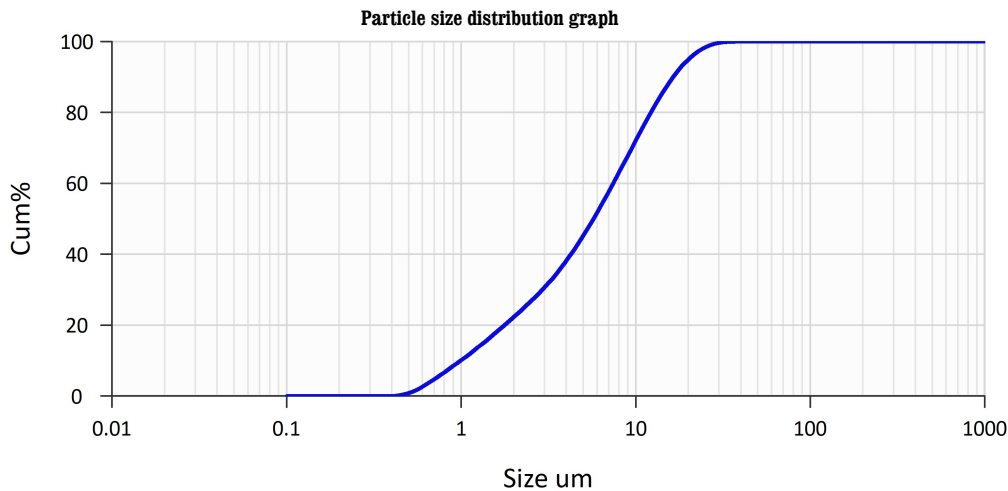


Bettersizer ST Particle Size Analysis Report

Range : 0.10um - 1000um

Sample : sample 25-Average	Number : 1	Sample Source : Bettersize	
Operator : mahmoud	Test Time : 2026-04-18 11:30:17	Measured By : Bettersize	
Particle RI : 1.52	Particle AR : 0.5	Medium RI : 1.333	
Optical : Mie	Mode : General	Distribution : Volume	
Sampling:	Speed (rpm): 1550	Ultrasound: Always ON, 35W, 60s, 0s	
Medium : Water	Dispersant :	Remark :	
D[4,3]: 7.355 um	D[3,2]: 2.734 um	D[1,0]: 0.747 um	Peak Size: 9.177 um
SPAN: 2.680	SSA: 812.7m ² /kg	Residual: 0.518 %	Obscuration: 12.07 %
D03 = 0.612 um	D06 = 0.758 um	D10 = 0.988 um	D16 = 1.415 um
D75 = 10.73 um	D50 = 5.708 um	D84 = 13.58 um	D90 = 16.29 um
D25 = 2.292 um	D97 = 22.44 um		



Diam um	Percent
0.050	0.00
0.100	0.00
0.200	0.00
0.500	0.88
1.000	10.18
2.000	22.36
5.000	45.33
10.00	72.17
20.00	94.99
45.00	100.00

