

# Quality Control Statistical Summary

Onshore Grab Sample: PI-04-BB

Sample Taken By: D. Phelps  
 Sample Taken On: 10/09/09  
 County: Pinellas

Latitude: 28° 05' 43.3"  
 Longitude: 82° 50' 8.3"  
 Datum: WGS 84

Statistical Results: Pre-CaCO3		
	Duplicate	Original
Mean:	2.4285 phi (0.1858 mm)	2.4479 phi (0.1833 mm)
Standard Dev:	0.3417 phi-units (0.7891 mm)	0.3338 phi-units (0.7934 mm)
Skewness:	-0.4960 dimensionless	-0.4114 dimensionless
Kurtosis:	5.8096 dimensionless	4.7602 dimensionless
5th Moment:	-21.3749 dimensionless	-13.9959 dimensionless
6th Moment:	175.3201 dimensionless	113.4835 dimensionless
RARD*:	0.1407 dimensionless	0.1364 dimensionless
Median:	2.3087 phi (0.2018 mm)	2.3324 phi (0.1986 mm)

Statistical Results: CaCO3		
	Duplicate	Original
Mean:	2.5148 phi (0.175 mm)	2.7362 phi (0.1501 mm)
Standard Dev:	0.4941 phi-units (0.71 mm)	0.3460 phi-units (0.7868 mm)
Skewness:	-0.4411 dimensionless	-4.5846 dimensionless
Kurtosis:	2.1870 dimensionless	32.9225 dimensionless
5th Moment:	-2.3703 dimensionless	##### dimensionless
6th Moment:	7.0023 dimensionless	##### dimensionless
RARD*:	0.1965 dimensionless	0.1264 dimensionless
Median:	2.3425 phi (0.1972 mm)	2.6430 phi (0.1601 mm)

Statistical Results: Post-CaCO3		
	Duplicate	Original
Mean:	2.4280 phi (0.1858 mm)	2.4315 phi (0.1854 mm)
Standard Dev:	0.3414 phi-units (0.7893 mm)	0.3242 phi-units (0.7987 mm)
Skewness:	-0.5748 dimensionless	-0.2309 dimensionless
Kurtosis:	6.5200 dimensionless	4.3685 dimensionless
5th Moment:	-23.7597 dimensionless	-7.5149 dimensionless
6th Moment:	200.9103 dimensionless	76.4772 dimensionless
RARD*:	0.1406 dimensionless	0.1333 dimensionless
Median:	2.3125 phi (0.2013 mm)	2.3074 phi (0.202 mm)

Additional Data	
<b>Total Fines</b>	
Original:	0.22 %
Duplicate:	0.11 %
<b>Total Carbonates</b>	
Original:	4.34 %
Duplicate:	2.02 %

Statistical Explanation	
Calculations based on the Method of Moments Skewness: 3rd Stand. Moment; Exact Gaussian = 0.0 Kurtosis: 4th Stand. Moment; Exact Gaussian = 3.0 Millimeter data calculated by $mm = 2^{\sqrt{-\phi}}$	
* Reciprocal Absolute Relative Dispersion (RARD) Scale	
< 0.5	Excellent homogeneity (e.g., beaches)
0.5 to 1.0	Good homogeneity
1.0 to 1.33	Fair homogeneity
> 1.33	Poor homogeneity (e.g., glacial)

