

MATERIAL SERIES: GOLD

Suzanne Hallett &
Pablo Perelmuter



OUR INSTRUCTORS

SUZANNE HALLETT

- The Piercing Urge / Owner
- AUPP Board of Directors
 - BJVP Volunteer
- APP Medical Committee volunteer
 - ASTM member F15

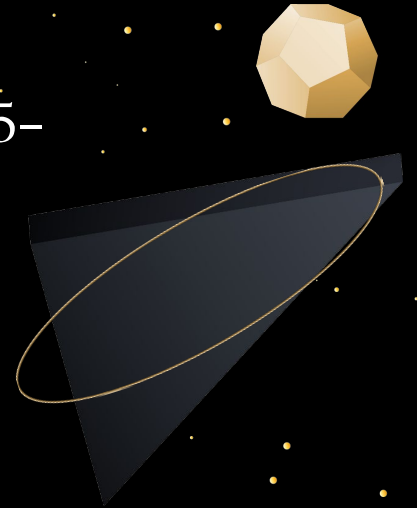


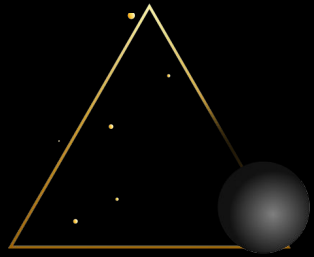
OUR INSTRUCTORS

PABLO PERELMUTER



- Lemonade Piercing/ Owner
- APP Medical Liaison
- BJVP administrator
- ASTM member F04- F15-
F23-E07 - E42





 *We hope you
like accents!*

CREATIVE COMMONS NOTICE




Welcome to our class! We are excited to have you join us on this journey of learning and exploration. The content of this class, including all materials, presentations, and discussions, is the intellectual property of the instructors. It is important to note that the views and opinions expressed here are those of the instructors alone and do not necessarily reflect the official policies or positions of the Association of Professional Piercers (APP).

We deeply value your participation and enthusiasm. This class is designed to provide you with valuable knowledge and skills, but it is essential to understand that completion of this course does not equate formal training or certification as a professional piercer. Becoming a professional piercer requires extensive training, practice, and adherence to industry standards and regulations.

While we celebrate your dedication to expanding your understanding of body piercing, we want to be clear that this educational experience is one step in a broader journey. We encourage you to continue seeking additional education, hands-on training, and mentorship from professionals to achieve your goals in the piercing industry.

Thank you for joining us, and we hope you find this class both informative and inspiring. Remember, your growth and success in this field are driven by your ongoing commitment to learning and professional development.



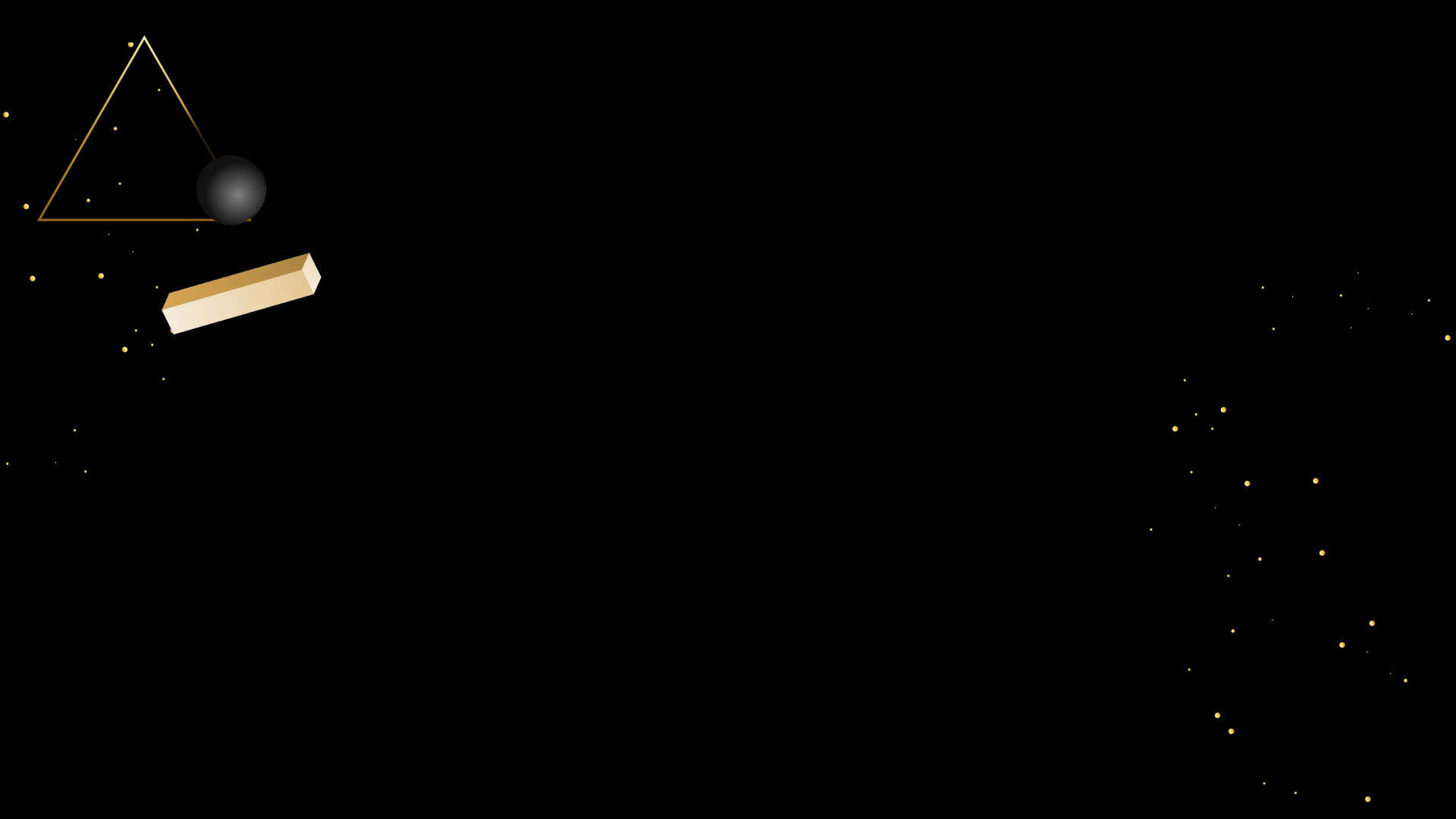


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04

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Traditional jewelry vs. Modern jewelry



INTRODUCTION



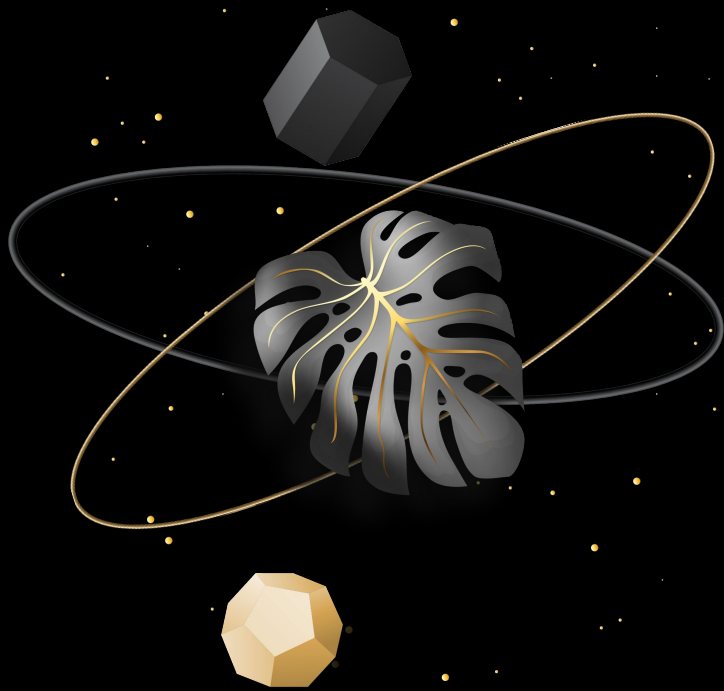
OUR MISSION

Our mission is to elevate the standards and understanding of gold body piercing jewelry through comprehensive education.

We aim to inspire innovation, ensure safety, and promote the consistent levels of craftsmanship and professionalism in the piercing industry.

we strive to set a new benchmark for excellence in the field of body piercing jewelry manufacturing, ensuring that gold remains a symbol of quality, safety, and artistry.



