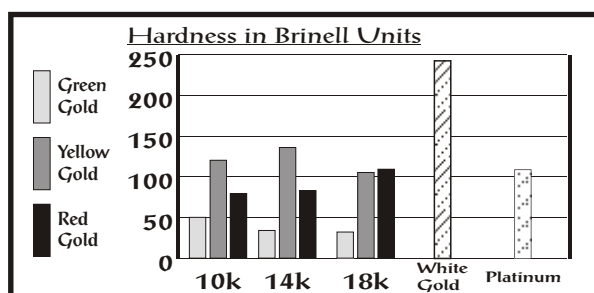


## – WHAT'S IN AN ALLOY? ...how to choose the right metal for your jewellery

All that glitters is not gold, at least not pure gold. Sometimes it is green or red. But why? And why is platinum the metal of choice for setting the most valuable gemstones when it is actually softer (and more costly) than white gold? Above all jewellery should be beautiful. It should have the luxurious appearance or patina that is part of its appeal while still withstanding the rigors of wear. Which metal recipe, or alloy, to use for a particular design is determined by careful balancing of several factors, all of which are interrelated.

The **colour** of the metal should enhance your skin tones and any gemstones used. Platinum is always white and is usually 90 to 95% pure. Most white golds contain nickel, a very potent bleaching agent. Copper mixed with gold makes red gold. Silver and gold gives green gold while adjusting the balance of copper and silver will provide a range of yellow shades. All of the different coloured alloys have different working qualities as shown in the charts below.

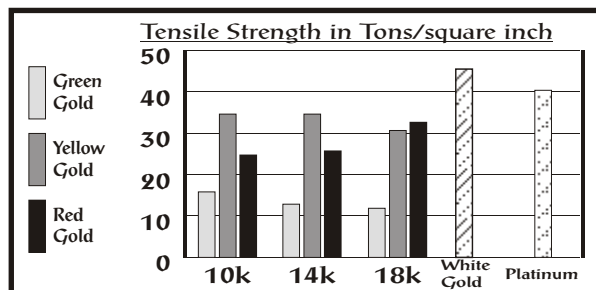
The **hardness** or resistance to scratching and abrasion is less important than you may think. All of the jewellery metals will scratch since all of them are softer than many of the other substances that you come in contact with.



The **tensile strength** is the metal's resistance to being fractured. **Toughness** is best described as the opposite of brittleness and **ductility** is concerned with how thin a wire may be drawn down to. **Malleability** is how thin a metal may be hammered. The following chart shows a comparison of one of these factors, tensile strength.

Hardness is not necessarily the most important factor. An analogy would be to contrast a block of ice (very hard, i.e., white gold) with a block of butter (very soft but malleable and ductile, i.e., platinum or higher karat golds). If you hit each of these blocks with a hammer or tried to file the

corner off they would respond very differently. The ice would shatter or easily abrade. The butter would simply move with the hammer blow or clog the file and then move with it. Therefore, it is more an alloy with good malleability and ductility will actually perform better even if it is



slightly softer than a more brittle metal.

All of the above qualities are also affected by mechanical processes applied to the metal. Simple bending, hammering or twisting of a piece of metal will "work-harden" it. Annealing, heating and cooling under controlled conditions, has the opposite effect of returning the metal to its softest, most workable state. Another type of controlled heating and cooling can actually temper the metal and heat-harden it without having to manipulate the item. The type of jewellery item will also determine the choice of alloy. A delicate filigree ring might be too fragile in 18 Karat green gold but would be fine in platinum or a lower karat of yellow gold. A brooch pin must be strong enough to penetrate fabric without bending.

**Patina** is also a factor. Does a ring look better after years of wear or does it just look old? Another analogy is to compare brand-new sterling silver and stainless steel flatware. They both appear very much the same on the store shelf. However, the much softer sterling silver will still look wonderful after many years of loving use. The harder stainless steel will look like old stainless steel after only a few years. An 18 or 22 karat wedding band will still look wonderful after 50 years of wear, the network of dents and scratches blending in a rich testimony of its life story.

