The Colima and El Chichon stratovolcanoes, located in the western Mexican Volcanic Belt and the Chiapanecan Volcanic Arc respectively, are two of the major volcanoes in Mexico which erupted in historical times. Lava lithic clasts embedded in the the PDC deposits of the 1913 (Colima) and 1982 (El Chichon) eruptions have been sampled to estimate the deposition temperature of PDCs by means of rock-magnetic measurements.

A total of 260 clasts have been thermally demagnetized at 10-12 steps, and the results analyzed using the normalized intensity decay curves, Zijderveld diagrams and equal-area projections. Two remanence components occur in the clasts: a high blocking-temperature component, which is regarded as the primary thermal remanent magnetization acquired during the emplacement of the lava flow, and a secondary, low blocking-temperature component due to the reheating by the PDC hot air+ash mixture and the eventual cooling after deposition. At individual sites, the mean direction of the secondary component is statistically indistinguishable from the 1913 and 1982 IGRF direction. This consistency provides an independent check of the reliability of the procedure used to isolate the two components.

At each sampling site, $T_{\text{dep}}$ was estimated by the overlapping of the reheating ranges of all lithic clasts collected. Its values are systematically different for the two volcanoes: they range from 250 to 330 °C at the 7 Colima sites, from 360 to 420 °C at the 12 El Chichon sites.