

Appendix 1. Measurement of Turbidity (How to use transparency meter)

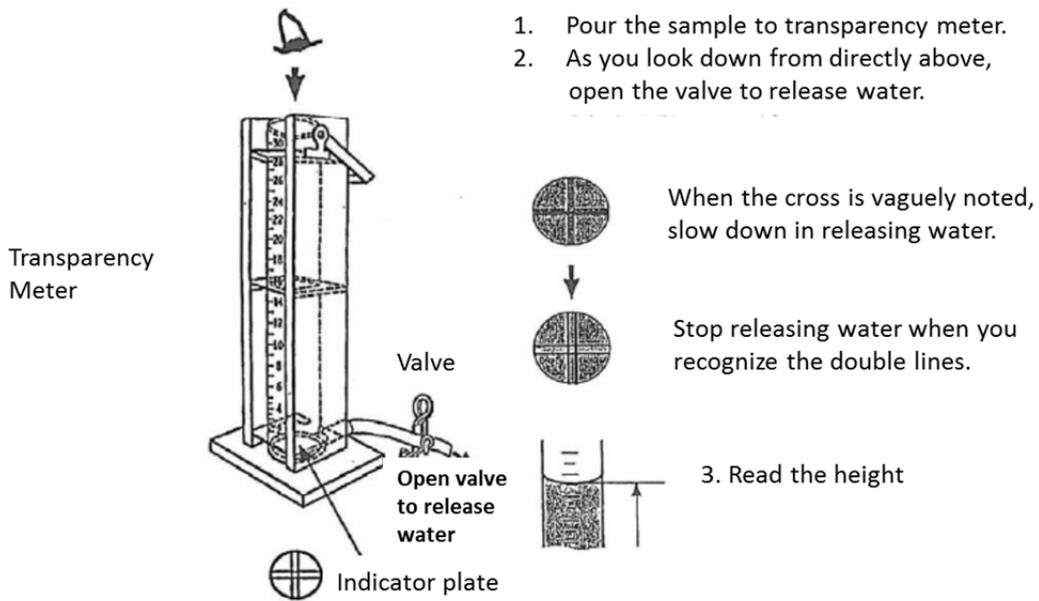


Table – 1. Conversion Table (transparency → SS)

Transparency (cm)	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9				
SS (mg/l)	766	708	658	614	575	540	509	481	456	433	412	393	376	359	344				
Transparency (cm)	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4				
SS (mg/l)	330	318	306	294	284	274	265	256	248	240	233	226	220	214	208				
Transparency (cm)	4.5	4.6	4.7	4.8	4.9	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8				
SS (mg/l)	202	197	192	187	182	178	170	162	155	149	143	137	132	127	122				
Transparency (cm)	7.0	7.2	7.4	7.6	7.8	8.0	8.5	9.0	9.5	10	11	12	13	14	15	17	20	25	30
SS (mg/l)	118	114	111	107	104	101	93	87	82	77	68	61	56	51	47	40	33	25	20

Transparency < 1.5: Sample is diluted 10 or 100 times with tap water to read transparency. SS conversion value is multiplied 10 or 100 times for correction.

Transparency > 3.0: It is equivalent to natural rivers or even better; thus, presents no problem.

Measurements should be taken in a shaded area.

Appendix 2. Measurement of Red Soil Sedimentation

(1) SPSS and How to measure SPRS

SPSS and SPRS are indicators to assess the red soil sedimentation. SPSS is used in measurement of red soil particles of sedimentation at sea floor and tidal flats; whereas, SPRS is used in measuring red soil particle of sedimentation at river beds.

