The present study deals with the obtaining of solid cerium by molten salt electrolysis of a 46.74 - 48.26 - 5wt% LiF-NaF-NaCeF$_4$ mixture, in the temperature range 700 - 730°C and with a current efficiency of ~75%.

For this purpose NaCeF$_4$ was obtained, characterized and it’s cubic form was identified. The solubility and decomposition potential of this compound in the molten electrolyte 49.2 - 50.8% LiF-NaF was also studied.

Key words: Cerium; Electrolysis; NaCeF$_4$ Decomposition Potential; Molten Salts.