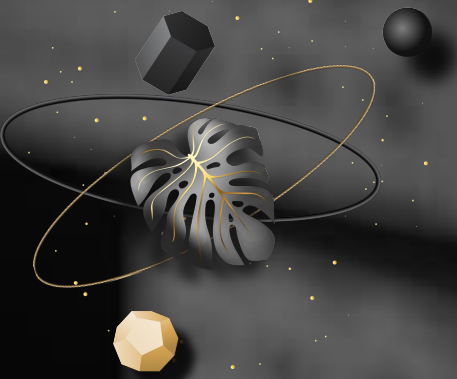


01

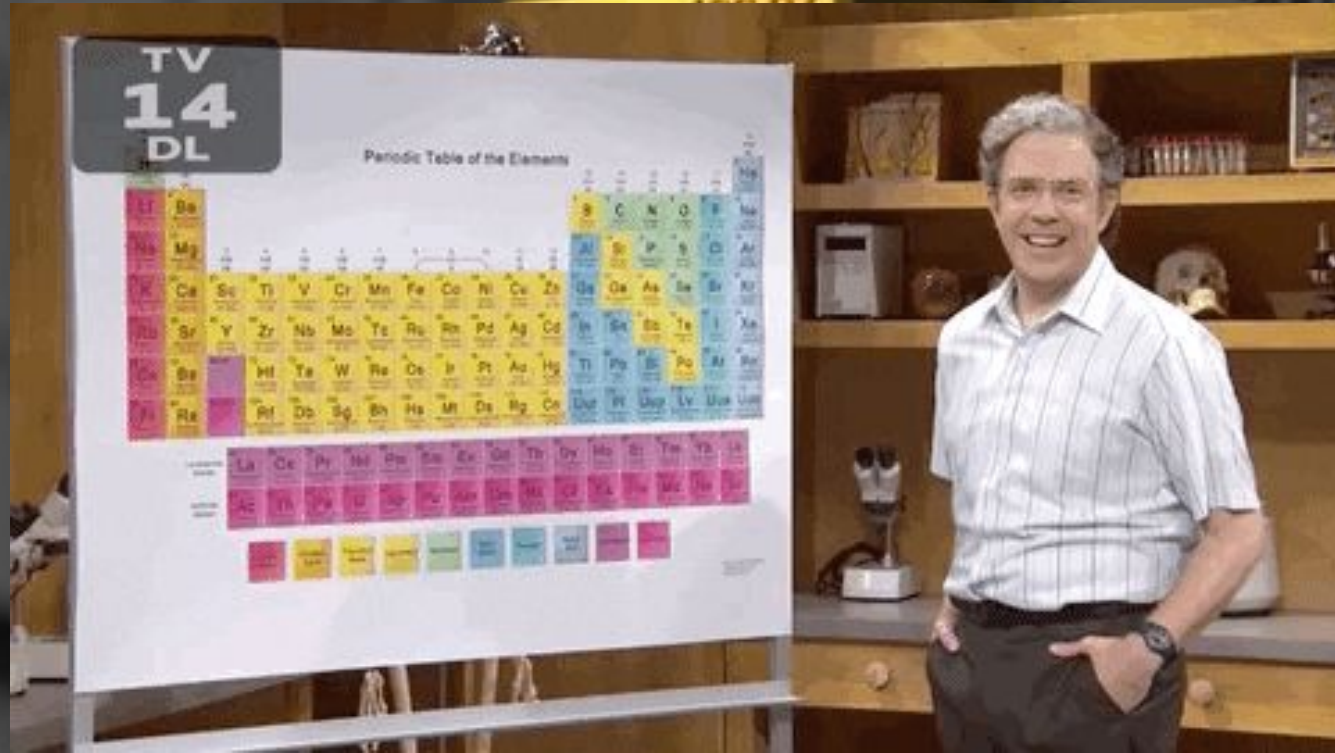
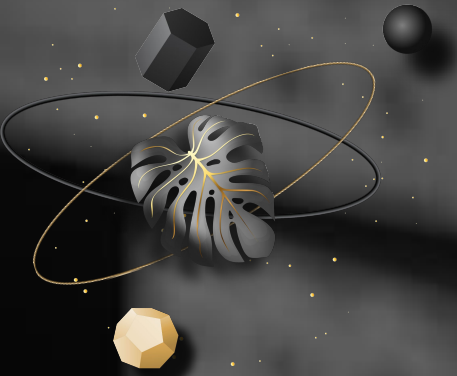
WHAT IS GOLD?

Basic elemental information
and a brief history

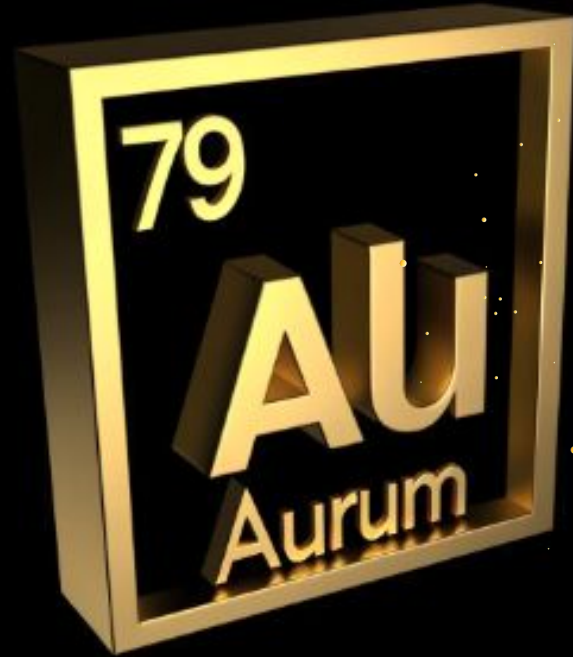
GOLD IS AN ELEMENT



GOLD IS AN ELEMENT



ELEMENTAL SYMBOL



ATOMIC NUMBER



Biocompatibility

Most compatible elements

GOLD

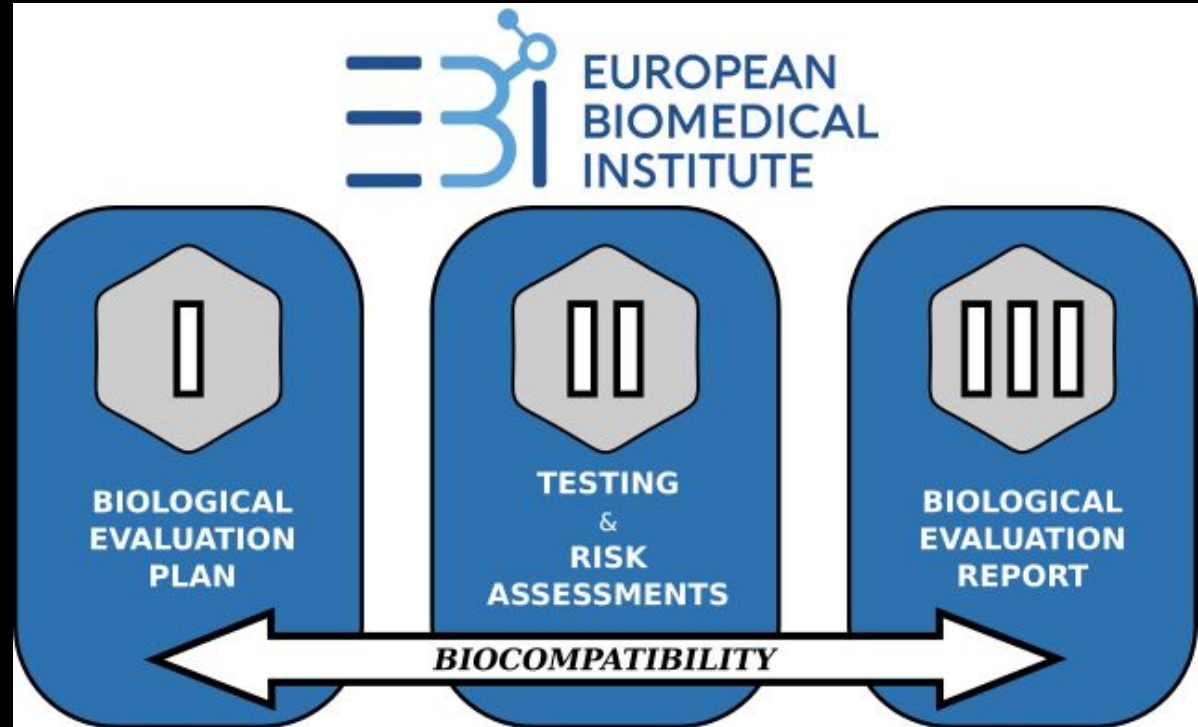
PLATINUM

NIوبيUM

TITANIUM

TANTALUM

ZIRCONIUM



WHERE
DOES
GOLD
COME
FROM?



GOLD'S JOURNEY TO THE EARTH'S SURFACE...