*SPSS: Suspended Particles in Sea Sediment

*SPRS: Suspended Particles in River Sediment

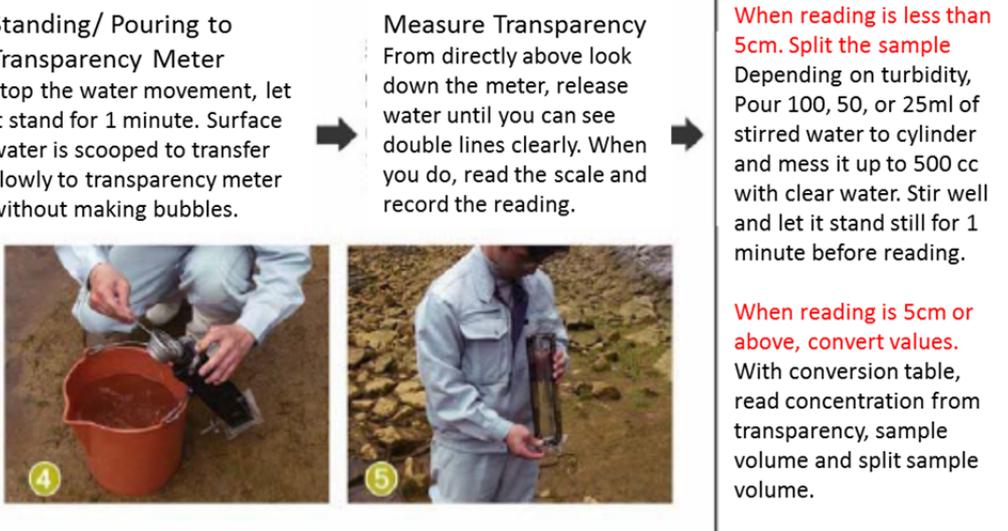
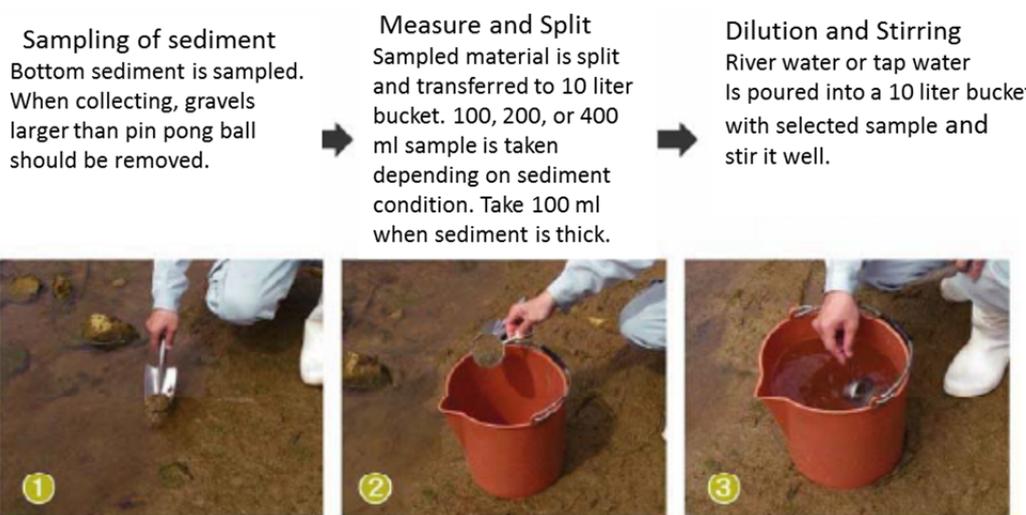
(2) Equipment Required

Measuring spoon – one set (5,10,50,100 ml), Sieve with 4 mm mesh(2 mm x 2 mm), 30cm transparency meter, 500ml mess cylinder, (2-3), 10L bucket, scoop

