



The rehydroxylation dating of archeological baked-clay artifacts for determination paleomagnetic data

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If confirmed, the rehydroxylation dating method proposed by Wilson et al. would be a major achievement for archeological and geological sciences. This method would indeed make it possible to date potentially all fired-clay artifacts (fragments of pottery or of architectural bricks) unearthed in excavation contexts and/or recovered from old buildings, offering to archeologists exceptional time constraints that are at the basis of most archeological issues. Together with that, determination of magnetic characteristics of fired-clay artifacts allows to build paleosecular variations.

We present new results obtained from thermo-gravimetry and differential scanning calorimetry measurements coupled with mass spectrometry analyses to identify rehydroxylation water and link it with age of ceramic. A variety of archeological artifacts was collected from different excavations conducted on the territory of the Republic of Tatarstan, Russia.

Magnetic measurements include thermomagnetic analysis, coercitive spectrometry, magnetic susceptibility measurement versus temperature. Paleomagnetic studies include measurement of paleointensity. The main aim of paleomagnetic investigations is to reconstruct magnetic field behavior during last centuries and made paleosecular variations (PSV) for Volga region.