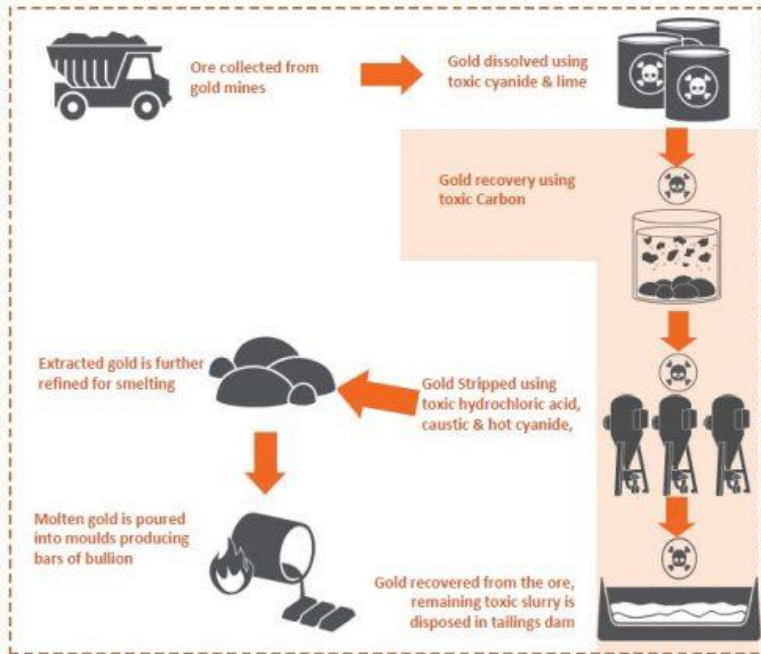
GOLD DEPOSITS AND THEIR FORMATION



HOW
DO
WE
GET
IT?



TRADITIONAL - "DIRTY GOLD"



CET - "CLEAN GOLD"

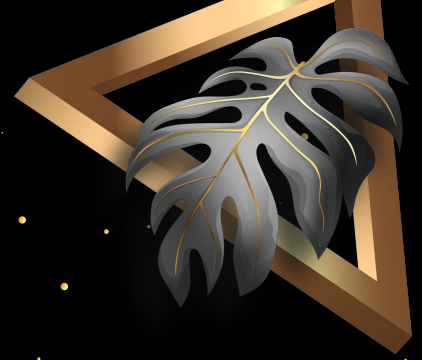


CONFLICT
FREE
GOLD



IS GOLD RARE ON EARTH

?



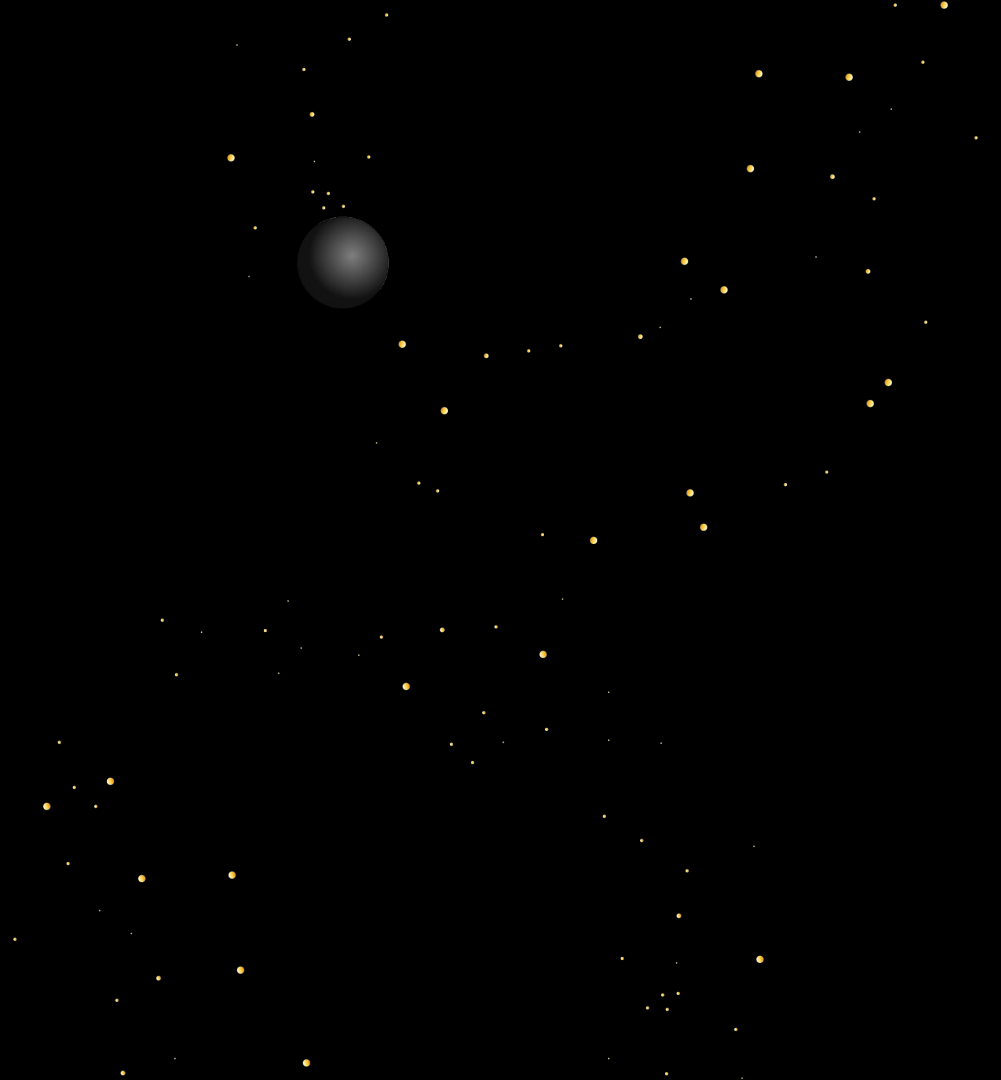
IS GOLD RARE ON OUR PLANET?