<p>Sampling of Sediment Sediment is sampled from tidal flat and sea bed.</p>		<p>Standing After shaking, leave the mess cylinder stand still for one minute.</p>		
↓	<p>Sieving Sieve the sediment with 4mm mesh.</p>		<p>Pour it to transparency meter Pour the water to transparency meter so as not to disturb the settled sediment.</p>	
↓	<p>Measuring Sieved sediment is collected with a measuring spoon in 5,25,50,100 ml</p>		<p>Measure Transparency Look down from directly above, read the scale when you clearly see double lines</p>	
↓	<p>Dilution and Shaking Place the sample in mess cylinder, pour clean water, mess up to 500 ml and shake it well.</p>		<p>When reading is less than 5cm. Split sample Depending on turbidity, Pour 100, 50, or 25ml of stirred water to cylinder and mess it up to 500 cc with clear water. Stir well and let it stand for 1 minute before reading.</p>	<p>When reading is 5cm or above, convert values. Using conversion table, read concentration from transparency, sample volume and split sample volume.</p>

(3) Key Points in Sampling Sediments

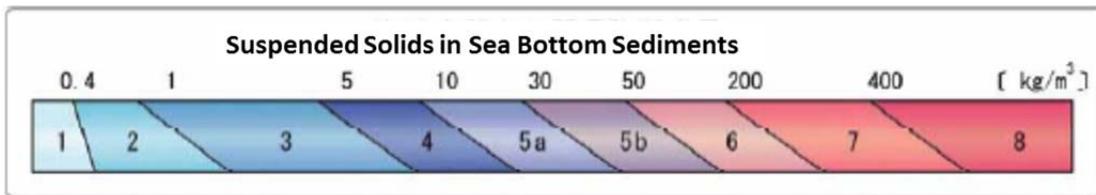
- *After preliminary observation of sampling site and information collection, sampling points are selected.
- *A point that represents the area is selected and sampling points where average sedimentation is found are determined. Selecting a few sampling points will allow you to understand overview of the red soil pollution in the area.
- *Approximately 200 ~ 500 ml of bottom sediment should be sampled.
- *Record the date and place of the sample collected. In continuing the survey, sampling should be done at the same sampling points.



Assessment of Measurement Result

1) Sea Area

- *Sea sediment can be classified into 9 ranks.
- *For rank 1~5b, generation of suspended matter is believed to be nature-based (rocks and sands eroded by waves and matters generated by biological activities).
- *For rank 6 and above, pollution is clearly induced by red soil runoff based on human activities.



Suspended Solids kg/m ³			Sediment Condition and Other Remarks
Min.	Rank	Max.	
	1	< 0.4	Even when bottom sand is stirred, fine particles are not suspended. White sand extends in the area and organisms are hardly observed.
0.4 ≤	2	< 1	Even when bottom sand is stirred, suspended fine particles are not easily observed. White sand extend in the area and organisms are hardly observed.
1 ≤	3	< 5	Suspended fine particles can be observed when bottom sediment is stirred. A live coral reef ecosystem is present. Water transparency is high.
5 ≤	4	< 10	Water becomes slightly turbid when bottom sediment is stirred. A live coral reef ecosystem is present.
10 ≤	5a	< 30	Fine particles are noticeable on bottom sediment surface by careful observation. This rank is equivalent to upper limit of SPSS where a live coral ecosystem is present.
30 ≤	5b	< 50	Dust-like particles cover the sediment surface. Transparency decreases. Adverse effects on coral coverage is noticeable.
50 ≤	6	< 200	Red sediment is noted. Dark particles are suspended when bottom sediment is stirred. Above this rank, it is a clear indication of pollution by red soil runoff caused by man.
200 ≤	7	< 400	Shoe print is clearly noted on tidal flat. Red soil sedimentation is significant with a trace of sand as well. Large colony of branching <i>Acropora</i> is not present.
400 ≤	8		Feet get stuck in what looks like mud. Sand is hardly noticeable. Massive corals with high resistance to sediment are scattered like cactus in a desert.

(2) Rivers

- *Red soil sedimentation at rivers can be classified into 4 ranks.
- *For rank I ~ III, generation of suspended matter is believed to be nature-based (rocks and sands eroded by river flow and the matters generated by biological activities).
- *For rank III and above, pollution is clearly induced by red soil runoff derived from human activities.