Particle size distribution table

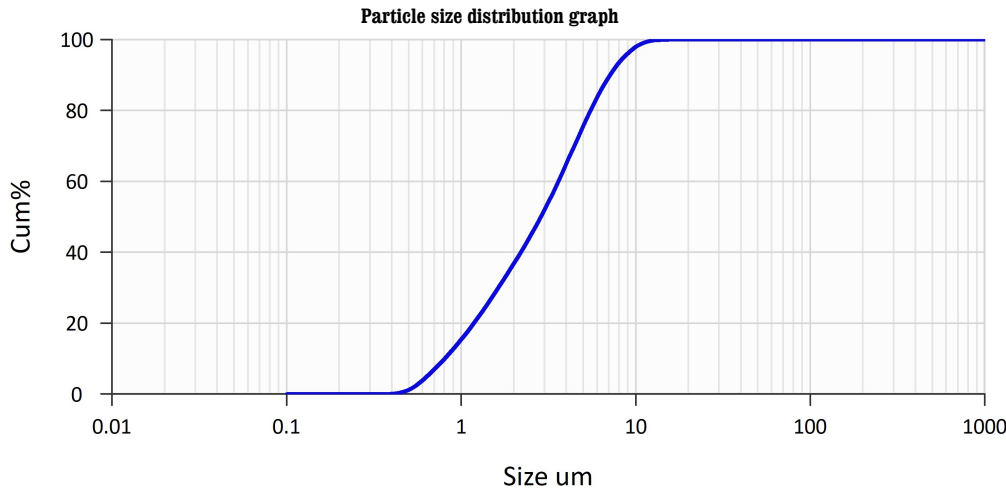
Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%
0.100-0.111	0.00	0.00	0.999-1.115	1.76	11.93	9.999-11.15	4.38	76.55	99.99-111.5	0.00	100.00
0.111-0.124	0.00	0.00	1.115-1.245	1.84	13.77	11.15-12.45	4.27	80.82	111.5-124.5	0.00	100.00
0.124-0.138	0.00	0.00	1.245-1.389	1.89	15.66	12.45-13.89	3.96	84.78	124.5-138.9	0.00	100.00
0.138-0.155	0.00	0.00	1.389-1.550	1.97	17.63	13.89-15.50	3.63	88.41	138.9-155.0	0.00	100.00
0.155-0.173	0.00	0.00	1.550-1.730	2.01	19.64	15.50-17.30	3.20	91.61	155.0-173.0	0.00	100.00
0.173-0.193	0.00	0.00	1.730-1.930	2.06	21.70	17.30-19.30	2.66	94.27	173.0-193.0	0.00	100.00
0.193-0.215	0.00	0.00	1.930-2.154	2.10	23.80	19.30-21.54	2.12	96.39	193.0-215.4	0.00	100.00
0.215-0.240	0.00	0.00	2.154-2.404	2.17	25.97	21.54-24.04	1.58	97.97	215.4-240.4	0.00	100.00
0.240-0.268	0.00	0.00	2.404-2.682	2.26	28.23	24.04-26.82	1.08	99.05	240.4-268.2	0.00	100.00
0.268-0.299	0.00	0.00	2.682-2.993	2.43	30.66	26.82-29.93	0.62	99.67	268.2-299.3	0.00	100.00
0.299-0.334	0.00	0.00	2.993-3.340	2.64	33.30	29.93-33.40	0.25	99.92	299.3-334.0	0.00	100.00
0.334-0.372	0.02	0.02	3.340-3.727	2.90	36.20	33.40-37.27	0.07	99.99	334.0-372.7	0.00	100.00
0.372-0.415	0.10	0.12	3.727-4.159	3.17	39.37	37.27-41.59	0.01	100.00	372.7-415.9	0.00	100.00
0.415-0.464	0.33	0.45	4.159-4.641	3.45	42.82	41.59-46.41	0.00	100.00	415.9-464.1	0.00	100.00
0.464-0.517	0.69	1.14	4.641-5.179	3.70	46.52	46.41-51.79	0.00	100.00	464.1-517.9	0.00	100.00
0.517-0.577	1.10	2.24	5.179-5.779	3.92	50.44	51.79-57.79	0.00	100.00	517.9-577.9	0.00	100.00
0.577-0.644	1.43	3.67	5.779-6.449	4.11	54.55	57.79-64.48	0.00	100.00	577.9-644.9	0.00	100.00
0.644-0.719	1.55	5.22	6.449-7.196	4.28	58.83	64.48-71.96	0.00	100.00	644.9-719.6	0.00	100.00
0.719-0.803	1.63	6.85	7.196-8.029	4.41	63.24	71.96-80.30	0.00	100.00	719.6-803.0	0.00	100.00
0.803-0.896	1.64	8.49	8.029-8.961	4.44	67.68	80.30-89.61	0.00	100.00	803.0-896.1	0.00	100.00
0.896-0.999	1.68	10.17	8.961-9.999	4.49	72.17	89.61-99.99	0.00	100.00	896.1-1000	0.00	100.00

Bettersizer ST Particle Size Analysis Report

Range : 0.10um - 1000um

Sample : sample 10-Average	Number : 1	Sample Source : Bettersize
Operator : mahmoud	Test Time : 2026-04-18 11:18:41	Measured By : Bettersize
Particle RI : 1.52	Particle AR : 0.5	Medium RI : 1.333
Optical : Mie	Mode : General	Distribution : Volume
Sampling:	Speed (rpm): 1550	Ultrasound: Always ON, 35W, 60s, 0s
Medium : Water	Dispersant :	Remark :