We won't talk about this



GOLD HAS INTERESTING PROPERTIES



GOLD CHARACTERISTICS



DUCTILE



MALLEABLE



EASY FORM



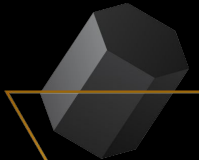
FLEXIBLE



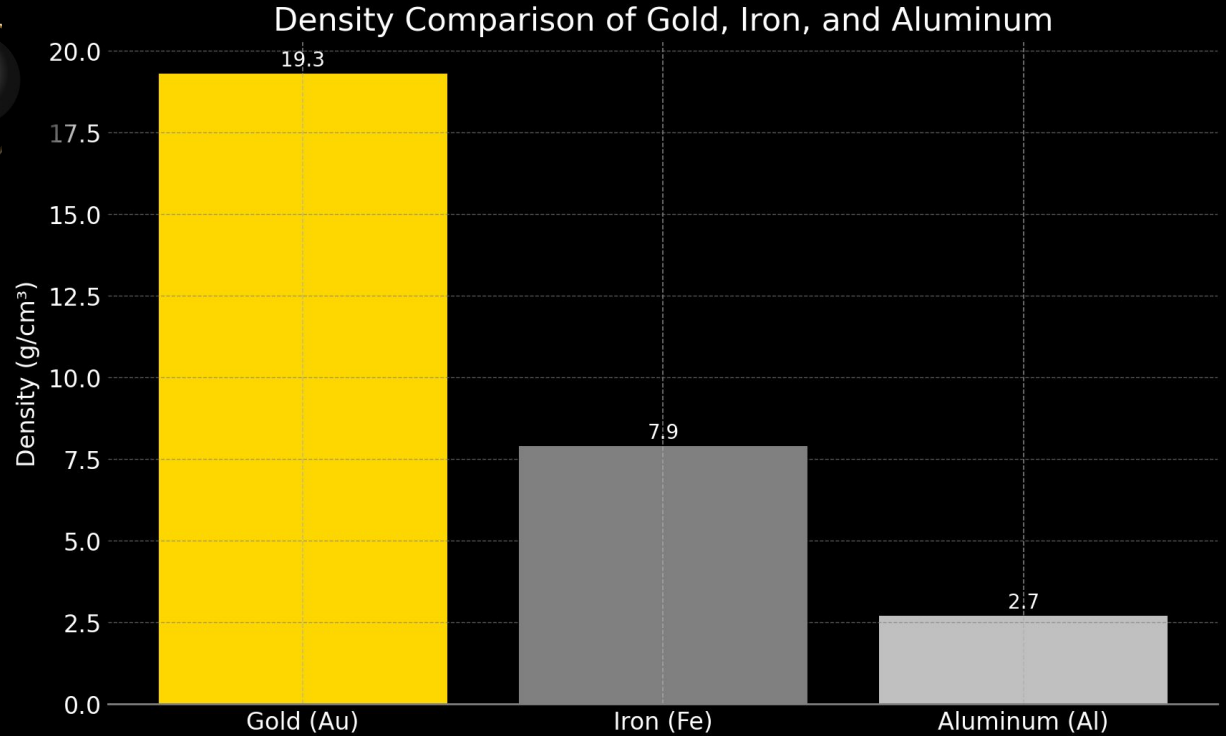
SHAPEABLE



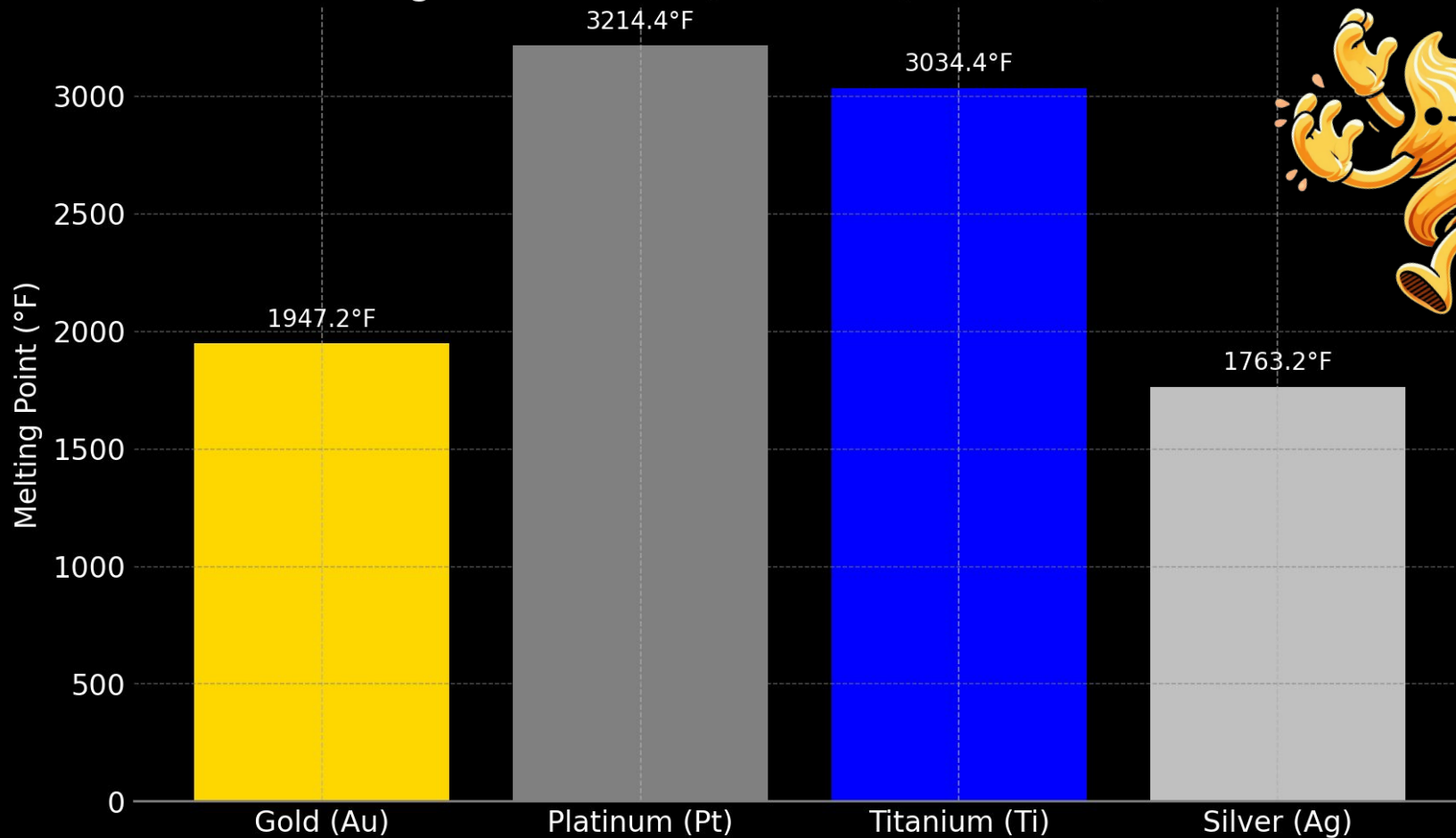
MOLDABLE



GOLD IS DENSE



Melting Points of Gold, Platinum, Titanium, and Silver



NOBLE METALS

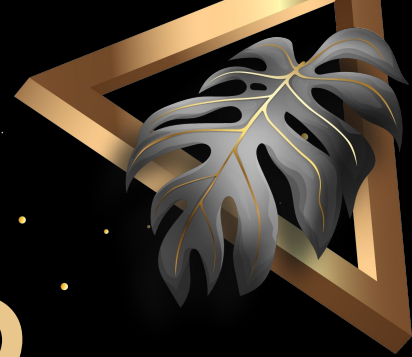


NOBLE METALS

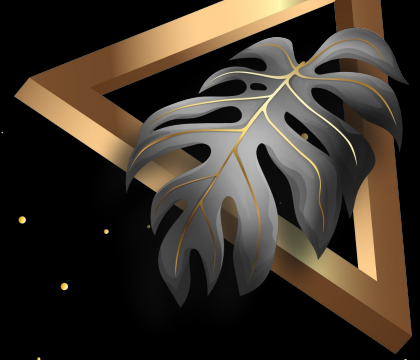


44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver
76 Os Osmium	77 Ir Iridium	78 Pt Platinum	79 Au Gold

BUT SILVER
MAKES EARS
GREEN?



Tarnishing of Silver



Tarnishing of Silver



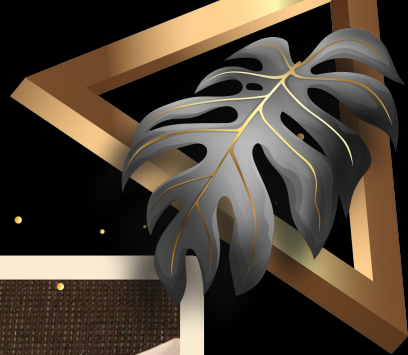
SULFUR



Tarnishing of Silver



Tarnishing of Silver



A Brief
conversation
about gold
history

Varna
was
discovered
in the late
1970s



From human admiration to gold coins

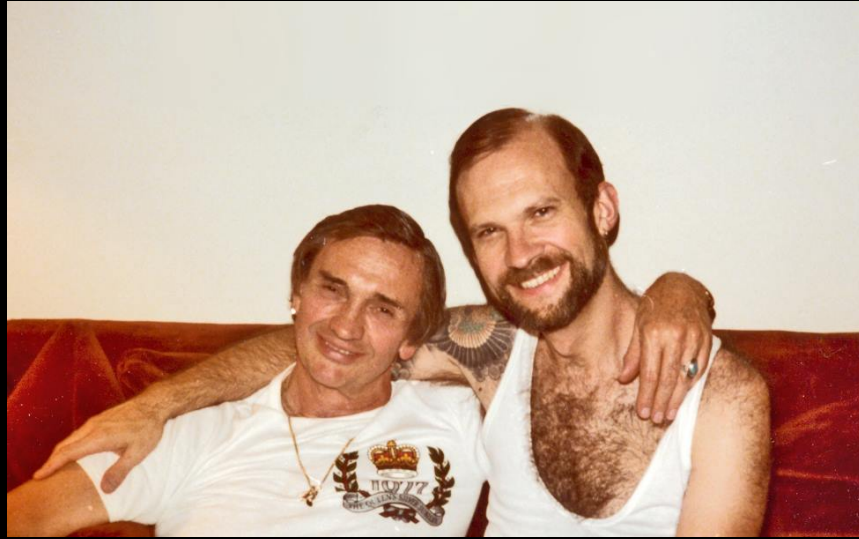
2,750-year-old
gold coin was
been discovered
near Bulgaria's
Black Sea coast
and is believed to
be the world's
oldest gold coin.



Gold piercing jewellery in history?



Gold piercing jewellery in history?



Gold piercing jewellery in history?

THE NIPPLE RETAINER



No. NR To facilitate speedy healing of newly pierced nipples, this retainer is difficult to rival. The 16 ga. center post and 20 ga. outer ring are hand-crafted of 14K white gold. Yellow gold available on special order. Specify inside diameter desired.



Gold piercing jewellery in history?

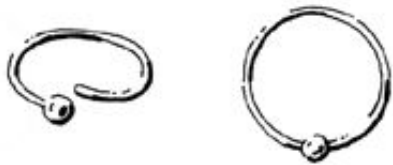


Gold piercing jewellery in history?



