New lodranite specimen No.1028: Preliminary identification and description

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Meteorite specimen No.1028 has been identified preliminary as one of lodrainte in the stony-iron meteorite group. The specimen is small-fragmental piece with dull black fusion crust and granular interior. The interior of 1028 shows relatively coarse-grained granular texture colored by the shiny-brown limonite for oxidization.

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The specimen consists mainly of olivine, pyroxene and moderate of nikel-iron metal with plagioclase. Microscopically the specimen is a almost equal granular, shows granular with granoblastic texture consisting coarse-grained olivine, pyroxene, metal with plagioclase and traced accessories. Weathering is considerable with brown limonitic around most metal and other minerals, and in the fractures.

Mineral composition were carried out by JEOL-EPMA. Olivine is compositionally homogeneous and Mg-rich, average Fo87.9(range Fo88.6-87.5). Orthopyroxene is also homogeneous ranged En85.9-87.7Fs10.5-11.4Wo1.4-2.6. Plagioclase composition is An13.6Ab81.8Or4.6(range An12.0-15.2Ab81.1-84.1Or3.7-5.1). Bulk composition of No.1028 gives 38percentSiO2, 1.8Al2O3, 6.1Fe2O3, 6.8FeO, 28.4MgO, 2CaO, 1.1FeS and 10.7Fe respectively. Oxygen isotope data correspond to those of lodranite/acapulcoite group.

Meteorite No.1028 has been classified as one of lodranite group for it's mineral assemblages, mineral compositions, bulk composition and oxygen isotope data.