The luxurious feel of a substantial 18K or platinum ring gives the same feeling of quality that you get from the satisfying sound of closing the door of a well-built automobile.

At Jewels By Design we are happy to show you

Jewels By Design is accepting orders for special Tucson Gem Show orders.  
Please call Llyn at 228-0644 to discuss your wish list.  
**Deadline is February 2, 1998**

### Why does gold discolour?

The most common reason for jewellery turning colour is metallic abrasion caused by makeup on skin or clothing. Cosmetics and some fabrics can actually contain compounds that are harder than the gold in the jewellery itself. These can wear or rub off very tiny particles of the precious metals. These particles will look like black dust which can leave a smudge on skin or clothing.

Another cause of discolouration is the actual corrosion, not of the gold in your jewellery, but of the primary alloy materials used. Copper and silver will both form dark oxides and sulfides in reaction to skin acids, chlorine or even smog. That is why your jewellery may only react when you are under stress which can cause a change in your body chemistry. Frequent cleaning will help minimize oxidation. In severe cases switching to the more pure alloys like 18 Karat can help. In severe cases platinum, which is virtually non reactive, may be the only solution.

### What's new!

We have a very exciting collection of South Sea Pearls in stock at the moment. In natural colour blacks, from Tahiti-Cook Islands, we have a 20 inch, graduated baroque strand, nine to 11 mm sizes. Also an incredible "Poe Rava" or Peacock colour matched pair of drop-shape pearls, 15 x 11 mm. The luster and colour are outstanding and would make a very special pair of ear drops. Also interesting is a pair of 10 mm, Golden South Sea Pearls from Indonesia They would be lovely with the apple-green of peridot or warm-toned Champagne diamonds.

Our opal supplier has left us with a great collection of loose stones. Particularly interesting are a fan-shaped pair of vivid blue-green colour. I have rarely seen this "shot silk" pattern in opal.

We also have an oval ruby, just less than one carat, that is so bright that will catch your eye from across the room.

These are but a few highlights of our new stock to tempt you. Be sure to come in and see the rest.

## TUCSON GEM SHOW 1998

Many of our regular clients are familiar with the annual pilgrimage to Tucson for the Gem and Mineral Fair. From modest beginnings more than 40 years ago Tucson has become a phenomenon; Mecca, Woodstock and the World's Fair, all rolled in one.

The Tucson Gem Fair is the largest gem and mineral show in the world. Dealers congregate from all corners of the earth with their wares. Via the grapevine, we have heard that the production of two new mines producing remarkable quality emeralds and sapphires will be unveiled. There are always new gem cutters to meet and old friends to revisit. The variety of gems is immense, with displays spread across more than 15 locations around the city. Mineral dealers selling magnificent amethyst specimens from the back of their truck are next to diamond dealers from India, next to a room of tables draped with pearls from the Orient and South Pacific.

This year is special for Llyn since he will be honoured with Platinum Award in the Spectrum Competition.

We attend the show for several reasons, the escape from a bit of winter being only one. It is a chance to see what is new, different and exciting in the gem world; to meet and talk with goldsmiths and dealers from other countries and discover what the rest of the world is doing in design. And, of course, to buy stock for the shop so that Jewels By Design can bring at least a taste of the Gem Fair

to Calgary. Shopping at the show is much more difficult than one might think because of the sheer number of beautiful gems. By taking special orders from our clients, we find the shopping easier since we can focus on these items.

Is there a particular stone that you would love to have but can't find? Is there an important date coming up that should be celebrated with an equally special jewel? Do you have a piece of jewellery that needs a different stone to bring it up to date? Or perhaps something to compliment a piece you already own?

**Call Jewels by Design at 228-0644 before Monday, February 2, to discuss your special orders for Llyn to search out in Tucson. The selection is unrivaled and virtually any request can be met.**