Report on Bursary Awards for Attending EuroClay 2015 in Edinburg by the Clay Mineral Group of the Mineralogical Society of Great Britain and Ireland

Funding from the Clay Mineral Group, CMG, of the Mineralogical Society of Great Britain and Ireland helped to support my attendance at the Euroclay 2015 - the quadrennial meeting of the European Clay Groups Association (ECGA) jointly with the annual meeting of The Clay Minerals Society (CMS) and in association with the International Natural Zeolite Association (INZA) and the Geological Society.

The support assisted me in no small measure to attend the conference to present our work titled *Mineralogy and Geochemical Characteristics of some Geophagic Clays from Southern Nigeria*. The work centred on the chemistry and mineralogical constituents of some clays used by people as geophagics clays in southern part of Nigeria; a region where the habit of geophagia is very prevalent, was well received. Quite a substantial number of participants interacted with me at the Poster Stand to discuss the practice of Geophagia in other parts of the world.

Attendance of the conference allowed me to interact with other participants who are actively involved in research into this field and other field of Clay research.

I also had great opportunity to interact with senior and experienced colleagues on possible area of collaboration.

My attendance of the conference also introduced me to new frontiers of research in clay mineral science as well as improved my competence in analytical techniques of how to handle mineralogical and geochemical data.

I want to use this medium to appreciate the opportunity extended to me to be part of this conference.

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**Mineralogy and Geochemical Characteristics of some Geophagic Clays from Southern Nigeria**

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**Introduction:** Geophagy, a complex human behavior, is the consumption of soils especially those of clayey composition. In Nigeria, cultural, cosmetic (Fig 1), nutritional and medicinal justifications have been adduced to the practice of geophagy. Geophagic clays may be good, cheap sources of iron, sodium, and calcium, but could also contain Potentially Hazardous Elements (PHEs) like zinc, cadmium, arsenic and lead. The consumption and use of such clays thus expose the individuals to the potential harmful effects of these PHEs. This study was thus aimed at evaluating the mineralogical and geochemical properties of the clays consumed in southern Nigeria to determine their quality and possible health effects.

**Study Area:** The study was conducted in Calabar and Oron/Attakwa, both in southern Nigeria, situated within the sedimentary terrain and underlain by formations of the Calabar Flank and Niger-Delta complex.

**Methodology:** Eleven processed and nine raw clay samples were obtained from the market and clay mines (Fig 2) respectively; thirteen of which were identified as being consumed. Post air-drying and pulverization, the samples were analyzed for mineralogy and elemental composition using XRD and ICP-MS techniques respectively.

**Results and Discussion:** Physicochemical analysis revealed pH of 6.5-7.0 and 3.9-6.9 for consumed clays and non-consumed ones respectively. Of all major elements, only Fe (0.49-5.93%) and Al (7.58-14.46%) have high enough concentration to serve as minerals recognizable from the.

**Toxic Substances and Disease Registry (ATSDR)** (Table 1). The presence of Pb, As and Cd is particularly problematic as these metals have no prescribed guidelines for their consumption. Consumed clays had higher Cu

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