D[4,3]: 3.462 um	D[3,2]: 1.864 um	D[1,0]: 0.764 um	Peak Size: 4.317 um
SPAN: 2.206	SSA: 1191m ² /kg	Residual: 0.351 %	Obscuration: 13.71 %
D03 = 0.569 um	D06 = 0.667 um	D10 = 0.800 um	D16 = 1.021 um
D75 = 4.921 um	D50 = 2.854 um	D84 = 6.045 um	D90 = 7.097 um



Diam um	Percent
0.020	0.00
0.050	0.00
0.100	0.00
0.200	0.00
0.500	1.25
1.000	15.43
2.000	36.81
5.000	75.75
10.00	97.97
20.00	100.00

Particle size distribution table

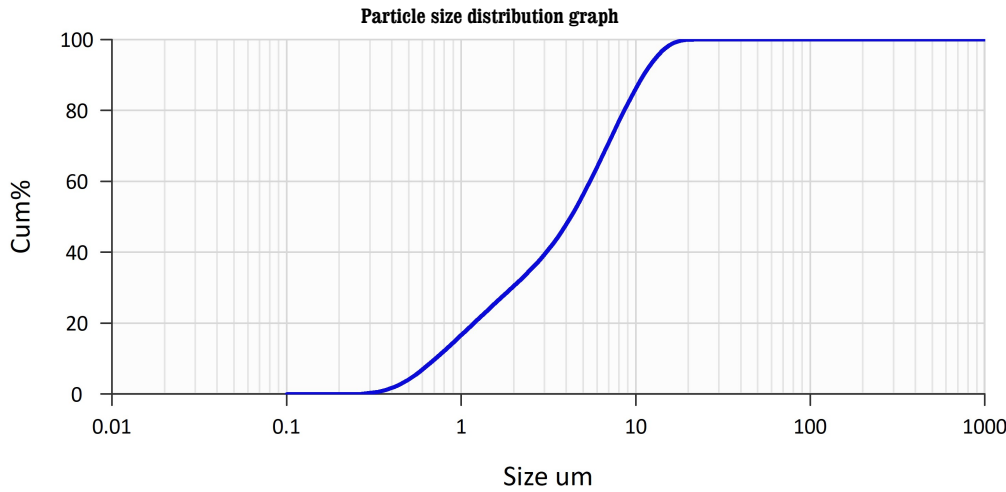
Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%
0.100-0.111	0.00	0.00	0.999-1.115	2.98	18.39	9.999-11.15	1.18	99.15	99.99-111.5	0.00	100.00
0.111-0.124	0.00	0.00	1.115-1.245	3.21	21.60	11.15-12.45	0.60	99.75	111.5-124.5	0.00	100.00
0.124-0.138	0.00	0.00	1.245-1.389	3.34	24.94	12.45-13.89	0.21	99.96	124.5-138.9	0.00	100.00
0.138-0.155	0.00	0.00	1.389-1.550	3.48	28.42	13.89-15.50	0.04	100.00	138.9-155.0	0.00	100.00
0.155-0.173	0.00	0.00	1.550-1.730	3.57	31.99	15.50-17.30	0.00	100.00	155.0-173.0	0.00	100.00
0.173-0.193	0.00	0.00	1.730-1.930	3.64	35.63	17.30-19.30	0.00	100.00	173.0-193.0	0.00	100.00
0.193-0.215	0.00	0.00	1.930-2.154	3.78	39.41	19.30-21.54	0.00	100.00	193.0-215.4	0.00	100.00
0.215-0.240	0.00	0.00	2.154-2.404	3.94	43.35	21.54-24.04	0.00	100.00	215.4-240.4	0.00	100.00
0.240-0.268	0.00	0.00	2.404-2.682	4.17	47.52	24.04-26.82	0.00	100.00	240.4-268.2	0.00	100.00
0.268-0.299	0.00	0.00	2.682-2.993	4.44	51.96	26.82-29.93	0.00	100.00	268.2-299.3	0.00	100.00
0.299-0.334	0.00	0.00	2.993-3.340	4.73	56.69	29.93-33.40	0.00	100.00	299.3-334.0	0.00	100.00
0.334-0.372	0.02	0.02	3.340-3.727	5.01	61.70	33.40-37.27	0.00	100.00	334.0-372.7	0.00	100.00
0.372-0.415	0.14	0.16	3.727-4.159	5.19	66.89	37.27-41.59	0.00	100.00	372.7-415.9	0.00	100.00
0.415-0.464	0.47	0.63	4.159-4.641	5.25	72.14	41.59-46.41	0.00	100.00	415.9-464.1	0.00	100.00
0.464-0.517	0.99	1.62	4.641-5.179	5.15	77.29	46.41-51.79	0.00	100.00	464.1-517.9	0.00	100.00
0.517-0.577	1.59	3.21	5.179-5.779	4.87	82.16	51.79-57.79	0.00	100.00	517.9-577.9	0.00	100.00
0.577-0.644	2.07	5.28	5.779-6.449	4.42	86.58	57.79-64.48	0.00	100.00	577.9-644.9	0.00	100.00
0.644-0.719	2.32	7.60	6.449-7.196	3.84	90.42	64.48-71.96	0.00	100.00	644.9-719.6	0.00	100.00
0.719-0.803	2.48	10.08	7.196-8.029	3.21	93.63	71.96-80.30	0.00	100.00	719.6-803.0	0.00	100.00
0.803-0.896	2.58	12.66	8.029-8.961	2.48	96.11	80.30-89.61	0.00	100.00	803.0-896.1	0.00	100.00
0.896-0.999	2.75	15.41	8.961-9.999	1.86	97.97	89.61-99.99	0.00	100.00	896.1-1000	0.00	100.00