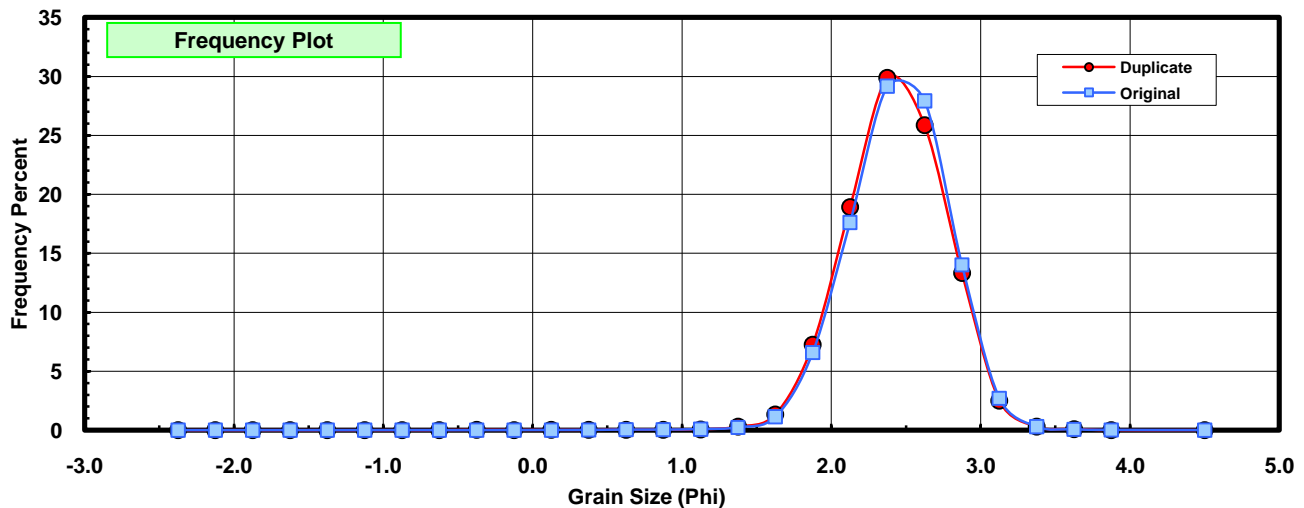
# Pre-Digestion Grain Size Distribution

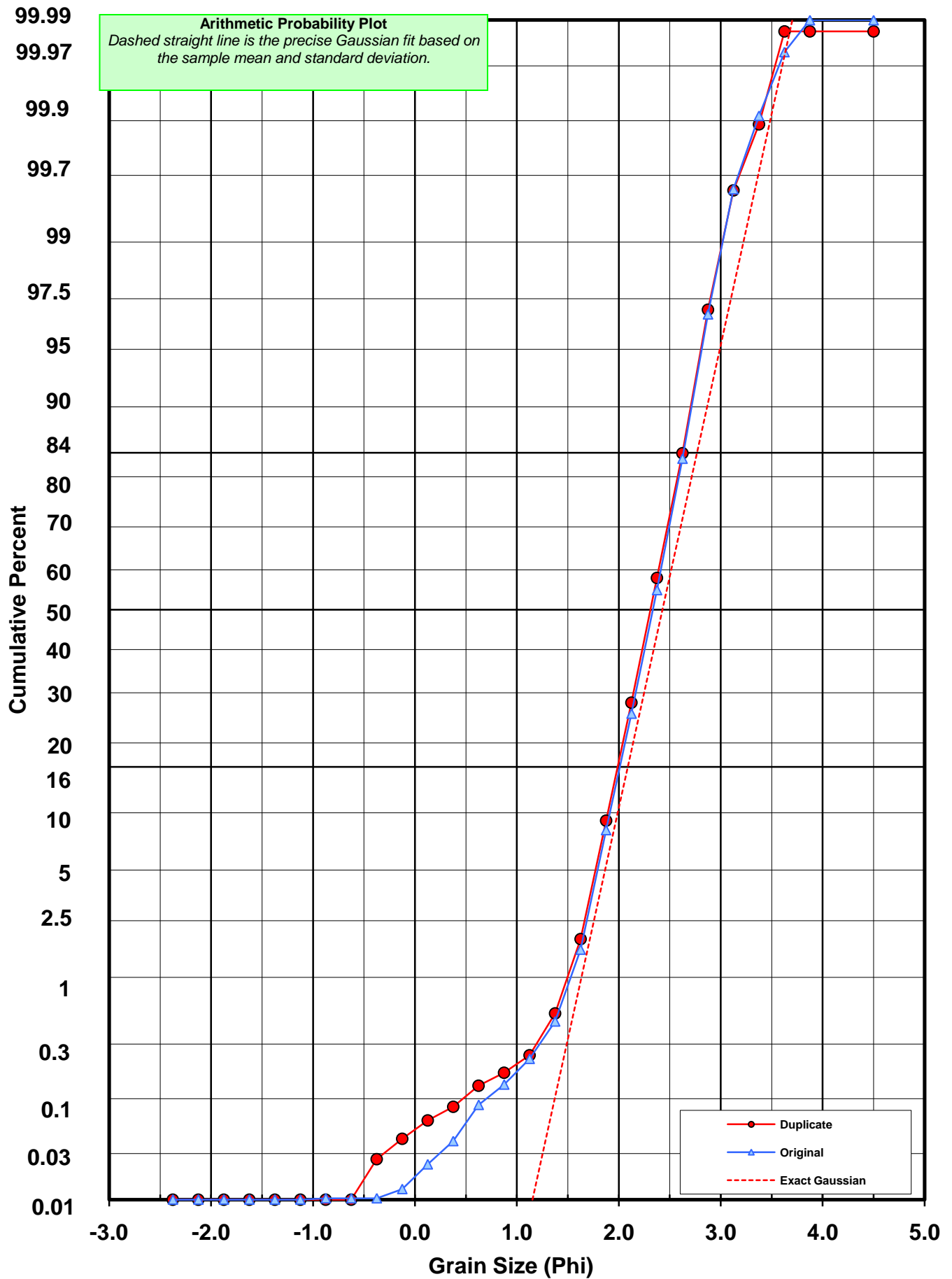
Onshore Grab Sample: PI-04-BB

Total Duplicate Sample Mass: 48.524 grams

Total Original Sample Mass: 51.158 grams

Sieve Size (phi)	Sieve Midpt (phi)	Weight of Dupl (grams)	Freq Weight %	Cumulative Weight %	Weight of Original (grams)	Freq Weight %	Cumulative Weight %
-2.25	-2.375	0.000	0.000	0.000	0.000	0.000	0.000
-2.00	-2.125	0.000	0.000	0.000	0.000	0.000	0.000
-1.75	-1.875	0.000	0.000	0.000	0.000	0.000	0.000
-1.50	-1.625	0.000	0.000	0.000	0.000	0.000	0.000
-1.25	-1.375	0.000	0.000	0.000	0.000	0.000	0.000
-1.00	-1.125	0.000	0.000	0.000	0.000	0.000	0.000
-0.75	-0.875	0.000	0.000	0.000	0.002	0.004	0.004
-0.50	-0.625	0.000	0.000	0.000	0.000	0.000	0.004
-0.25	-0.375	0.013	0.027	0.027	0.000	0.000	0.004
0.00	-0.125	0.008	0.016	0.043	0.003	0.006	0.010