Gold piercing jewellery in history?

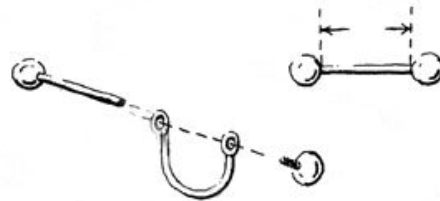
THE BEAD RING



No. BR Our most versatile and comfortable ring. Since the bead closure cannot enter the piercing, irritation and discomfort are minimized. For a new *Prince Albert* this ring is ideal, however, it is handsome and serviceable wherever it is worn.

Hand-crafted of 14K white gold in a variety of gauges and diameters, yellow gold available on special order. Specify inside diameter desired.

THE BARBELL & HORSESHOE



No. BB The ever-popular standby of the piercing *aficionado*, the GAUNTLET ENTERPRISES Barbell is precision constructed of two threaded balls and an internally threaded post, both of 14K white gold. Internal threading eliminates the irritating, abrasive factor common to so many barbells, past and present.

With its companion horseshoe (No. HS), the barbell is unmatched for ruggedness and durability in heavy action.

The barbell post is a sturdy one-sixteenth inch, and the horseshoe is 14 ga. (sterling silver or 14K white gold). Order by barbell post length. Add one-eighth inch if barbell is being used with horseshoe.



Gold piercing jewellery in history?



Gold piercing jewellery in present times?



02

GOLD ALLOYS

How is it mixed? Why? Where? Why not?



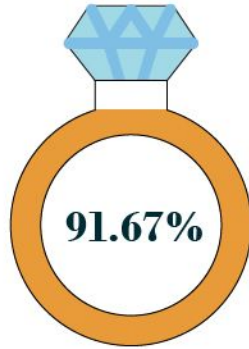
The image features a dark, black background filled with numerous small, golden-yellow dots of varying sizes, resembling a starry night sky. A large, thin, golden-yellow triangle is superimposed over the scene, tilted slightly to the right. The text "THE WORLD OF KARATS" is centered within the triangle, rendered in a bold, golden-yellow, sans-serif font. The text is arranged in three lines: "THE" on the top line, "WORLD OF" on the middle line, and "KARATS" on the bottom line.

THE
WORLD OF
KARATS

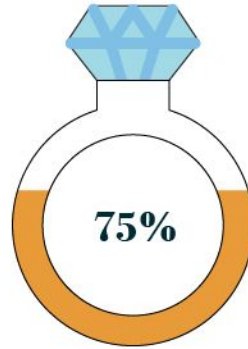
THE WORLD OF KARATS vs. FINESSE/Hallmark



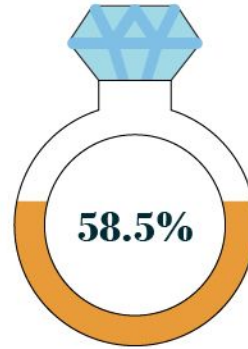
24k/999



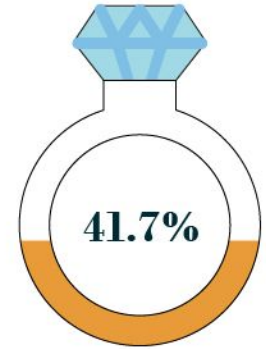
22k/916



18K/750



14K/585



10K/417

THE WORLD OF KARATS vs. FINESSE/Hallmark

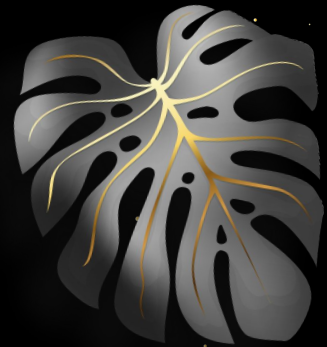


Platinum 950=
95% Platinum 5% Ruthenium



Silver 925=
92.5% Silver, 7.5% Copper, Nickel, others

Gold Stamping Act

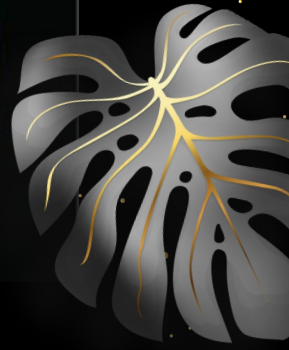


Gold Stamping Act

KARAT DESIGNATION



24-CARAT	22-CARAT	18-CARAT	14-CARAT
			
99.9%	91.6%	75%	58.3%



Gold Stamping Act

ACCURACY



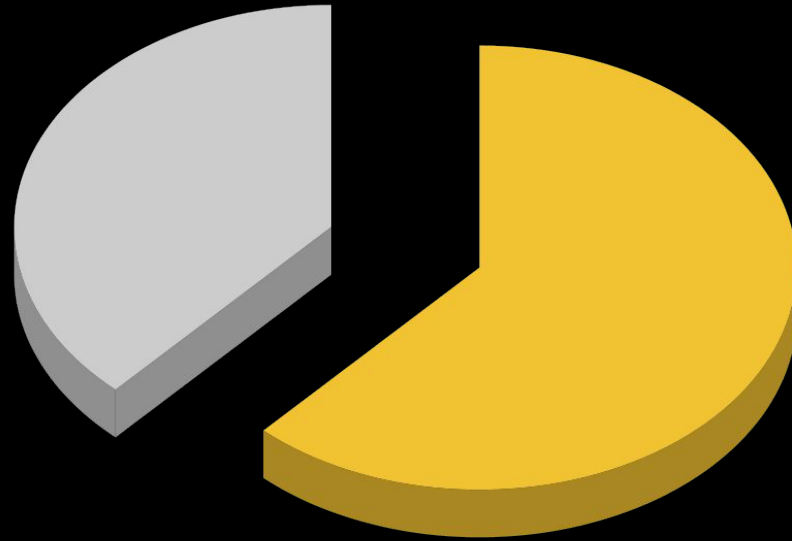
$$14k = (24/14) \times 100 = 58.33\%$$

$$13.5k = (24/13.5) \times 100 \approx 56.25\%$$

0.5k Permissible deviation.

Gold Stamping Act

Disclosure of Other Metals



● AU ● Everything else

Gold Stamping Act

Disclosure of Other Metals



Example 14k Yellow gold

Gold: 58.33%

Copper: 20-25%

Silver: 10-12%

Zinc: 5-7%



Gold Stamping Act

Disclosure of Other Metals



Example 14k rose gold

Gold: 58.33%

Copper: 30-35%

Silver: 7-10%



Gold Stamping Act

Disclosure of Other Metals



Example 14k white gold

Gold: 58.33%

~~Ni~~el: 8-10%

Silver: 10-12%

Copper: 5-7%

Zinc: 1-2%



Gold Stamping Act

Disclosure of Other Metals



Example 14k white gold

Gold: 58.33%

Palladium: 8-10%

Silver: 10-12%

Copper: 5-7%

Zinc: 1-2%



Gold Stamping Act

Stamps and Hallmarks



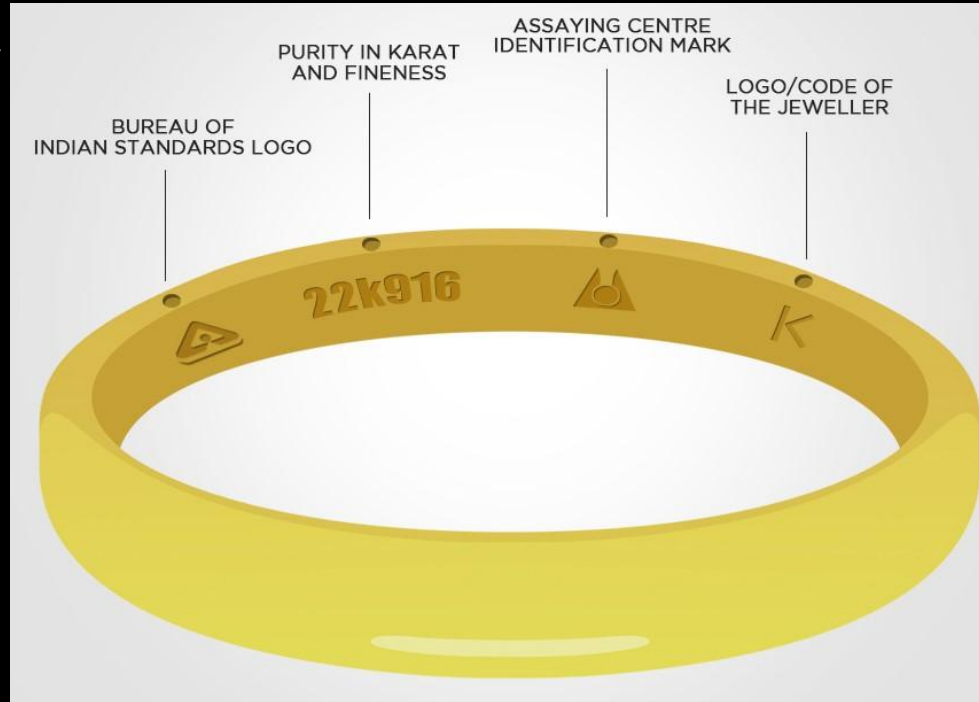
Gold Stamping Act Stamps and Hallmarks



SPONSOR'S OR MAKER'S MARK	COMMON CONTROL MARK			FINENESS (PURITY) MARK			ASSAY OFFICE MARK				
	GOLD	SILVER	PLATINUM	GOLD	SILVER	PLATINUM					
AB				375	800	850					
				585	925	900					
				750	999	950					
				916		999					
				990							
				999							
										UNITED KINGDOM	

Gold Stamping Act

Stamps and Hallmarks



Gold Stamping Act

Stamps and Hallmarks



Gold Stamping Act

Stamps and Hallmarks



Gold Stamping Act

In the U.S., hallmarking is not a legal requirement.