(4) SS Transparency – Conversion of Suspended Matter Content

From reading of transparency, red soil content in sediment is calculated. Referring to

Rank	SPSS (kg/m ³)	Assessment
I	10 or less	When sediment is stirred, a slight turbidity is observed. No sedimentation of red soil. When little sand is found in river floor, red soil inflow is minimal.
II	10 - 30	Little red soil sedimentation is found. When sedimentation is stirred, river water become turbid. There is a possibility for a slight red soil inflow.
III	30 - 100	A thin sedimentation of red soil in river surface is found. When one walk through a river, water becomes turbid. When sediment is stirred, water become quite turbid.
IV	100 or over	Red soil sedimentation is observed on river floor surface. A large source can be found upstream or was there in the past.

the table in the following pages will give you quick answers.

You can also view the conversion table at the website of Okinawa Prefecture

*Sea <http://www.eikanken-okinawa.jp/mizuG/akahp/Seatable.htm>

*River <http://www.eikanken-okinawa.jp/mizuG/akahp/Rivertable.htm>

Suspended Solids in Tidal Flats and Ocean Floor (SPSS) Conversion Table (1) kg/m³

Sample Volume
Split Volume
Transparency

試料量	5ml	5ml	5ml	5ml	10ml	25ml	50ml	100ml
分取量	0ml	100ml	50ml	25ml	0ml	0ml	0ml	0ml
透視度 (cm)								
30.0	7.89	39.5	78.9	158	3.95	1.58	0.79	0.39
29.8	7.97	39.9	79.7	159	3.99	1.59	0.8	0.4
29.6	8.05	40.2	80.5	161	4.02	1.61	0.8	0.4
29.4	8.13	40.6	81.3	163	4.06	1.63	0.81	0.41
29.2	8.21	41	82.1	164	4.1	1.64	0.82	0.41
29	8.29	41.4	82.9	166	4.14	1.66	0.83	0.41
28.8	8.37	41.9	83.7	167	4.19	1.67	0.84	0.42
28.6	8.45	42.3	84.5	169	4.23	1.69	0.85	0.42
28.4	8.54	42.7	85.4	171	4.27	1.71	0.85	0.43
28.2	8.62	43.1	86.2	172	4.31	1.72	0.86	0.43
28	8.71	43.6	87.1	174	4.36	1.74	0.87	0.44
27.8	8.8	44	88	176	4.4	1.76	0.88	0.44
27.6	8.89	44.4	88.9	178	4.44	1.78	0.89	0.44
27.4	8.98	44.9	89.8	180	4.49	1.8	0.9	0.45
27.2	9.07	45.4	90.7	181	4.54	1.81	0.91	0.45
27	9.17	45.8	91.7	183	4.58	1.83	0.92	0.46
26.8	9.26	46.3	92.6	185	4.63	1.85	0.93	0.46
26.6	9.36	46.8	93.6	187	4.68	1.87	0.94	0.47
26.4	9.46	47.3	94.6	189	4.73	1.89	0.95	0.47
26.2	9.55	47.8	95.5	191	4.78	1.91	0.96	0.48
26	9.66	48.3	96.6	193	4.83	1.93	0.97	0.48
25.8	9.76	48.8	97.6	195	4.88	1.95	0.98	0.49
25.6	9.86	49.3	98.6	197	4.93	1.97	0.99	0.49
25.4	9.97	49.8	99.7	199	4.98	1.99	1	0.5
25.2	10.1	50.4	101	201	5.04	2.01	1.01	0.5
25	10.2	50.9	102	204	5.09	2.04	1.02	0.51
24.8	10.3	51.5	103	206	5.15	2.06	1.03	0.51
24.6	10.4	52	104	208	5.2	2.08	1.04	0.52
24.4	10.5	52.6	105	210	5.26	2.1	1.05	0.53
24.2	10.6	53.2	106	213	5.32	2.13	1.06	0.53
24	10.8	53.8	108	215	5.38	2.15	1.08	0.54
23.8	10.9	54.4	109	218	5.44	2.18	1.09	0.54
23.6	11	55	110	220	5.5	2.2	1.1	0.55
23.4	11.1	55.6	111	222	5.56	2.22	1.11	0.56
23.2	11.3	56.3	113	225	5.63	2.25	1.13	0.56
23	11.4	56.9	114	228	5.69	2.28	1.14	0.57
22.8	11.5	57.6	115	230	5.76	2.3	1.15	0.58
22.6	11.6	58.2	116	233	5.82	2.33	1.16	0.58
22.4	11.8	58.9	118	236	5.89	2.36	1.18	0.59
22.2	11.9	59.6	119	238	5.96	2.38	1.19	0.6
22	12.1	60.3	121	241	6.03	2.41	1.21	0.6
21.8	12.2	61	122	244	6.1	2.44	1.22	0.61
21.6	12.3	61.7	123	247	6.17	2.47	1.23	0.62
21.4	12.5	62.5	125	250	6.25	2.5	1.25	0.62
21.2	12.6	63.2	126	253	6.32	2.53	1.26	0.63
21	12.8	64	128	256	6.4	2.56	1.28	0.64
20.8	13	64.8	130	259	6.48	2.59	1.3	0.65
20.6	13.1	65.6	131	262	6.56	2.62	1.31	0.66
20.4	13.3	66.4	133	266	6.64	2.66	1.33	0.66
20.2	13.4	67.2	134	269	6.72	2.69	1.34	0.67
20	13.6	68.1	136	272	6.81	2.72	1.36	0.68

