	24	0	100	0	72.0	2.6E+02
031	Phlogopite	India	4.4	Distilled water	6.4	×	0.3	30	24	0	0.1	0	70.0	2.3E+02
032	Phlogopite	India	4.4	Distilled water	5.9	×	0.3	30	24	0	1	0	91.0	1.0E+03
033	Phlogopite	India	4.4	Distilled water	5.8	×	0.3	30	24	0	2	0	91.5	1.1E+03
034	Phlogopite	India	4.4	Distilled water	5.7	×	0.3	30	24	0	10	0	88.0	7.3E+02
035	Phlogopite	India	4.4	Distilled water	5.6	×	0.3	30	24	0	20	0	80.5	4.1E+02
036	Phlogopite	India	4.4	Distilled water	5.5	×	0.3	30	24	0	100	0	75.0	3.0E+02
037	Phlogopite	India	4.4	Distilled water	5.3	×	0.3	30	24	0	200	0	56.5	1.3E+02
038	Phlogopite	India	4.4	Distilled water	5.5	×	0.3	30	24	0	1000	0	17.0	2.0E+01
039	Phlogopite	India	4.4	Distilled water	5.3	×	0.3	30	24	0	2000	0	12.0	1.4E+01
040	Synthetic fluorine Phlogopite		42.2	Distilled water	6.4	×	0.3	30	24	0	0.1	0	40.0	6.7E+01
041	Synthetic fluorine Phlogopite		42.2	Distilled water	5.8	×	0.3	30	24	0	2	0	15.0	1.8E+01
042	Synthetic fluorine Phlogopite		42.2	Distilled water	5.7	×	0.3	30	24	0	10	0	10.0	1.1E+01
043	Synthetic fluorine Phlogopite		42.2	Distilled water	5.6	×	0.3	30	24	0	20	0	5.0	5.3E+00
044	Synthetic fluorine Phlogopite		42.2	Distilled water	5.5	×	0.3	30	24	0	100	0	2.0	2.0E+00
045	Synthetic Iron Phlogopite		26.5	Distilled water	6.4	×	0.3	30	24	0	0.1	0	0.0	0
046	Synthetic Iron Phlogopite		26.5	Distilled water	5.9	×	0.3	30	24	0	1	0	3.0	3.1E+00
047	Synthetic Iron Phlogopite		26.5	Distilled water	5.8	×	0.3	30	24	0	2	0	5.0	5.3E+00
048	Synthetic Iron Phlogopite		26.5	Distilled water	5.7	×	0.3	30	24	0	10	0	0.0	0
049	Synthetic Iron Phlogopite		26.5	Distilled water	5.6	×	0.3	30	24	0	20	0	0.0	0
050	Synthetic Iron Phlogopite		26.5	Distilled water	5.5	×	0.3	30	24	0	100	0	0.0	0
051	Muscovite	India	22.3	Distilled water	6.4	×	0.3	30	24	0	0.1	0	90.0	9.0E+02
052	Muscovite	India	22.3	Distilled water	5.9	×	0.3	30	24	0	1	0	89.0	8.1E+02
053	Muscovite	India	22.3	Distilled water	5.8	×	0.3	30	24	0	2	0	84.5	5.5E+02
054	Muscovite	India	22.3	Distilled water	5.7	×	0.3	30	24	0	10	0	59.0	1.4E+02