Gold Stamping Act

Underkarating



Gold Stamping Act

Underkarating



44
News

NEW AT 5

RISE IN FAKE JEWELRY SCAM

MT. CARMEL

Jewelry, Precious Metals,
and Pewter Industries



APP Initial Jewelry Standard

2. Solid 14 karat or higher yellow, white, or rose gold that is nickel and cadmium free.

Gold jewelry used for initial piercing may not be:

- i. **Plated, unless with materials approved by this standard, including 24k, 18k, 14k or rhodium.**
- ii. **Gold-filled.**
- iii. **Gold overlay/vermeil.**

Gold plated



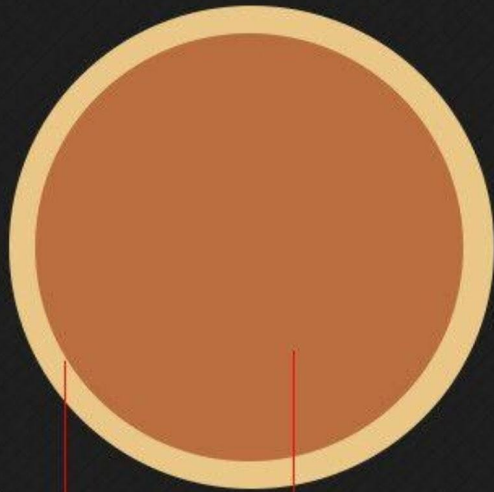
Base
metal

Gold plating

- Hard Gold Plated
- Soft Gold Plate
- Duplex Gold Plated
- Vacuum Gold Plated
- Chemical Plated & Immersion Gold Plated

Gold plated

Single-layer Plating

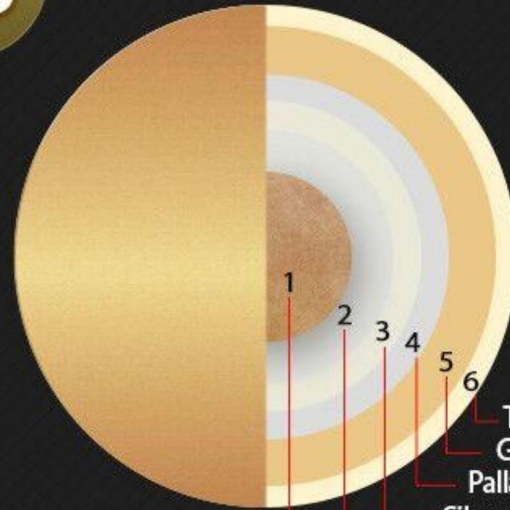


Gold Plating

Base Metal : brass/sterling silver

VS

Multilayer Plating (BP)



1

2

3

4

5

6

Top Coat

Gold Plating

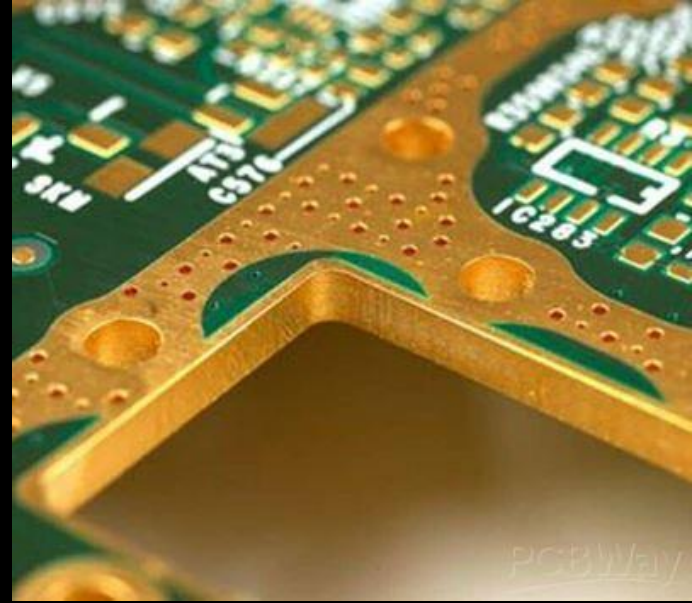
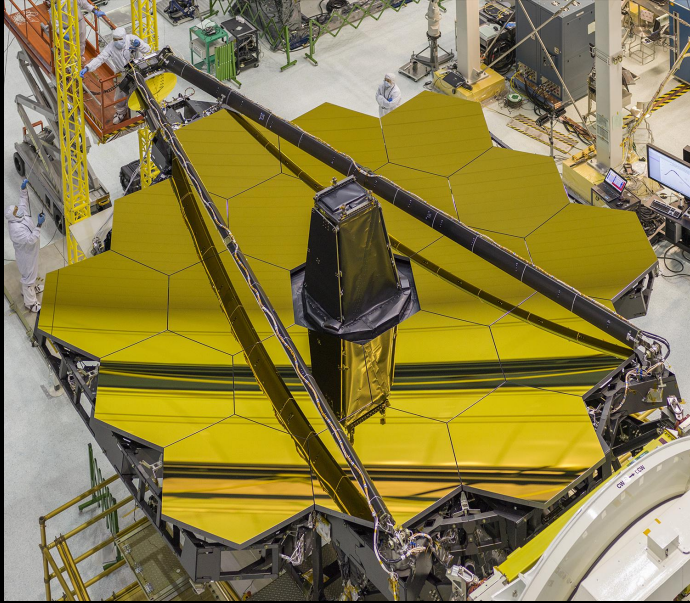
Palladium Plating