Suspended Solids in Tidal Flats and Ocean Floor (SPSS) Conversion Table (2) kg/m³

Sample Volume

Separate Sample

試料量	5ml	5ml	5ml	5ml	10ml	25ml	50ml	100ml
分取量	0ml	100ml	50ml	25ml	0ml	0ml	0ml	0ml
19.8	13.8	69	138	276	6.9	2.76	1.38	0.69
19.6	14	69.9	140	279	6.99	2.79	1.4	0.7
19.4	14.2	70.8	142	283	7.08	2.83	1.42	0.71
19.2	14.3	71.7	143	287	7.17	2.87	1.43	0.72
19	14.5	72.6	145	290	7.26	2.9	1.45	0.73
18.8	14.7	73.6	147	294	7.36	2.94	1.47	0.74
18.6	14.9	74.6	149	298	7.46	2.98	1.49	0.75
18.4	15.1	75.6	151	302	7.56	3.02	1.51	0.76
18.2	15.3	76.6	153	306	7.66	3.06	1.53	0.77
18	15.5	77.6	155	311	7.76	3.11	1.55	0.78
17.8	15.7	78.7	157	315	7.87	3.15	1.57	0.79
17.6	16	79.8	160	319	7.98	3.19	1.6	0.8
17.4	16.2	80.9	162	324	8.09	3.24	1.62	0.81
17.2	16.4	82.1	164	328	8.21	3.28	1.64	0.82
17	16.7	83.3	167	333	8.33	3.33	1.67	0.83
16.8	16.9	84.5	169	338	8.45	3.38	1.69	0.84
16.6	17.1	85.7	171	343	8.57	3.43	1.71	0.86
16.4	17.4	87	174	348	8.7	3.48	1.74	0.87
16.2	17.6	88.2	176	353	8.82	3.53	1.76	0.88
16	17.9	89.6	179	358	8.96	3.58	1.79	0.9
15.8	18.2	90.9	182	364	9.09	3.64	1.82	0.91
15.6	18.5	92.3	185	369	9.23	3.69	1.85	0.92
15.4	18.8	93.8	188	375	9.38	3.75	1.88	0.94
15.2	19	95.2	190	381	9.52	3.81	1.9	0.95
15	19.3	96.7	193	387	9.67	3.87	1.93	0.97
14.8	19.7	98.3	197	393	9.83	3.93	1.97	0.98
14.6	20	99.9	200	399	9.99	3.99	2	1
14.4	20.3	102	203	406	10.2	4.06	2.03	1.02
14.2	20.6	103	206	413	10.3	4.13	2.06	1.03
14	21	105	210	420	10.5	4.2	2.1	1.05
13.8	21.3	107	213	427	10.7	4.27	2.13	1.07
13.6	21.7	109	217	434	10.9	4.34	2.17	1.09
13.4	22.1	110	221	442	11	4.42	2.21	1.1
13.2	22.5	112	225	449	11.2	4.49	2.25	1.12
13	22.9	114	229	457	11.4	4.57	2.29	1.14
12.8	23.3	116	233	466	11.6	4.66	2.33	1.16
12.6	23.7	119	237	474	11.9	4.74	2.37	1.19
12.4	24.1	121	241	483	12.1	4.83	2.41	1.21
12.2	24.6	123	246	492	12.3	4.92	2.46	1.23
12	25.1	125	251	501	12.5	5.01	2.51	1.25
11.8	25.6	128	256	511	12.8	5.11	2.56	1.28
11.6	26.1	130	261	521	13	5.21	2.61	1.3
11.4	26.6	133	266	532	13.3	5.32	2.66	1.33
11.2	27.1	136	271	542	13.6	5.42	2.71	1.36
11	27.7	138	277	554	13.8	5.54	2.77	1.38
10.8	28.3	141	283	565	14.1	5.65	2.83	1.41
10.6	28.9	144	289	577	14.4	5.77	2.89	1.44
10.4	29.5	147	295	590	14.7	5.9	2.95	1.47
10.2	30.1	151	301	603	15.1	6.03	3.01	1.51
10	30.8	154	308	616	15.4	6.16	3.08	1.54

