

# Metal Sensitivity Specifications

## General Information<sup>1</sup>

- 10 – 15% of the overall population have a metal allergy
- Metal sensitivity can be either acute or delayed in presentation
- Implant-related reactions are more commonly delayed reactions
- Nickel is the most common metal to cause hypersensitive allergenic reactions

1. Hallab N, et al. J Bone Joint Surg Am 2001 Mar;83-A(3):428-36. Schram SE, et al. Nickel hypersensitivity: A clinical review and call to action. International Journal of Dermatology. 2010;49:115.

## Metal Discs

Sample metal discs are available for immunologists, dermatologist or allergy specialists who wish to perform a scratch test, intradermal test, or blood test. These discs are only samples of the material, and we suggest sending patients to an allergy specialist.

## Composition of Biomet Products

Biomet utilizes metal compositions that are consistent with the ASTM standards for medical device. Biomet utilize cobalt chrome, stainless steel and titanium alloy in various products for thoracic, cranial, and oral maxillofacial procedures.

<b>Cobalt Chrome</b> (ASTM F1537)	<b>Titanium Alloy</b> (ASTM F136)	<b>Stainless Steel</b> (ASTM F899, A564, A276)
Chrome: 26 – 30%	Aluminum: 5.5 – 6.5%	Chromium: 17 – 19%
Molybdenum: 5 – 7%	Vanadium: 3.5 – 4.5%	Nickel: 13 – 15%
Nickel: < 1%	Iron: < 0.25%	Molybdenum: 2.2 – 3%
Silicone: > 1%	Oxygen: < 0.13%	Manganese: < 2%
Iron: < 0.75%	Carbon: < 0.08 %	Silicone: < 0.75%
Carbon: < 0.35%	Nitrogen: < 0.05%	Trace amounts less than < 0.5 Carbon, Phosphorus, Sulfur, Copper, Nitrogen
Manganese: < 1%	Hydrogen: < 0.012%	
Nitrogen: < 0.25%	Titanium: Balance	
Cobalt: Balance		

## Metal Discs for Testing

- Part No. 24-6690 Cobalt Chrome
- Part No. 24-6692 Titanium Alloy (6/4)
- Part No. 01-3701 Stainless Steel