0.25	0.125	0.010	0.021	0.064	0.007	0.014	0.023
0.50	0.375	0.010	0.021	0.084	0.009	0.018	0.041
0.75	0.625	0.022	0.045	0.130	0.024	0.047	0.088
1.00	0.875	0.019	0.039	0.169	0.023	0.045	0.133
1.25	1.125	0.034	0.070	0.239	0.046	0.090	0.223
1.50	1.375	0.144	0.297	0.536	0.122	0.238	0.461
1.75	1.625	0.653	1.346	1.882	0.582	1.138	1.599
2.00	1.875	3.521	7.256	9.138	3.367	6.582	8.181
2.25	2.125	9.178	18.914	28.052	9.012	17.616	25.797
2.50	2.375	14.493	29.868	57.920	14.924	29.172	54.969
2.75	2.625	12.544	25.851	83.771	14.283	27.919	82.888
3.00	2.875	6.467	13.327	97.098	7.172	14.019	96.908
3.25	3.125	1.215	2.504	99.602	1.383	2.703	99.611
3.50	3.375	0.141	0.291	99.893	0.153	0.299	99.910
3.75	3.625	0.047	0.097	99.990	0.035	0.068	99.978
4.00	3.875	0.000	0.000	99.990	0.010	0.020	99.998
5.00	4.500	0.005	0.010	100.000	0.001	0.002	100.000