Suspended Solids in Tidal Flats and Ocean Floor (SPSS) Conversion Table (3) kg/m³

Sample Volume

Split Volume

試料量	5ml	5ml	5ml	5ml	10ml	25ml	50ml	100ml
分取量	0ml	100ml	50ml	25ml	0ml	0ml	0ml	0ml
9.8	31.5	158	315	630	15.8	6.3	3.15	1.58
9.6	32.2	161	322	645	16.1	6.45	3.22	1.61
9.4	33	165	330	660	16.5	6.6	3.3	1.65
9.2	33.8	169	338	676	16.9	6.76	3.38	1.69
9	34.6	173	346	692	17.3	6.92	3.46	1.73
8.8	35.5	177	355	710	17.7	7.1	3.55	1.77
8.6	36.4	182	364	728	18.2	7.28	3.64	1.82
8.4	37.3	187	373	747	18.7	7.47	3.73	1.87
8.2	38.3	192	383	767	19.2	7.67	3.83	1.92
8	39.4	197	394	788	19.7	7.88	3.94	1.97
7.8	40.5	202	405	810	20.2	8.1	4.05	2.02
7.6	41.7	208	417	833	20.8	8.33	4.17	2.08
7.4	42.9	214	429	857	21.4	8.57	4.29	2.14
7.2	44.2	221	442	883	22.1	8.83	4.42	2.21
7	45.5	228	455	911	22.8	9.11	4.55	2.28
6.8	47	235	470	939	23.5	9.39	4.7	2.35
6.6	48.5	243	485	970	24.3	9.7	4.85	2.43
6.4	50.1	251	501	1,000	25.1	10	5.01	2.51
6.2	51.9	259	519	1,040	25.9	10.4	5.19	2.59
6	53.7	269	537	1,070	26.9	10.7	5.37	2.69
5.8	55.7	278	557	1,110	27.8	11.1	5.57	2.78
5.6	57.8	289	578	1,160	28.9	11.6	5.78	2.89
5.4	60.1	300	601	1,200	30	12	6.01	3
5.2	62.5	313	625	1,250	31.3	12.5	6.25	3.13
5	65.2	326	652	1,300	32.6	13	6.52	3.26

Suspended Solids in Tidal Flats and Ocean Floor (SPSS) Conversion Table (4) kg/m³