Bettersizer ST Particle Size Analysis Report

Range : 0.10um - 1000um

Sample :	es20-2-2	Number :	2	Sample Source :	Bettersize
Operator :	mahmoud	Test Time :	2025-10-16 12:48:31	Measured By :	Bettersize
Particle RI :	1.52	Particle AR :	0.1	Medium RI :	1.333
Optical :	Mie	Mode :	General	Distribution :	Volume
Sampling:		Speed (rpm):	1200	Ultrasound:	Always ON, 35W, 60s, 0s
Medium :	Water	Dispersant :		Remark :	

D[4,3]:	5.091 um	D[3,2]:	1.930 um	D[1,0]:	0.525 um	Peak Size:	6.878 um		
SPAN:	2.449	SSA:	1150m ² /kg	Residual:	0.441 %	Obscuration:	12.65 %		
D03 =	0.455 um	D06 =	0.564 um	D10 =	0.709 um	D16 =	0.966 um	D25 =	1.507 um
D75 =	7.661 um	D50 =	4.238 um	D84 =	9.458 um	D90 =	11.08 um	D97 =	14.26 um



Diam um	Percent
0.050	0.00
0.100	0.00
0.200	0.00
0.500	4.19
1.000	16.70
2.000	30.50
5.000	56.38
10.00	86.25
20.00	99.95
45.00	100.00

