

Preprint

## A New Sample Container-Heater for a Tetrahedral Press

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Several methods for containing and heating a sample in a tetrahedral press have been reported,<sup>1,2</sup> but each requires a considerable amount of un-

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1. H. T. Hall and L. Merrill, Inorg. Chem. 2, 618 (1963)
  2. J. D. Dudley and H. T. Hall, Phys. Rev. 118, 1211 (1960)
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orthodox machining with special tools. A new approach has been devised which allows the experimenter to construct a container-heater easily with tools found in every shop.

The new container-heater consists of a piece of metal foil, (Ni, Pt, etc.) in which a dimple has been formed, and this assembly is placed in a precut and drilled pyrophyllite tetrahedron.

In order to form the metal container a die was made by drilling out a dimple in a 1 3/4" aluminum slug with a 3/8" bull nose drill. A collar was placed around the aluminum slug and molten lead was poured into the cavity. The lead piece is then used as the male part of the die. A Plexiglas template was cut to outline the shape of the container. Annealed Ni or Pt foils (.005") were cut in the proper shape and hand pressed between the dies. Figure 1 shows the aluminum die with inked guide lines, the lead male die, the Plexiglas template and a dimple which has been pressed from 0.005" Ni foil.