Sample Volume
Split Volume
Transparency

試料量⇒	400ml	200ml	100ml	100ml	100ml	100ml
分取量⇒				100ml	50ml	25ml
透視度 (cm)						
30.0	2	3.9	7.9	39.5	78.9	158
29.8	2	4	8	39.9	79.7	159
29.6	2	4	8	40.2	80.5	161
29.4	2	4.1	8.1	40.6	81.3	163
29.2	2.1	4.1	8.2	41	82.1	164
29	2.1	4.1	8.3	41.4	82.9	166
28.8	2.1	4.2	8.4	41.9	83.7	167
28.6	2.1	4.2	8.5	42.3	84.5	169
28.4	2.1	4.3	8.5	42.7	85.4	171
28.2	2.2	4.3	8.6	43.1	86.2	172
28	2.2	4.4	8.7	43.6	87.1	174
27.8	2.2	4.4	8.8	44	88	176
27.6	2.2	4.4	8.9	44.4	88.9	178
27.4	2.2	4.5	9	44.9	89.8	180
27.2	2.3	4.5	9.1	45.4	90.7	181
27	2.3	4.6	9.2	45.8	91.7	183
26.8	2.3	4.6	9.3	46.3	92.6	185
26.6	2.3	4.7	9.4	46.8	93.6	187
26.4	2.4	4.7	9.5	47.3	94.6	189
26.2	2.4	4.8	9.6	47.8	95.5	191
26	2.4	4.8	9.7	48.3	96.6	193
25.8	2.4	4.9	9.8	48.8	97.6	195
25.6	2.5	4.9	9.9	49.3	98.6	197
25.4	2.5	5	10	49.8	99.7	199
25.2	2.5	5	10.1	50.4	101	201
25	2.5	5.1	10.2	50.9	102	204
24.8	2.6	5.1	10.3	51.5	103	206
24.6	2.6	5.2	10.4	52	104	208
24.4	2.6	5.3	10.5	52.6	105	210
24.2	2.7	5.3	10.6	53.2	106	213
24	2.7	5.4	10.8	53.8	108	215
23.8	2.7	5.4	10.9	54.4	109	218
23.6	2.7	5.5	11	55	110	220
23.4	2.8	5.6	11.1	55.6	111	222
23.2	2.8	5.6	11.3	56.3	113	225
23	2.8	5.7	11.4	56.9	114	228
22.8	2.9	5.8	11.5	57.6	115	230
22.6	2.9	5.8	11.6	58.2	116	233
22.4	2.9	5.9	11.8	58.9	118	236
22.2	3	6	11.9	59.6	119	238
22	3	6	12.1	60.3	121	241
21.8	3.1	6.1	12.2	61	122	244
21.6	3.1	6.2	12.3	61.7	123	247
21.4	3.1	6.2	12.5	62.5	125	250
21.2	3.2	6.3	12.6	63.2	126	253
21	3.2	6.4	12.8	64	128	256
20.8	3.2	6.5	13	64.8	130	259
20.6	3.3	6.6	13.1	65.6	131	262
20.4	3.3	6.6	13.3	66.4	133	266
20.2	3.4	6.7	13.4	67.2	134	269
20	3.4	6.8	13.6	68.1	136	272

Suspended Solids in Tidal Flats and Ocean Floor (SPSS) Conversion Table (5) kg/m³

