

Chapter 5 Appendix 3

COMPOSITION OF CONCRETE FROM JOYAMA PRIMARY SCHOOL, NAGASAKI

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Chemical analysis of the concrete sample obtained from the Joyama Primary School was carried out by Hirokazu Hashimoto, Institute of Technology, Tokyo. The sample was obtained from the concrete wall of the building which was constructed before 1945. A 100 mm ϕ \times 300 mm cylinder was removed from the concrete slab sent from Nagasaki for testing. The results are given in Table 1.

Table 1. Composition of Concrete (g/cm^3) from Joyama Primary School, Nagasaki

Element	Average	Maximum	Minimum	SD
Hydrogen H	0.0142	0.0150	0.0127	0.0009
Boron B	0.0002	0.0003	0.0001	0
Carbon C	0.0193	0.0217	0.0173	0.0020
Oxygen O	1.2885	1.3165	1.270	0.0190
Sodium Na	0.0442	0.0476	0.0406	0.0026
Magnesium Mg	0.0198	0.0206	0.0186	0.0008
Aluminum Al	0.1270	0.1362	0.1211	0.0056
Silicon Si	0.5951	0.6423	0.5593	0.0314
Phosphorus P	0.0016	0.0019	0.0012	0.0003
Sulfur S	0.0025	0.0027	0.0022	0.0002
Potassium K	0.0320	0.0346	0.0297	0.0019
Calcium Ca	0.2071	0.2178	0.1972	0.0076
Chromium Cr	0.0005	0.0007	0.0004	0.0001
Manganese Mn	0.0015	0.0016	0.0015	0
Iron Fe	0.0623	0.0657	0.0595	0.0023
Nickel Ni	0.0001	0.0001	0.0001	0
Density	2.42	2.48	2.36	0.05