Particle size distribution table

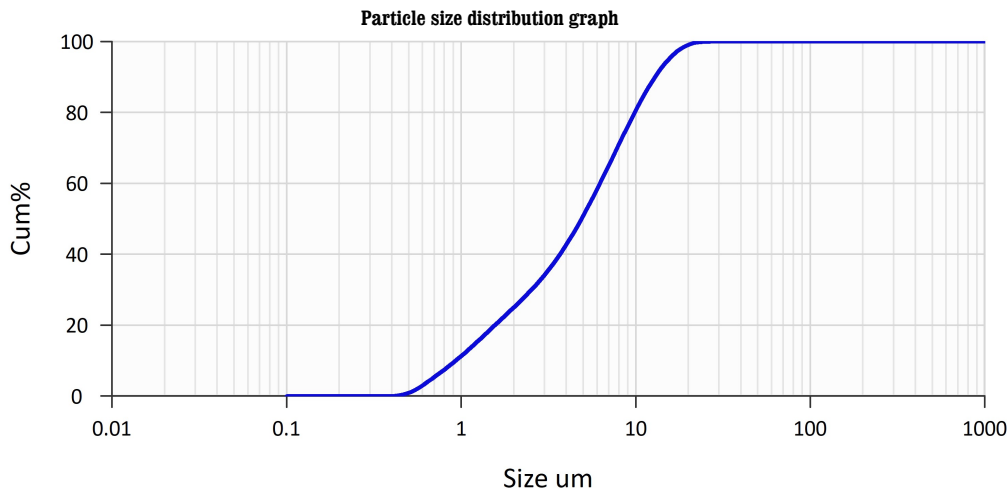
Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%
0.100-0.111	0.00	0.00	0.999-1.115	2.23	18.91	9.999-11.15	3.95	90.20	99.99-111.5	0.00	100.00
0.111-0.124	0.00	0.00	1.115-1.245	2.23	21.14	11.15-12.45	3.45	93.65	111.5-124.5	0.00	100.00
0.124-0.138	0.00	0.00	1.245-1.389	2.19	23.33	12.45-13.89	2.75	96.40	124.5-138.9	0.00	100.00
0.138-0.155	0.00	0.00	1.389-1.550	2.19	25.52	13.89-15.50	1.96	98.36	138.9-155.0	0.00	100.00
0.155-0.173	0.00	0.00	1.550-1.730	2.15	27.67	15.50-17.30	1.12	99.48	155.0-173.0	0.00	100.00
0.173-0.193	0.00	0.00	1.730-1.930	2.15	29.82	17.30-19.30	0.43	99.91	173.0-193.0	0.00	100.00
0.193-0.215	0.00	0.00	1.930-2.154	2.19	32.01	19.30-21.54	0.09	100.00	193.0-215.4	0.00	100.00
0.215-0.240	0.04	0.04	2.154-2.404	2.28	34.29	21.54-24.04	0.00	100.00	215.4-240.4	0.00	100.00
0.240-0.268	0.09	0.13	2.404-2.682	2.43	36.72	24.04-26.82	0.00	100.00	240.4-268.2	0.00	100.00
0.268-0.299	0.21	0.34	2.682-2.993	2.67	39.39	26.82-29.93	0.00	100.00	268.2-299.3	0.00	100.00
0.299-0.334	0.37	0.71	2.993-3.340	2.95	42.34	29.93-33.40	0.00	100.00	299.3-334.0	0.00	100.00
0.334-0.372	0.56	1.27	3.340-3.727	3.30	45.64	33.40-37.27	0.00	100.00	334.0-372.7	0.00	100.00
0.372-0.415	0.83	2.10	3.727-4.159	3.69	49.33	37.27-41.59	0.00	100.00	372.7-415.9	0.00	100.00
0.415-0.464	1.13	3.23	4.159-4.641	4.06	53.39	41.59-46.41	0.00	100.00	415.9-464.1	0.00	100.00
0.464-0.517	1.43	4.66	4.641-5.179	4.41	57.80	46.41-51.79	0.00	100.00	464.1-517.9	0.00	100.00
0.517-0.577	1.70	6.36	5.179-5.779	4.68	62.48	51.79-57.79	0.00	100.00	517.9-577.9	0.00	100.00
0.577-0.644	1.89	8.25	5.779-6.449	4.85	67.33	57.79-64.48	0.00	100.00	577.9-644.9	0.00	100.00
0.644-0.719	2.01	10.26	6.449-7.196	4.94	72.27	64.48-71.96	0.00	100.00	644.9-719.6	0.00	100.00
0.719-0.803	2.10	12.36	7.196-8.029	4.89	77.16	71.96-80.30	0.00	100.00	719.6-803.0	0.00	100.00
0.803-0.896	2.14	14.50	8.029-8.961	4.68	81.84	80.30-89.61	0.00	100.00	803.0-896.1	0.00	100.00
0.896-0.999	2.18	16.68	8.961-9.999	4.41	86.25	89.61-99.99	0.00	100.00	896.1-1000	0.00	100.00

Bettersizer ST Particle Size Analysis Report

Range : 0.10um - 1000um

Sample : sample 20-Average	Number : 1	Sample Source : Bettersize
Operator : mahmoud	Test Time : 2026-04-18 11:58:42	Measured By : Bettersize
Particle RI : 1.52	Particle AR : 0.5	Medium RI : 1.333
Optical : Mie	Mode : General	Distribution : Volume
Sampling:	Speed (rpm): 1550	Ultrasound: Always ON, 35W, 60s, 0s
Medium : Water	Dispersant :	Remark :