Sample Volume

Split Volume

試料量⇒	400ml	200ml	100ml	100ml	100ml	100ml
分取量⇒				100ml	50ml	25ml
19.8	3.4	6.9	13.8	69	138	276
19.6	3.5	7	14	69.9	140	279
19.4	3.5	7.1	14.2	70.8	142	283
19.2	3.6	7.2	14.3	71.7	143	287
19	3.6	7.3	14.5	72.6	145	290
18.8	3.7	7.4	14.7	73.6	147	294
18.6	3.7	7.5	14.9	74.6	149	298
18.4	3.8	7.6	15.1	75.6	151	302
18.2	3.8	7.7	15.3	76.6	153	306
18	3.9	7.8	15.5	77.6	155	311
17.8	3.9	7.9	15.7	78.7	157	315
17.6	4	8	16	79.8	160	319
17.4	4	8.1	16.2	80.9	162	324
17.2	4.1	8.2	16.4	82.1	164	328
17	4.2	8.3	16.7	83.3	167	333
16.8	4.2	8.4	16.9	84.5	169	338
16.6	4.3	8.6	17.1	85.7	171	343
16.4	4.3	8.7	17.4	87	174	348
16.2	4.4	8.8	17.6	88.2	176	353
16	4.5	9	17.9	89.6	179	358
15.8	4.5	9.1	18.2	90.9	182	364
15.6	4.6	9.2	18.5	92.3	185	369
15.4	4.7	9.4	18.8	93.8	188	375
15.2	4.8	9.5	19	95.2	190	381
15	4.8	9.7	19.3	96.7	193	387
14.8	4.9	9.8	19.7	98.3	197	393
14.6	5	10	20	99.9	200	399
14.4	5.1	10.2	20.3	102	203	406
14.2	5.2	10.3	20.6	103	206	413
14	5.2	10.5	21	105	210	420
13.8	5.3	10.7	21.3	107	213	427
13.6	5.4	10.9	21.7	109	217	434
13.4	5.5	11	22.1	110	221	442
13.2	5.6	11.2	22.5	112	225	449
13	5.7	11.4	22.9	114	229	457
12.8	5.8	11.6	23.3	116	233	466
12.6	5.9	11.9	23.7	119	237	474
12.4	6	12.1	24.1	121	241	483
12.2	6.2	12.3	24.6	123	246	492
12	6.3	12.5	25.1	125	251	501
11.8	6.4	12.8	25.6	128	256	511
11.6	6.5	13	26.1	130	261	521
11.4	6.6	13.3	26.6	133	266	532
11.2	6.8	13.6	27.1	136	271	542
11	6.9	13.8	27.7	138	277	554
10.8	7.1	14.1	28.3	141	283	565
10.6	7.2	14.4	28.9	144	289	577
10.4	7.4	14.7	29.5	147	295	590
10.2	7.5	15.1	30.1	151	301	603

Suspended Solids in Tidal Flats and Ocean Floor (SPSS) Conversion Table (6) kg/m³

Sample Volume

Split Volume

試料量⇒	400ml	200ml	100ml	100ml	100ml	100ml
分取量⇒				100ml	50ml	25ml
9.8	7.9	15.8	31.5	158	315	630
9.6	8.1	16.1	32.2	161	322	645
9.4	8.2	16.5	33	165	330	660
9.2	8.4	16.9	33.8	169	338	676
9	8.7	17.3	34.6	173	346	692
8.8	8.9	17.7	35.5	177	355	710
8.6	9.1	18.2	36.4	182	364	728
8.4	9.3	18.7	37.3	187	373	747
8.2	9.6	19.2	38.3	192	383	767
8	9.8	19.7	39.4	197	394	788
7.8	10.1	20.2	40.5	202	405	810
7.6	10.4	20.8	41.7	208	417	833
7.4	10.7	21.4	42.9	214	429	857
7.2	11	22.1	44.2	221	442	883
7	11.4	22.8	45.5	228	455	911
6.8	11.7	23.5	47	235	470	939
6.6	12.1	24.3	48.5	243	485	970
6.4	12.5	25.1	50.1	251	501	1,000
6.2	13	25.9	51.9	259	519	1,040
6	13.4	26.9	53.7	269	537	1,070
5.8	13.9	27.8	55.7	278	557	1,110
5.6	14.4	28.9	57.8	289	578	1,160
5.4	15	30	60.1	300	601	1,200
5.2	15.6	31.3	62.5	313	625	1,250
5	16.3	32.6	65.2	326	652	1,300