

Beryllium Target for the eta-Primakoff Experiment

Chris Keith

Oct. 16, 2018

Beryllium sample purchased from AMERICAN ELEMENTS

Measured diameter: 1.000 in

Measured length: 0.699 in

Measured mass: 16.65 g

Measured density: 1.85 g/cc

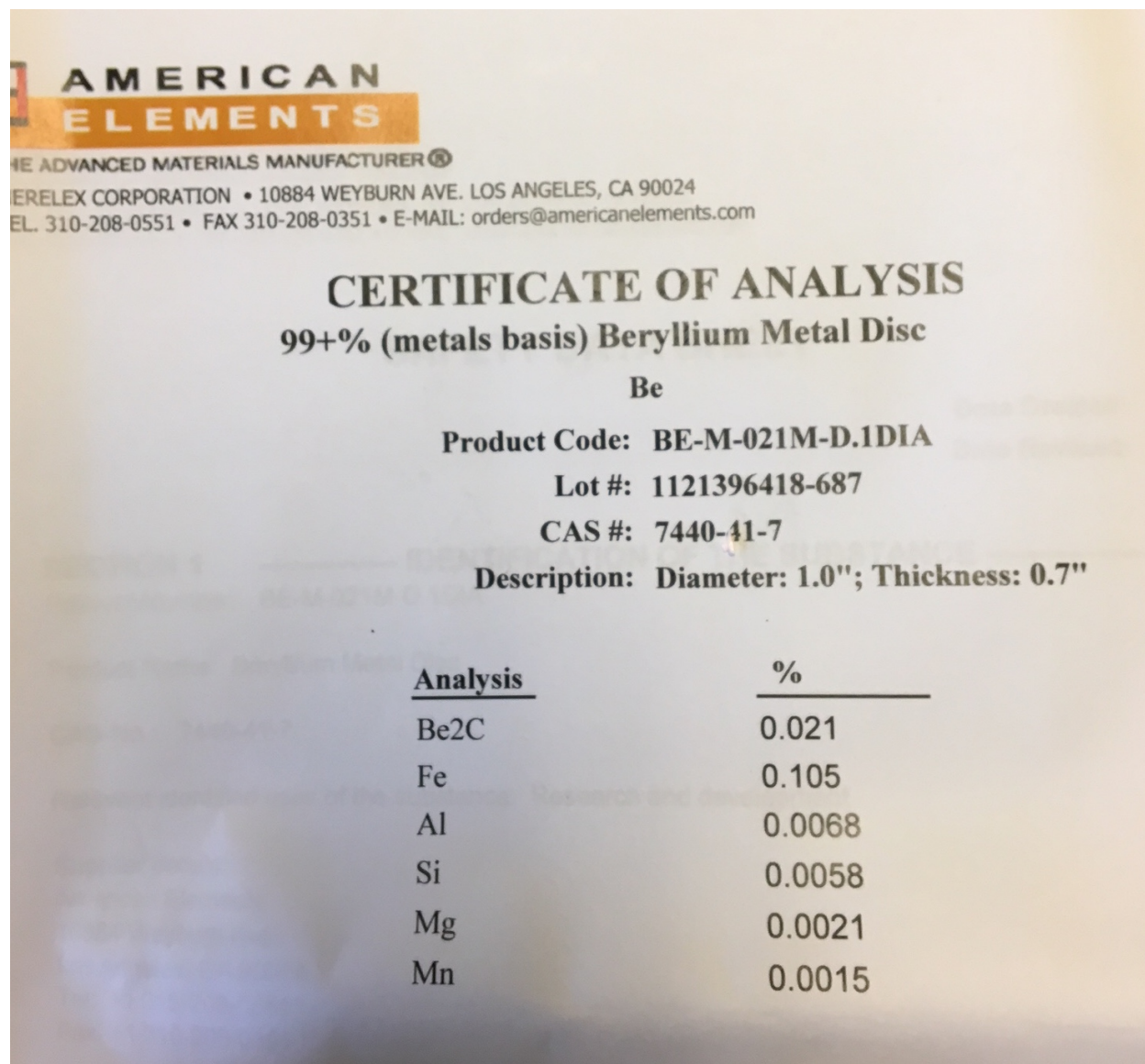


Figure 1: Certificate of analysis from American Elements.

The beryllium target holder attaches to an alignment base inside the GlueX target vacuum chamber. It is designed to place the center of the beryllium sample at the same z location as the center of the GlueX LH2 sample, ± 0.1 mm. The holder consists of an aluminum base and a 1-inch diameter PMMA tube. A small G10 clamp holds the Be sample in place at the downstream end of the tube. The clamp is in turn taped to the PMMA tube. The base and tube both have inner diameters of 0.875", while the clamp has an opening of 0.860". Note that the inner diameter of the LH2 target's entrance window is 0.628".

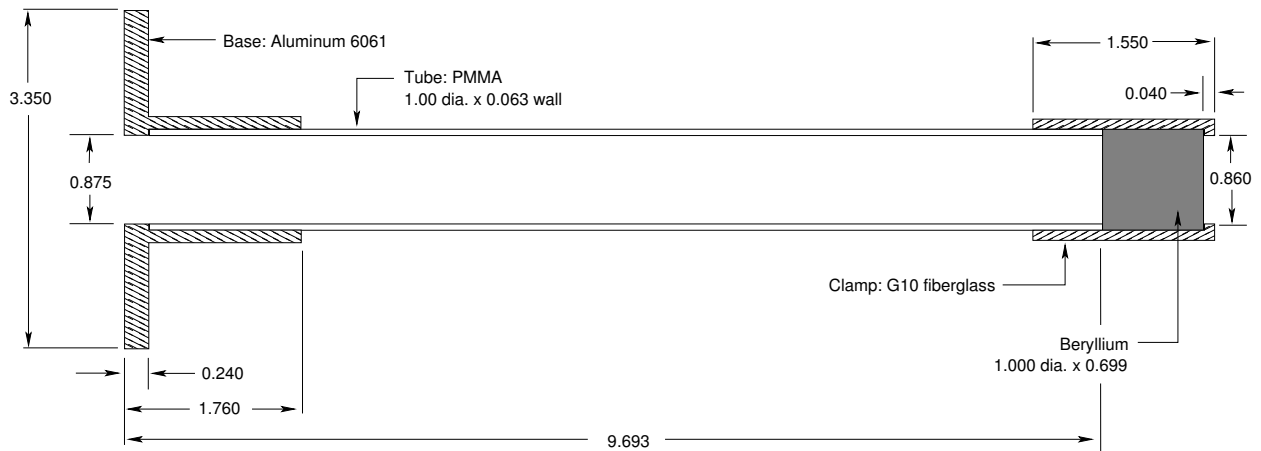


Figure 2: Cross section view of the sample holder for the beryllium target. All units are inches.