

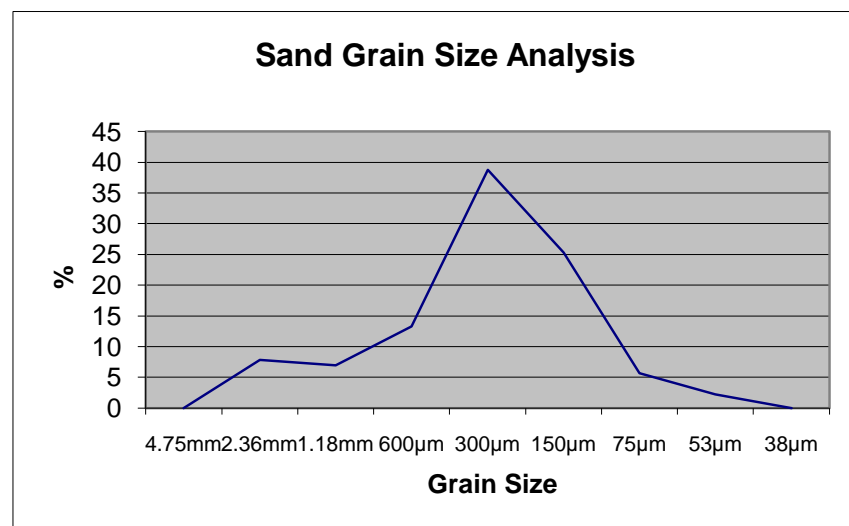
Chicora Foundation Gas Displacement Mortar Analysis Data Sheet

Name: Original Mortar, Granite wall, east side
Sample No.: 2010-04
Date: 8/12/10
Origin of Sample: Elm Street Cemetery, Braintree, MA

Visual Description of sample (color, texture, hardness, inclusions, etc.):
 Very pale brown (10YR8/2); easily broken, very friable. Few visible inclusions, those present are very small. Slightly rough texture

Mortar Analysis

Original weight of powdered sample (in g)	<u>6.33</u>
Weight of filter paper (in g)	<u>0.89</u>
Weight of filter paper + dry fines (in g)	<u>2.19</u>
Weight dry fines (in g)	<u>1.30</u>
Weight of dry sand (in g)	<u>4.59</u>
Gas Displacement (in ml)	<u>104.00</u>
Weight of lime (in g)	<u>0.47</u>
% of sand	<u>72.51</u>
% of fines	<u>20.54</u>
% of lime	<u>7.38</u>
% of acid solubles	<u>-0.43</u>



Observations (dissolution of binder, color of liquid, reaction):
 Immediate, but short-lived aggressive reaction turning the liquid yellow; subtle reaction continued for about 2 minutes.

Characterization of Sand:

	wt./% finer than		wt (gm)	%
Microscopic Examination: Subrounded to angular; quartzite, unknown metavolcanic, quartz.	4.75mm		0.00	0
	2.36mm		0.36	7.843137
	1.18mm		0.32	6.971678
	600µm		0.61	13.28976
	300µm		1.78	38.77996
	150µm		1.16	25.27233
	75µm		0.26	5.664488
	53µm		0.10	2.178649
	38µm		0.00	0
Total sand weight			4.59	

Munsell Color(s) of Sand: very pale brown (10YR8/2)