Silver Plating

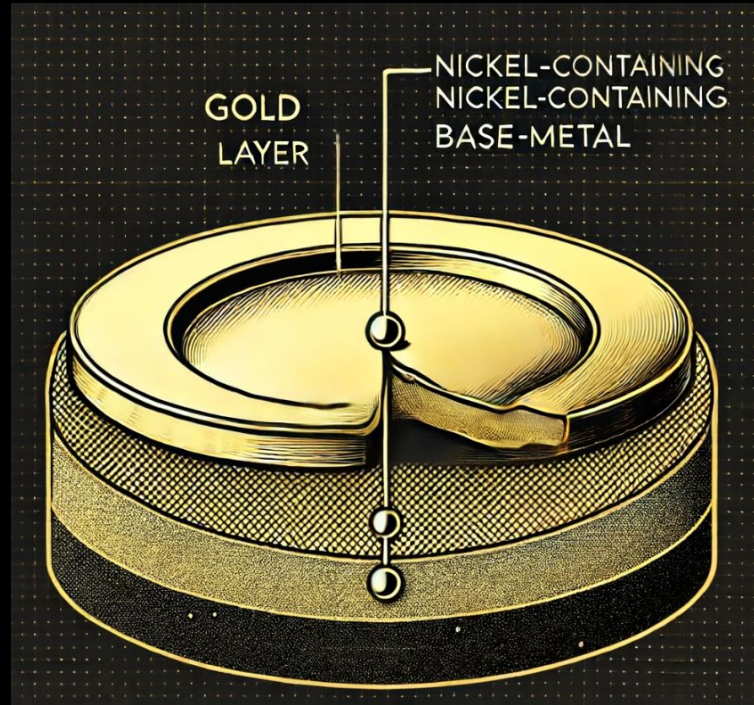
Copper Plating/Silver Plating

Base Metal: Brass/Sterling silver

Gold plated

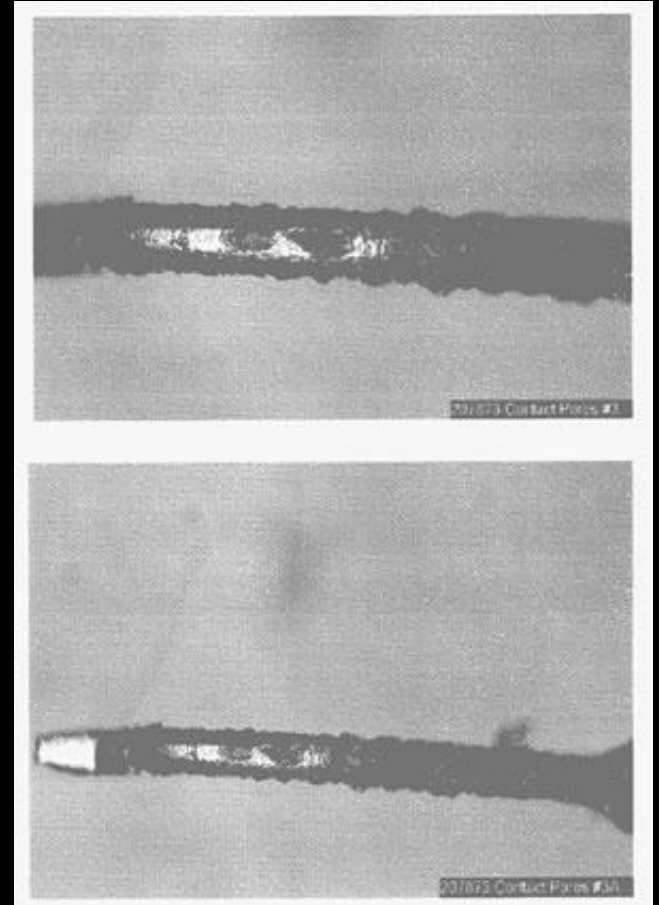


Gold plated issues



Gold plated issues

Porosity of Gold Plating



Gold plated issues Degradation



Gold vermeil/overlay

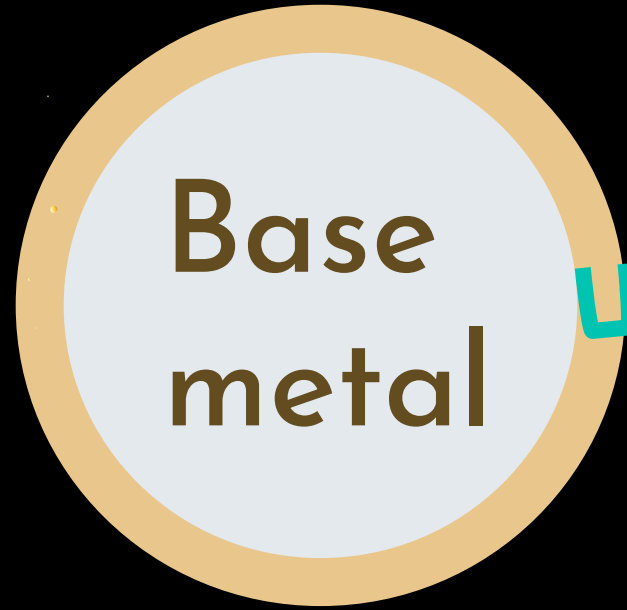
A decorative graphic in the top right corner featuring a gold bar resting on a scale, with a dark sphere and scattered gold particles in the background.

SILVER

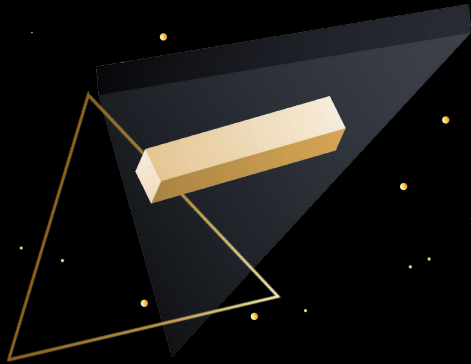


Gold plating

Gold filled/rolled



U Gold Filling



Solid gold



Is Rhodium Plating the Villain, and Are Companies Scamming Us with White Gold?



Why the Statement is Misleading for Body Piercing Jewelry



Why the Statement is Misleading for Body Piercing Jewelry



Is this ideal?



Nickel Content

vs.

Nickel Release

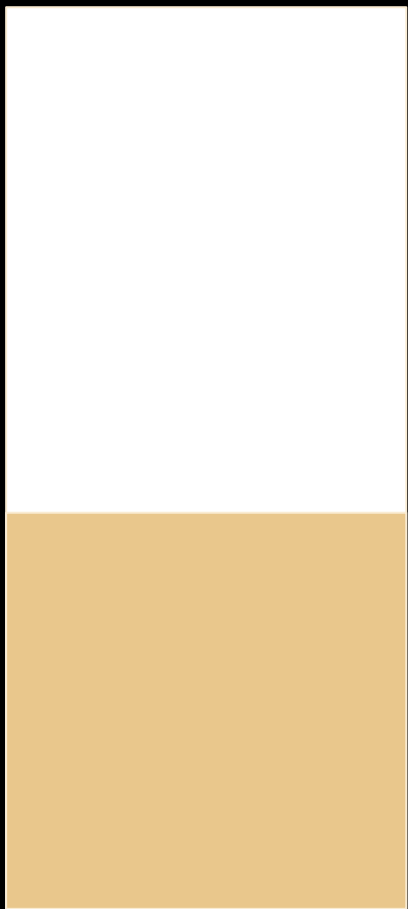
Nickel sensitization is a human health concern due to its marked prevalence in the general population. However, the risk of becoming nickel-sensitized or having a nickel ACD reaction (if already nickel-sensitized) can be managed and minimized through reduced exposure to nickel-releasing items.

The Nickel Institute / NIPERA

Cadmium

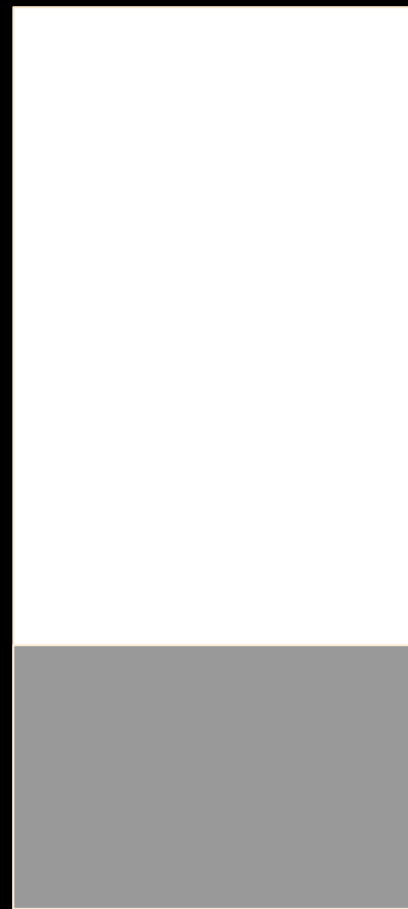


Allergy vs sensitivity



40ppm

28ppm



40ppm



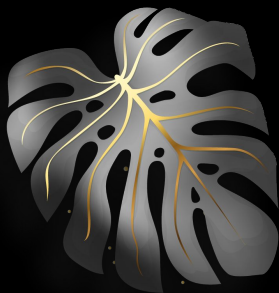
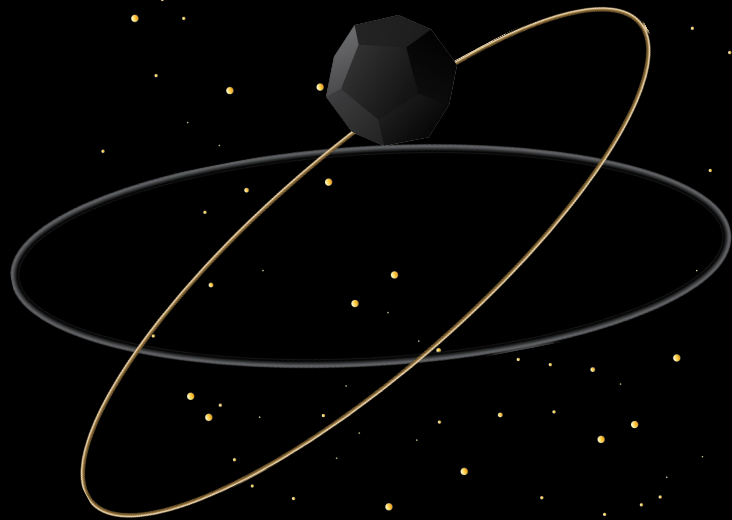
28ppm