D[4,3]: 5.972 um	D[3,2]: 2.482 um	D[1,0]: 0.746 um	Peak Size: 7.542 um
SPAN: 2.438	SSA: 895.1m ² /kg	Residual: 0.428 %	Obscuration: 18.90 %
D03 = 0.597 um	D06 = 0.727 um	D10 = 0.924 um	D16 = 1.275 um
D75 = 8.764 um	D50 = 4.882 um	D84 = 10.87 um	D90 = 12.82 um
			D25 = 1.996 um
			D97 = 16.98 um



Diam um	Percent
0.050	0.00
0.100	0.00
0.200	0.00
0.500	0.99
1.000	11.37
2.000	25.03
5.000	50.94
10.00	80.66
20.00	99.07
45.00	100.00

Particle size distribution table

Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%
0.100-0.111	0.00	0.00	0.999-1.115	2.03	13.38	9.999-11.15	4.33	84.98	99.99-111.5	0.00	100.00
0.111-0.124	0.00	0.00	1.115-1.245	2.14	15.52	11.15-12.45	3.95	88.93	111.5-124.5	0.00	100.00
0.124-0.138	0.00	0.00	1.245-1.389	2.17	17.69	12.45-13.89	3.40	92.33	124.5-138.9	0.00	100.00
0.138-0.155	0.00	0.00	1.389-1.550	2.21	19.90	13.89-15.50	2.80	95.13	138.9-155.0	0.00	100.00
0.155-0.173	0.00	0.00	1.550-1.730	2.21	22.11	15.50-17.30	2.15	97.28	155.0-173.0	0.00	100.00
0.173-0.193	0.00	0.00	1.730-1.930	2.21	24.32	17.30-19.30	1.48	98.76	173.0-193.0	0.00	100.00
0.193-0.215	0.00	0.00	1.930-2.154	2.27	26.59	19.30-21.54	0.84	99.60	193.0-215.4	0.00	100.00
0.215-0.240	0.00	0.00	2.154-2.404	2.35	28.94	21.54-24.04	0.33	99.93	215.4-240.4	0.00	100.00
0.240-0.268	0.00	0.00	2.404-2.682	2.51	31.45	24.04-26.82	0.07	100.00	240.4-268.2	0.00	100.00
0.268-0.299	0.00	0.00	2.682-2.993	2.73	34.18	26.82-29.93	0.00	100.00	268.2-299.3	0.00	100.00
0.299-0.334	0.00	0.00	2.993-3.340	2.99	37.17	29.93-33.40	0.00	100.00	299.3-334.0	0.00	100.00
0.334-0.372	0.02	0.02	3.340-3.727	3.30	40.47	33.40-37.27	0.00	100.00	334.0-372.7	0.00	100.00
0.372-0.415	0.11	0.13	3.727-4.159	3.63	44.10	37.27-41.59	0.00	100.00	372.7-415.9	0.00	100.00
0.415-0.464	0.37	0.50	4.159-4.641	3.95	48.05	41.59-46.41	0.00	100.00	415.9-464.1	0.00	100.00
0.464-0.517	0.77	1.27	4.641-5.179	4.26	52.31	46.41-51.79	0.00	100.00	464.1-517.9	0.00	100.00
0.517-0.577	1.24	2.51	5.179-5.779	4.51	56.82	51.79-57.79	0.00	100.00	517.9-577.9	0.00	100.00
0.577-0.644	1.58	4.09	5.779-6.449	4.71	61.53	57.79-64.48	0.00	100.00	577.9-644.9	0.00	100.00
0.644-0.719	1.72	5.81	6.449-7.196	4.83	66.36	64.48-71.96	0.00	100.00	644.9-719.6	0.00	100.00
0.719-0.803	1.80	7.61	7.196-8.029	4.87	71.23	71.96-80.30	0.00	100.00	719.6-803.0	0.00	100.00
0.803-0.896	1.83	9.44	8.029-8.961	4.78	76.01	80.30-89.61	0.00	100.00	803.0-896.1	0.00	100.00
0.896-0.999	1.91	11.35	8.961-9.999	4.64	80.65	89.61-99.99	0.00	100.00	896.1-1000	0.00	100.00