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An investigation on mineralogy and chemical composition of dust in different region of Kerman City

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Abstract: Dust is one of the environmental problems in Kerman city. Due to the major aspect of mineralogy in environmental studies, mineralogy and chemical studies of dust in different regions of the city performed by microscopic thin sections, x ray diffraction (XRD) and ICP-MS. In all areas of the city, minerals such as calcite, quartz, feldspar, pyroxene, micas, Jaffeite, gismondine and clay mineral were most abundant in the dust. Decreases of size and roundness of quartz and Calcite from west to east, indicating the major source of dust is from the west of city. Jaffeit in dust of the central region, may be originated from the cement factory in the west and abundant of gismondin (a zeolite) in the north of city dust can be orginated from playa surfaces. Chemical studies indicating high concentration of pb, As, Cr, Sn, Zn, Cd in the dust of western region may be originated from anthropogenic activity, industrial such as cement factory and traffic.

Keyworlds: *Dust; Kerman; gismondin; Jaffeite; annite; XRD; air pollution*

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