

September 28, 2014

**Analysis of Volcanic Ash Falling from the September 2014 Eruption of the Ontake Volcano
(September 27–28)**

The volcanic ash particles from the eruption of the Ontake Volcano on September 27 and 28 are made up largely of altered rock fragments together with less than 10% unaltered red-orange fragments and crystalline fragments (Figure 1). Also, the analysis reveals the presence of very small amounts of unaltered gray rock fragments and gray glossy fragments (Figure 2).

The volcanic ash used in the analysis was collected at about 8:00 AM on September 28 from the vicinity of the GPS observatory of Nagoya University in Kaida Plateau at the foot of the east side of the Ontake Volcano at an altitude of 1450 m (6 km east-northeast of Kengamine). The particles are of medium-to-fine-grain size with a maximum diameter of 0.5 mm. Observations using a binocular microscope reveal that the volcanic ash includes more than 90% altered rock fragments, of which 40-50% are white in color and 30-40% are gray. Apart from altered rock fragments, the volcanic ash is made up of somewhat rounded crystalline fragments, unaltered red-orange fragments, gray rock fragments, gray glass fragments, and iron pyrites. The pyrites were present as separate pieces and were accompanied by white to gray altered rock fragments.

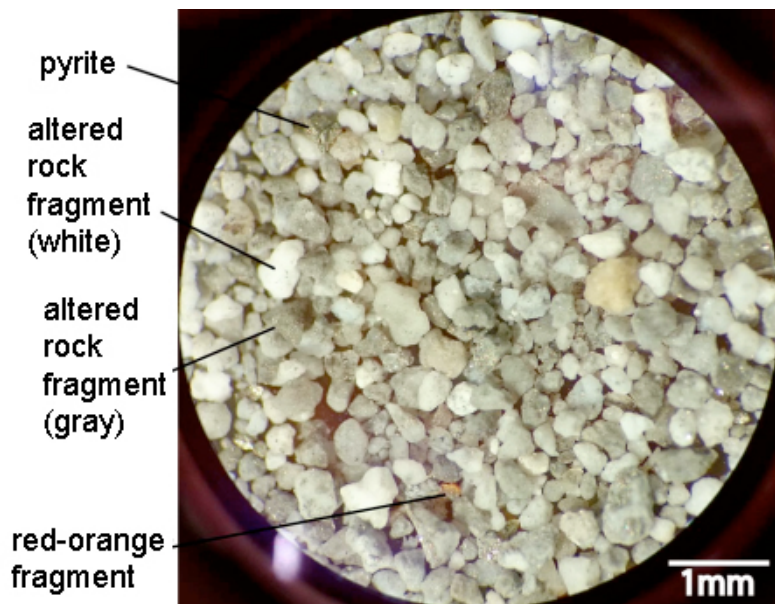


Figure 1 Ash particles of the eruption viewed by a stereo microscope. Most of the particles are altered rock fragments.

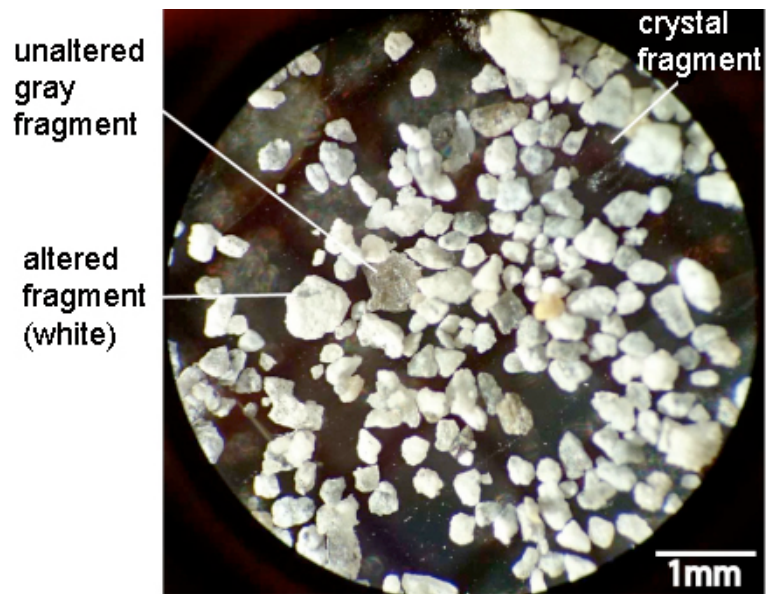


Figure 2 An example of unaltered gray rock fragments.