



## Millions of Years Old or 5 Week Petri Dish Diamonds – Can You Tell The Difference?

Laboratory-grown diamonds have been around for about 20 years but they have always been more expensive than the natural product and some have appeared in very unnatural colours. Techniques have improved and will continue to do so and prices have therefore dropped considerably.

De Beers have just launched their own brand of laboratory diamonds called their 'Lightbox' range – and are building a new factory in Oregon with a production target of 500,000 carats a year. They have indicated a retail price of \$200 for a ¼ carat and \$800 for a 1 carat stone which, despite sounding low, will still provide them with a larger profit margin than for their natural products. A reasonable ¼ carat natural stone would retail for £500 + today in the UK and a reasonable 1 carat natural stone from about £3500.

There are 2 very 'high tec' processes which can grow the diamond from a pure carbon 'seed' to over a carat in weight in about 5 weeks as opposed to the natural product which takes millions of years deep in the bowels of the earth. Man-made stones are not all totally flawless; internal flaws in natural stones are normally specks of uncrystallised carbon, whereas in man-made stones the flaws are caused by slight production glitches and variations in conditions can influence the colour and clarity qualities

De Beers have said that they will laser mark every stone they produce, then ticket and retail it accordingly. The question is, will all producers and retailers be as honest and transparent? Another consideration is the practice of 'diamond sights', which take place during the early stages of the production of a piece of diamond jewellery. This is where a few very select bulk diamond buyers are offered large quantities of stones in huge 'lots', by the big diamond suppliers. Recently in India, a 'sight' was found to include only 10% natural against 90% man-made stones – with no indication from the supplier that this was the case.

Will these laboratory-grown stones drag the price of natural stones down or will it be an opportunity to promote their natural qualities and increase prices? Despite advertising to the contrary, diamonds are not that rare and although some new mines have opened in Middle Africa there have been no major new diamond field discoveries since the ones in Canada nearly 20 years ago. De Beers calculate that there are only about 50 established legitimate diamond mines operating throughout the world. They predict that the effect of relatively cheap man-made diamonds on stone prices in general could mean the number of producing mines could drop by half in the next twenty years.

Currently a first-time engagement ring buyer looking for a 2-carat diamond ring will see a sparkling man-made single stone at £1500 and a visually identical natural stone at £7500. Most will buy on price in my opinion, but I sincerely hope I'm wrong. The problem for retailers, manufacturers and of course valuers is that these man-made stones are real diamonds – ie pure carbon – and will test as such when examined by hand held diamond testing machines.



Laboratory grown diamonds

So, with this size of price gap, for both the insured and the insurer, it is going to be very important to be as sure as possible about the stone's origins. The type of inclusions (flaws) in a natural stone do look different from those in a man-made specimen so that will help when making a judgement. However, the age of the piece and its 'family' history will also prove helpful guidance factors. When appraising client's new jewellery, the need to see a certificate and receipt from the supplier stating the stones' origins or even better an independent laboratory certificate for the principal stones, is becoming increasingly more important to both valuers and insurers.

Currently, the GIA (Gemmological Institute of America) which is the most recognised laboratory worldwide is saying that it will carry out stone inspections and will state if a stone is natural or man-made. In the case of a man-made piece they will state the carat weight, but they will not - at this stage - classify its colour or clarity. The other main laboratories like HRD and IGI have not yet made their positions clear but I would think they would follow GIA's position. It is to be noted that there have been quite a few new ones emerging in the Middle and Far East, out of which have come some rather disturbing stories about the accuracy of their classifications.

Our recommendation is to stick to the well known and established laboratories. It is claimed that, say a 1 carat stone, E colour and VS1 clarity with a GIA certificate could be worth 10% more than an almost identical stone with a less high-profile laboratory certificate. However, unfortunately GIA do not have a UK laboratory currently.

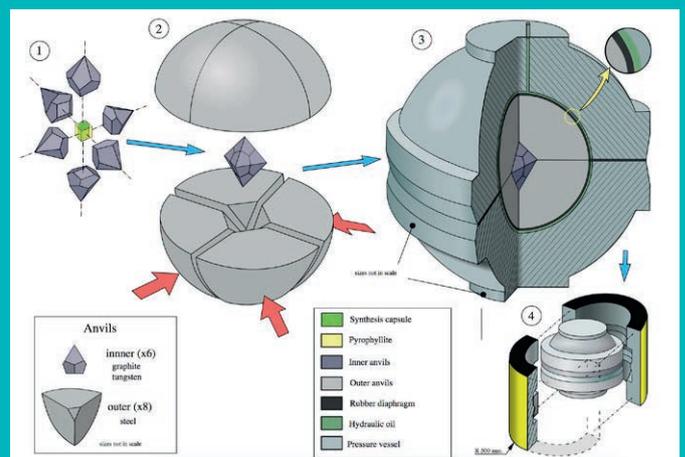
The diamond trading market has changed enormously over the past 20 years with De Beers no longer in virtual 'sole control' and the Canadians and the Russians going their own way in marketing their diamonds. The monthly diamond Rapaport and Index reports, which list the average trade prices in US dollars of millions of loose diamonds of all sizes and qualities on offer throughout the world, are still used by the trade as their base point.

I think it's too early to be certain which way the market will go. There are obviously wider and more general factors such as the economy and politics which may also have an impact, but for sure there's uncertainty and nervousness in some areas of the market. The fact that De Beers have committed to their own production of stones, together with their prediction that the relative 'cheapness' of the man-made stones could halve mining and production of natural stones in the next 20 years, gives an indication of where they foresee the market heading. The other side of the coin is that in that situation natural mined stones will become rarer and rarer therefore the prices will rise.

In conclusion, the need for regular valuations of your diamonds is becoming increasingly more important.



Colorless gem cut from diamond grown by chemical vapor deposition



Making synthetic diamonds through high pressure