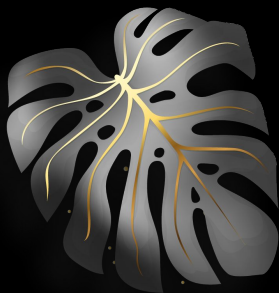
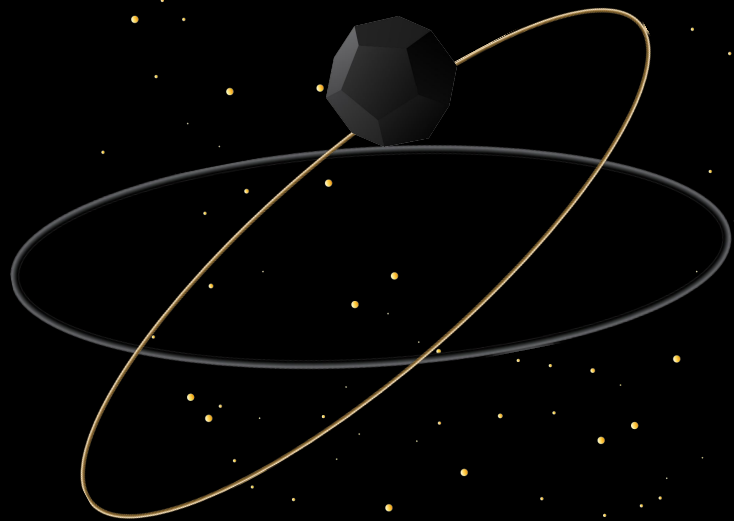




03 CONSUMER SAFETY

Standards, Testing and verification.







ASTM INTERNATIONAL





ASTM INTERNATIONAL

Committee F15 on Consumer Products





ASTM INTERNATIONAL

F15 Subcommittee

24 Jewelry

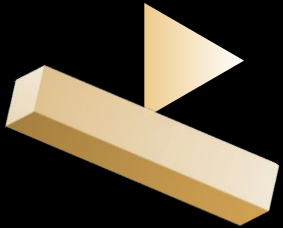




ASTM INTERNATIONAL

ASTM F2999

ASTM F2923

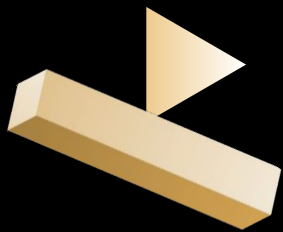




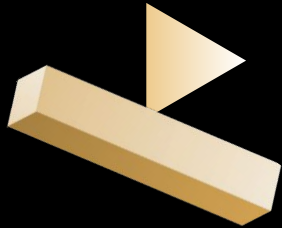
ASTM INTERNATIONAL

ASTM F2999
ASTM F2923

1.1 This specification establishes requirements and test methods for specified elements and for certain mechanical hazards in adult jewelry.



Astm F2999-Astm F2923



Intended User Labeling and Warnings	4
Specifications for Lead in Adult Jewelry	5
Specifications for Adult Body-Piercing Jewelry	6
Specifications for Antimony, Arsenic, Barium, Cadmium, Chromium, Mercury and Selenium in Paint and Surface Coatings of Adult Jewelry	7
Specification for Cadmium in Certain Substrate Materials of Adult Jewelry	8
Antimony, Arsenic, Barium, Chromium, Mercury and Selenium in Substrates of Adult Jewelry	9

Gold testing

Fire assay



Gold testing

Fire assay is a destructive test



XRF & HD-XRF

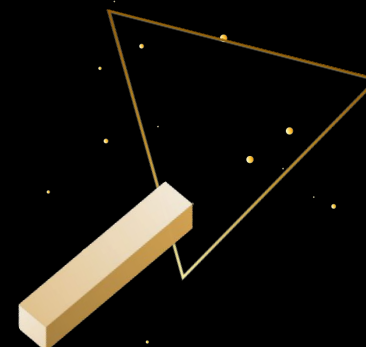


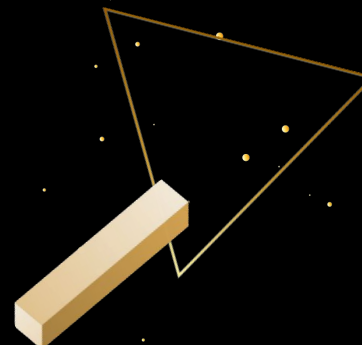
XRF and HD-XRF

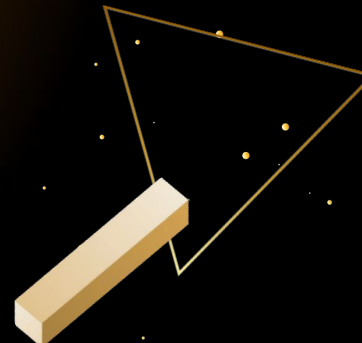


ISO 9001
ISO 13485

?







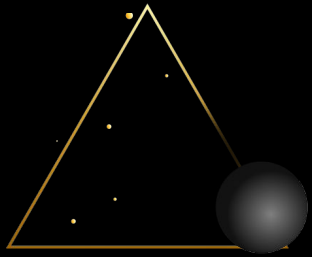


LONG TERM
WEAR VS
SHORT TERM
WEAR

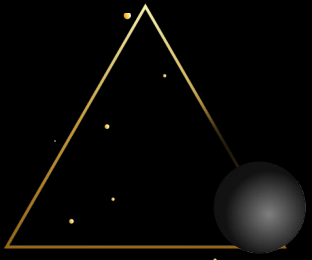
04

Traditional jewelry vs. Modern jewelry





Gold Mill Certs?

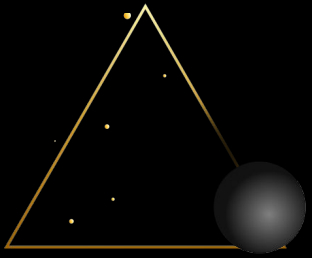


Gold does not typically have a mill certification for several reasons:



Nature of
the
Material



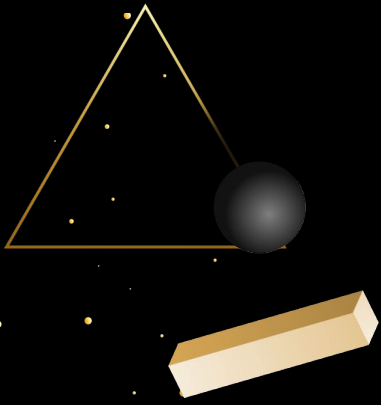


Gold does not typically have
a mill certification for several
reasons:



**Industry
Standards**





Gold does not typically have
a mill certification for several
reasons:

**Consistency and
Uniformity**

Anatomical Considerations Geometry matters



Anatomical Considerations Geometry matters



Anatomical Considerations Geometry matters



Anatomical Considerations Geometry matters



too short



too long



just right



Anatomical Considerations:

Geometry matters

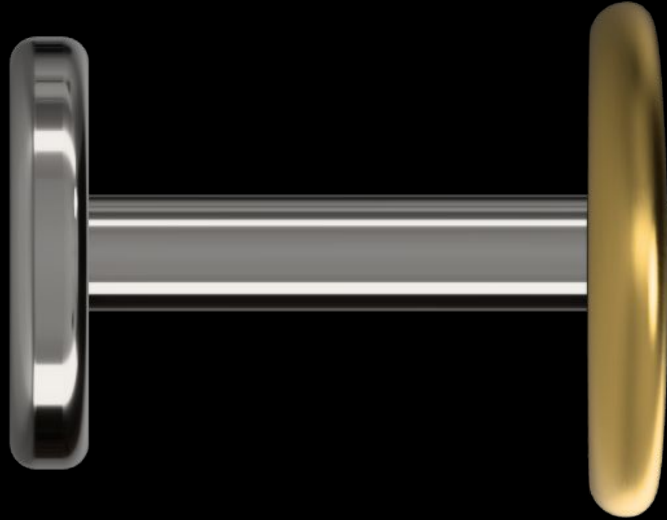


Anatomical Considerations:

Geometry matters



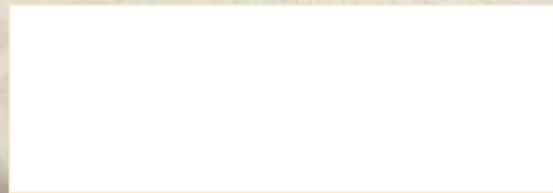
Anatomical Considerations: Geometry matters





Healing and Biocompatibility:

Our responsibility
as piercers



THIS JEWELRY SHOULD BE
CONSIDERED COSTUME JEWELRY
EXTENDED WEAR, SALIVA, SOAPS
ALCOHOL AND HARD WATER MAY
HAVE AN EFFECT ON THE LIFETIME
OF THIS PIECE

no returns/refunds





safejewelry.org



Thank you!

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THANKS!



Does anyone have any questions?
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