

# Chicora Foundation Gas Displacement Mortar Analysis Data Sheet

**Name:** Old City Jail                                      **Sample No.:** 2005-6  
**Date:** 8/19/05     **Origin of Sample:** N elevation stucco

**Visual Description of sample (color, texture, hardness, inclusions, etc.):**  
 Many inclusions, very hard. Stucco is a light grayish brown (10YR6/2). Has a wash that is yellowish brown (10YR5/8)

**Mortar Analysis**

Original weight of powdered sample (in g)	5.02
Weight of filter paper (in g)	2.20
Weight of filter paper + dry fines (in g)	2.48
Weight dry fines (in g)	0.28
Weight of dry sand (in g)	3.03
Gas Displacement (in ml)	162.00
Weight of lime (in g)	0.73
% of sand	60.36
% of fines	5.58
% of lime	14.50
% of acid solubles	19.57

**Observations (dissolution of binder, color of liquid, reaction):**  
 Immediate aggressive reaction; yellowish liquid; long lasting reaction, but less aggressive throughout

**Characterization of Sand:**

**Microscopic Examination:**  
 rounded to angular; well sorted; clear, smoky, and citrine quartz  
 (mostly clear and opaque)

	wt (gm)	%
wt./% finer than	4.75mm	0.00      0
	2.36mm	0.00      0
	1.18mm	0.30    9.90099
	600µm	0.82   27.06271
	300µm	1.46   48.18482
	150µm	0.33   10.89109
	75µm	0.10   3.30033
	53µm	0.02   0.660066
	38µm	0.00      0
Total sand weight	3.03	

**Munsell Color(s) of Sand:**      light brownish gray (10YR6/2)  
    with black (10YR2/1)