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				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	Muscovite	India	22.3	Distilled water	5.6	×	0.3	30	24	0	20	0	40.0	6.7E+01
056	Muscovite	India	22.3	Distilled water	5.5	×	0.3	30	24	0	100	0	13.0	1.5E+01
057	Na-taeniolite		8.7	Distilled water	6.4	×	0.3	30	24	0	0.1	0	100.0	—
058	Na-taeniolite		8.7	Distilled water	5.9	×	0.3	30	24	0	1	0	99.5	2.0E+04
059	Na-taeniolite		8.7	Distilled water	5.8	×	0.3	30	24	0	2	0	99.6	2.5E+04
060	Na-taeniolite		8.7	Distilled water	5.7	×	0.3	30	24	0	10	0	99.6	2.5E+04
061	Na-taeniolite		8.7	Distilled water	5.6	×	0.3	30	24	0	20	0	99.6	2.2E+04
062	Na-taeniolite		8.7	Distilled water	5.5	×	0.3	30	24	0	100	0	99.2	1.2E+04
063	Acid clay		12.8	Distilled water	6.4	×	0.3	30	24	0	0.1	0	70.0	2.3E+02
064	Acid clay		12.8	Distilled water	5.9	×	0.3	30	24	0	1	0	91.0	1.0E+03
065	Acid clay		12.8	Distilled water	5.8	×	0.3	30	24	0	2	0	92.0	1.2E+03
066	Acid clay		12.8	Distilled water	5.7	×	0.3	30	24	0	10	0	91.0	1.0E+03
067	Acid clay		12.8	Distilled water	5.6	×	0.3	30	24	0	20	0	89.5	8.5E+02
068	Acid clay		12.8	Distilled water	5.5	×	0.3	30	24	0	100	0	74.0	2.8E+02
069	Sericite	SHIMANE	6.8	Distilled water	6.4	×	0.3	30	24	0	0.1	0	60.0	1.5E+02
070	Sericite	SHIMANE	6.8	Distilled water	5.9	×	0.3	30	24	0	1	0	79.0	3.8E+02
071	Sericite	SHIMANE	6.8	Distilled water	5.8	×	0.3	30	24	0	2	0	77.0	3.3E+02
072	Sericite	SHIMANE	6.8	Distilled water	5.7	×	0.3	30	24	0	10	0	69.0	2.2E+02
073	Sericite	SHIMANE	6.8	Distilled water	5.6	×	0.3	30	24	0	20	0	61.5	1.6E+02
074	Sericite	SHIMANE	6.8	Distilled water	5.5	×	0.3	30	24	0	100	0	32.0	4.7E+01
075	Sericite treated with HCl	SHIMANE	5.9	Distilled water	6.4	×	0.3	30	24	0	0.1	0	100.0	—
076	Sericite treated with HCl	SHIMANE	5.9	Distilled water	5.9	×	0.3	30	24	0	1	0	99.7	3.3E+04
077	Sericite treated with HCl	SHIMANE	5.9	Distilled water	5.8	×	0.3	30	24	0	2	0	99.0	9.9E+03
078	Sericite treated with HCl	SHIMANE	5.9	Distilled water	5.7	×	0.3	30	24	0	10	0	78.0	3.5E+02
079	Sericite treated with HCl	SHIMANE	5.9	Distilled water	5.6	×	0.3	30	24	0	20	0	60.0	1.5E+02
080	Sericite treated with HCl	SHIMANE	5.9	Distilled water	5.5	×	0.3	30	24	0	100	0	23.0	3.0E+01
081	Sepiolite	China	—	Distilled water	6.4	×	0.3	30	24	0	0.1	0	50.0	1.0E+02
082	Sepiolite	China	—	Distilled water	5.9	×	0.3	30	24	0	1	0	51.0	1.0E+02
083	Sepiolite	China	—	Distilled water	5.8	×	0.3	30	24	0	2	0	50.0	1.0E+02
084	Sepiolite	China	—	Distilled water	5.7	×	0.3	30	24	0	10	0	46.0	8.5E+01
085	Sepiolite	China	—	Distilled water	5.6	×	0.3	30	24	0	20	0	37.5	6.0E+01
086	Sepiolite	China	—	Distilled water	5.5	×	0.3	30	24	0	100	0	18.0	2.2E+01
087	Sepiolite treated with HCl	China	—	Distilled water	6.4	×	0.3	30	24	0	0.1	0	80.0	4.0E+02
088	Sepiolite treated with HCl	China	—	Distilled water	5.9	×	0.3	30	24	0	1	0	81.0	4.3E+02
089	Sepiolite treated with HCl	China	—	Distilled water	5.7	×	0.3	30	24	0	10	0	66.0	1.9E+02
090	Sepiolite treated with HCl	China	—	Distilled water	5.5	×	0.3	30	24	0	100	0	25.0	3.3E+01
091	Palygorskite	China	—	Distilled water	6.4	×	0.3	30	24	0	0.1	0	30.0	4.3E+01
092	Palygorskite	China	—	Distilled water	5.9	×	0.3	30	24	0	1	0	40.0	6.7E+01
093	Palygorskite	China	—	Distilled water	5.8	×	0.3	30	24	0	2	0	35.0	5.4E+01
094	Palygorskite	China	—	Distilled water	5.7	×	0.3	30	24	0	10	0	40.0	6.7E+01
095	Palygorskite	China	—	Distilled water	5.6	×	0.3	30	24	0	20	0	30.0	4.3E+01
096	Palygorskite	China	—	Distilled water	5.5	×	0.3	30	24	0	100	0	22.0	2.8E+01
097	Allophane		11	Distilled water	6.4	×	0.3	30	24	0	0.1	0	96.0	2.4E+03
098	Allophane		11	Distilled water	5.9	×	0.3	30	24	0	1	0	49.0	9.6E+01
099	Allophane		11	Distilled water	5.8	×	0.3	30	24	0	2	0	40.0	6.7E+01
100	Allophane		11	Distilled water	5.7	×	0.3	30	24	0	10	0	23.0	3.0E+01
101	Allophane		11	Distilled water	5.6	×	0.3	30	24	0	20	0	16.5	2.0E+01
102	Allophane		11	Distilled water	5.5	×	0.3	30	24	0	100	0	6.0	6.4E+00

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

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

(3) ICP-OES