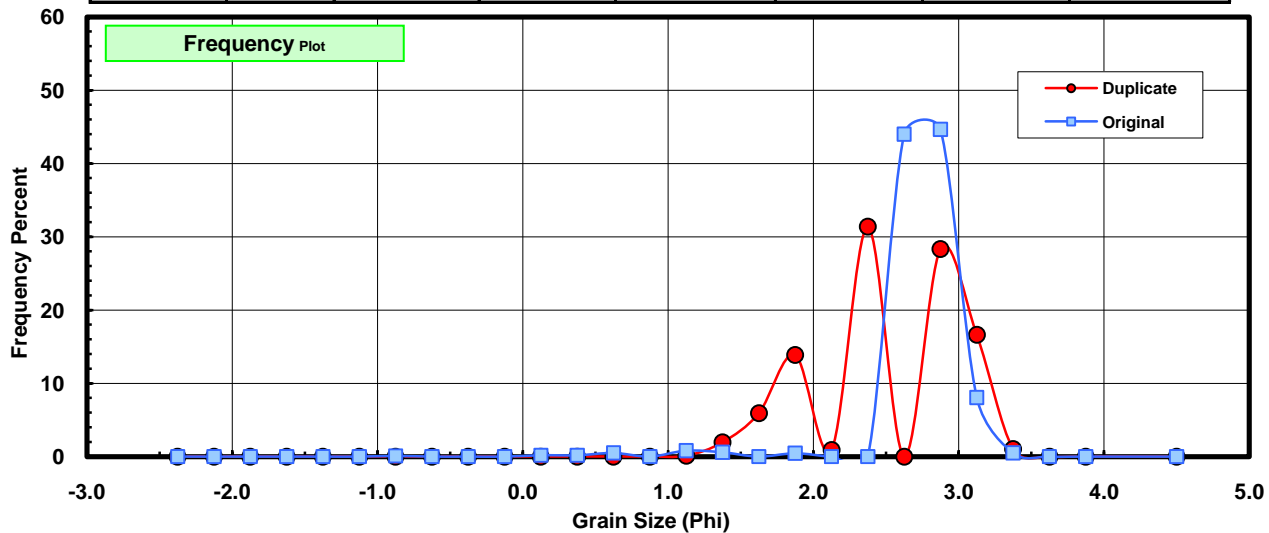


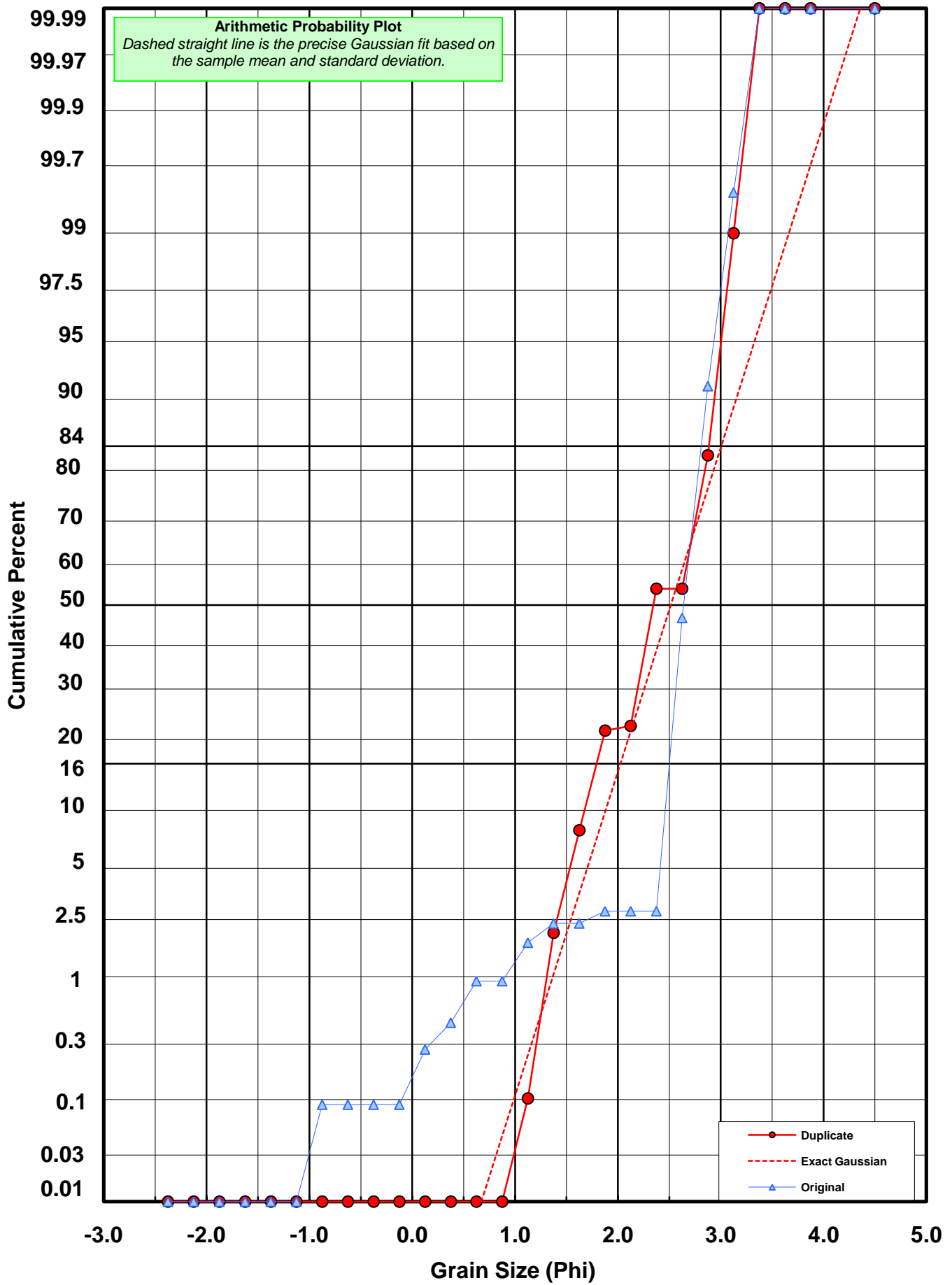
# Carbonate Grain Size Distribution

Onshore Grab Sample: PI-04-BB

**Total Duplicate Carbonate Mass:** 0.982 grams  
**% Carbonate in Duplicate:** 2.0 %  
**Total Original Carbonate Mass:** 2.219 grams  
**% Carbonate in Original:** 4.3 %

