

18-May-2016

Subject: Alpha-Bio Tec's dental implants, Titanium abutments and healing abutments made of Titanium Alloy Ti-6Al-4V ELI

To whom it may concerned,

Alpha-Bio Tec's dental implants Titanium abutments and healing abutments are made of the Titanium alloy Ti-6Al-4V ELI (Extra Low Interstitial) for Surgical Implant Applications (UNS R56401), according to ASTM F 136 current revision. This is the higher purity version of Ti-6Al-4V. It has the combination of high biocompatibility, high strength, light weight, good corrosion resistance, good fatigue strength, low modulus and high toughness. It has a superior damage tolerance comparing to other alloys.

The Ti-6Al-4V ELI is composed of the following elements (taken from ASTM F 136 - 11):

TABLE 3 Chemical Requirements


Element	Composition, % (mass/mass)
Nitrogen, max	0.05
Carbon, max	0.08
Hydrogen, max	0.012 ^A
Iron, max	0.25
Oxygen, max	0.13
Aluminum	5.5–6.50
Vanadium	3.5–4.5
Titanium ^B	balance

^A Material 0.032 in. (0.813 mm) and under may have hydrogen content up to 0.0150 %.

^B The percentage of titanium is determined by difference and need not be determined or certified.

Note:

Maximum total concentration of other elements is 0.30%, while the maximum concentration of each element is 0.1%.



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