TITANIUM METALS CORPORATION

Material Test Certificate

Certificate Information	
Certificate Number:	TMC-2025-0156
Date:	January 14, 2025
Customer:	BioMed Components LLC
Customer PO:	BM-2025-0089

MATERIAL IDENTIFICATION

Property	Value
Material Grade	Titanium Grade 2 (ASTM B348)
Product Form	Round Bar
Dimensions	15.88mm Diameter x 3000mm Length
Heat Number	TM-240812-G2-47
Mill Lot	47892-B
Quantity	25 bars
Total Weight	142.7 kg

CHEMICAL COMPOSITION (Weight %)

Element	Actual %	Max Allowed	Result
Nitrogen (N)	0.015%	0.03%	✅
Carbon (C)	0.04%	0.10%	✅
Hydrogen (H)	0.008%	0.015%	✅
Iron (Fe)	0.18%	0.30%	✅
Oxygen (O)	0.12%	0.25%	✅
Titanium (Ti)	Balance	Balance	✅

MECHANICAL PROPERTIES

Property	Actual	Minimum	Result
Tensile Strength	415 MPa	345 MPa	✅
Yield Strength (0.2%)	285 MPa	275 MPa	✅
Elongation	28%	20%	✅
Reduction of Area	42%	30%	✅
Hardness (HB)	201	Max 265	✅

TEST CONDITIONS

- **Test Temperature:** 23°C ±2°C
- **Test Method:** ASTM E8/E8M
- **Specimen Location:** Center of bar, longitudinal direction
- **Number of Tests:** 3 (average values reported)

CERTIFICATIONS

✅ Material produced under ISO 9001:2015 quality system
✅ Material suitable for medical device applications
✅ Complies with ASTM F67 requirements for surgical implants
✅ FDA DMF reference: 12847 (for medical applications)

TRACEABILITY

Item	Details
Raw Material Source	Ore: Australia, Rutile concentrate
Smelting Location	Henderson, NV facility
Processing Date	August 12-15, 2024
Quality Manager	Sarah Kim
Metallurgist	Dr. James Martinez

> **Note:** This certificate covers only the material described above and applies only to the quantities and specifications stated herein.

Certified by:
John Patterson, Quality Assurance Manager
Titanium Metals Corporation
Date: January 14, 2025

🔒 **TMC Certification Seal** [SEAL]