Sieve Size (phi)	Sieve Midpt (phi)	Weight of Dupl (grams)	Freq Weight %	Cumulative Weight %	Weight of Original (grams)	Freq Weight %	Cumulative Weight %
-2.25	-2.375	0.000	0.000	0.000	0.000	0.000	0.000
-2.00	-2.125	0.000	0.000	0.000	0.000	0.000	0.000
-1.75	-1.875	0.000	0.000	0.000	0.000	0.000	0.000
-1.50	-1.625	0.000	0.000	0.000	0.000	0.000	0.000
-1.25	-1.375	0.000	0.000	0.000	0.000	0.000	0.000
-1.00	-1.125	0.000	0.000	0.000	0.000	0.000	0.000
-0.75	-0.875	0.000	0.000	0.000	0.002	0.090	0.090
-0.50	-0.625	0.000	0.000	0.000	0.000	0.000	0.090
-0.25	-0.375	0.000	0.000	0.000	0.000	0.000	0.090
0.00	-0.125	0.000	0.000	0.000	0.000	0.000	0.090
0.25	0.125	0.000	0.000	0.000	0.004	0.180	0.270
0.50	0.375	0.000	0.000	0.000	0.004	0.180	0.451
0.75	0.625	0.000	0.000	0.000	0.011	0.496	0.946
1.00	0.875	0.000	0.000	0.000	0.000	0.000	0.946
1.25	1.125	0.001	0.102	0.102	0.018	0.811	1.758
1.50	1.375	0.019	1.935	2.037	0.013	0.586	2.343
1.75	1.625	0.058	5.906	7.943	0.000	0.000	2.343
2.00	1.875	0.136	13.849	21.792	0.010	0.451	2.794
2.25	2.125	0.009	0.916	22.709	0.000	0.000	2.794
2.50	2.375	0.308	31.365	54.073	0.000	0.000	2.794
2.75	2.625	0.000	0.000	54.073	0.976	43.984	46.778
3.00	2.875	0.278	28.310	82.383	0.991	44.660	91.438
3.25	3.125	0.163	16.599	98.982	0.179	8.067	99.504
3.50	3.375	0.010	1.018	100.000	0.011	0.496	100.000
3.75	3.625	0.000	0.000	100.000	0.000	0.000	100.000
4.00	3.875	0.000	0.000	100.000	0.000	0.000	100.000
5.00	4.500	0.000	0.000	100.000	0.000	0.000	100.000





# Post-Digestion Grain Size Distribution

Onshore Grab Sample: PI-04-BB

**Total Duplicate Digested Mass:** 48.135 grams  
**% Silica in Duplicate:** 99.2 %  
**Total Original Digested Mass:** 50.510 grams  
**% Silica in Original:** 98.7 %

Sieve Size (phi)	Sieve Midpt (phi)	Weight (grams)	Freq Weight %	Cumulative Weight %	Weight of Original (grams)	Freq Weight %	Cumulative Weight %
-2.25	-2.375	0.000	0.000	0.000	0.000	0.000	0.000
-2.00	-2.125	0.000	0.000	0.000	0.000	0.000	0.000
-1.75	-1.875	0.000	0.000	0.000	0.000	0.000	0.000
-1.50	-1.625	0.000	0.000	0.000	0.000	0.000	0.000
-1.25	-1.375	0.000	0.000	0.000	0.000	0.000	0.000
-1.00	-1.125	0.000	0.000	0.000	0.000	0.000	0.000
-0.75	-0.875	0.000	0.000	0.000	0.000	0.000	0.000
-0.50	-0.625	0.000	0.000	0.000	0.000	0.000	0.000
-0.25	-0.375	0.013	0.027	0.027	0.000	0.000	0.000
0.00	-0.125	0.008	0.017	0.044	0.005	0.010	0.010
0.25	0.125	0.010	0.021	0.064	0.003	0.006	0.016
0.50	0.375	0.023	0.048	0.112	0.005	0.010	0.026
0.75	0.625	0.022	0.046	0.158	0.013	0.026	0.051
1.00	0.875	0.047	0.098	0.256	0.025	0.049	0.101
1.25	1.125	0.033	0.069	0.324	0.028	0.055	0.156
1.50	1.375	0.125	0.260	0.584	0.109	0.216	0.372
1.75	1.625	0.595	1.236	1.820	0.582	1.152	1.524
2.00	1.875	3.385	7.032	8.852	3.357	6.646	8.171
2.25	2.125	9.169	19.049	27.901	9.342	18.495	26.666
2.50	2.375	14.185	29.469	57.370	16.153	31.980	58.646
2.75	2.625	13.077	27.167	84.537	13.307	26.345	84.991
3.00	2.875	6.189	12.858	97.395	6.181	12.237	97.228
3.25	3.125	1.052	2.186	99.580	1.204	2.384	99.612
3.50	3.375	0.131	0.272	99.852	0.142	0.281	99.893
3.75	3.625	0.048	0.100	99.952	0.039	0.077	99.970
4.00	3.875	0.014	0.029	99.981	0.011	0.022	99.992
5.00	4.500	0.009	0.019	100.000	0.004	0.008	100.000

