Callisto® 86

Economic high-gold alloy

Callisto® 86 is a high-gold ceramic alloy with a warm golden colour for high-quality restorations fabricated using the layering and press technique in particular.

Au	Pt	Pd	In	Sn	Fe	Mn	Li	Ru	Re
86.2	7.2	3.6	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Advantages

- **Warm golden colour for esthetic, high-quality metal-ceramic restorations**
- **True-to-nature shade effect originating from the framework structure**
- **Optimized high-gold ceramic alloy as an economic alternative to high-price gold alloys**
- **The range of indications includes fixed restorations fabricated in the layering and press technique, but the alloy is also suitable for the milling technique and full cast restorations**
- **Excellent melting and casting properties resulting in a homogeneous microstructure**
- **Easy handling and polishing properties**
- **Outstanding bonding strength with the veneering materials from Ivoclar Vivadent**
- **Tested and certified biocompatibility (high corrosion resistance)**

Indications

Inlays, onlays, ¾ crowns, crowns, telescopic and conus crowns, posts, short- and long-span bridges

Technical Data

Colour	rich yellow
Type	4
Density (g/cm³)	18.2
Melting range (°C)	1060–1165
Casting temperature (°C)	1225–1255
Oxide firing °C / min / vacuum	925 / 1 / no vacuum
CTE 25–500 °C	14.4
Vickers hardness	180
0.2 % proof stress (MPa)	425
Modulus of elasticity (MPa)	108,000
Elongation (%)	12

Lab-fabricated restoration
by H.P. Oss, Innsbruck, Austria

ivoclar vivadent®
passion vision innovation

Biocompatibility testing

Certificate

Test material: Callisto® 86

Composition in %	Au	Pt	Pd	In	Sn	Fe	Mn	Li	Ru	Re
Callisto® 86	86.2	7.2	3.6	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Manufacturer

Ivoclar Vivadent Inc., 175 Pineview Drive, Amherst, NY 14228, USA

Corrosion resistance

The test was conducted according to the international regulations of ISO 22674 and ISO 10271: static immersion testing through analytical determination of the metal ion release after a 7-day immersion.

Result: The metal ion release after 7 days of immersion was not significant.

Testing facility:
Department of Biomedical Materials Science, University of Mississippi Medical Center
Dr. Jason Griggs, 2500 North State Street, Room D528, Jackson, MS 39216-4505

Cytotoxicity

The Agar Diffusion test determines the reactivity of the cell culture on the test material.

Result: The test material is considered non-cytotoxic and meets the requirements of the Agar Diffusion test according to ISO 10993-5.

Testing facility:
Toxikon Corporation, 15 Wiggins Avenue, Bedford, MA 01730

Mutagenicity

An Ames assay was conducted to determine any possible cancer potential.

Test results: No mutagenicity potential was found to exist in these alloys.

Kligman Maximization

This test evaluated the allergenic potential and/or sensitizing capacity of these alloys.

Test results: Based on the standards set by the study protocol, these alloys exhibited no reaction of the challenge (0 % sensitization)

Sensitivity of oral mucosa

Test to determine the contact sensitivity of these alloys at the buccal oral mucosa.

Test results: No reactions were noted in conjunction with these alloys.

Testing facility: Toxikon Corporation, 15 Wiggins Avenue, Bedford, Massachusetts

Amherst, June 2013

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