

Certificate of Analysis (CoA)

July 14, 2025

Product Name: Niobium Sputtering Target**Chemical Formula:** Nb**Purity:** ≥99.95% (3N5)**Dimensions:** Ø50.8 mm × 6.35 mm (2" × 1/4")**Backing Plate:** None, with keeper screwed into target**Lot Number:** XKCS-25-SC-3958

Physical Description

- Form: Metallic sputtering target
- Appearance: Bright silver-gray metallic surface
- Crystal Structure: Body-centered cubic (bcc)
- Theoretical Density: ~8.57 g/cm³
- Fabrication: Vacuum arc melted, hot forged, and precision machined

Theoretical Composition

- **Element:** Niobium (Nb)
- **Atomic Weight:** 92.91 g/mol
- **Mass Fraction:** 100% Nb (elemental metal)

Chemical Composition (by GDMS / ICP-MS)

Element	Symbol	Max. Content (ppm)
Niobium	Nb	Balance (>99.95%)
Tantalum	Ta	<50
Oxygen	O	<30
Carbon	C	<20
Iron	Fe	<20
Silicon	Si	<20
Other metals (each) –		<20
Total Impurities	–	<500 ppm

Certificate of Analysis (CoA)

July 14, 2025

Handling & Storage

- Niobium is ductile but can oxidize on surface over time.
 - Store in vacuum-sealed or inert gas packaging.
 - Handle with clean gloves to avoid contamination.
 - Avoid direct mechanical force on the keeper when mounting.
-

Declaration

We certify that the product listed above has been manufactured and tested in accordance with our quality management system and meets the specifications stated herein.

Inspection Certificate by: Nancy Liu

Approver by: Chen Qiang

