

EMERALD



Preformed, partially shaped rough emeralds filled with Perma Is. Evidence of how much Perma Is used can be seen in this image as flats on one side. These flats were on the bottom of the stone, created by the puddling of enhancement while the stone was being treated.

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CRACK-UP

BY GARY ROSKIN, G.G., FGA, SENIOR EDITOR



A new development in the field of emerald enhancement could mean trouble for retail jewelers.

EMERALD CRACK-UP

Emerald-enhancement laboratories in Colombia and Brazil have devised a way to increase rough-to-polished weight retention of emeralds by as much as 50 percent—but the practice may ultimately compromise the stones.

The labs accomplish the feat by using so-called “Perma” fillers—accepted enhancements for finished emeralds, as long as they’re disclosed—on rough emerald crystals and preformed gemstones. But some New York emerald merchants say the practice amounts to gluing together an otherwise fragile stone to keep it from falling apart during final cutting and polishing. They claim that some stones come away from the cutting wheel with large portions held together only by the filler.

As for disclosure, the Colombian labs are disclosing the enhancement to emerald suppliers, but some suppliers sell the finished stones to retailers disclosing only that their goods are “enhanced with Perma.” That statement is unexceptionable when it refers to enhancement of finished emeralds, but if the treatment was applied to rough or preforms, it amounts to less than full disclosure and could put retailers at risk.

Arthur Groom, a retail jeweler and emerald wholesaler in Ridgewood, N.J., has drawn attention to the issue, most prominently in comments he made in a *Wall Street Journal* article, “How One Man Riled the Emerald Trade.” Groom, who enhances polished emeralds with his own ExCel treatment (an organic polymer), has been accused by some emerald dealers of being self-serving in his statements to the media.

But Fernando Garzon, an expert in emerald fillers and partners with Groom in the Clarity Enhancement Laboratory, New York, which developed the ExCel process, says the issue has caused him to refuse some work. Typically, clients want him to remove Perma from faceted Colombian emeralds and refill them with ExCel or the more traditional cedarwood oil. But if an emerald was filled with Perma in the rough or preform state, sometimes he has to decline. “No, I can’t do it, because it was previously enhanced—as a preform,” Garzon tells them. “If we try to remove the old filler, the stone will fall apart.”

Cleaning and enhancing a stone requires the use of acids, under heat and pressure, which attacks and removes foreign material in fissures. Ten years ago, Garzon could clean out old enhancement and replace it. Even today, if enhancements like Permasafe or Gematray are used on polished goods, Garzon can remove the enhancement and replace it with something else. But when Perma filler—which is meant to be permanent—is used



1 | This beautiful Colombian emerald shows a problem in the right corner. The enhancement is turning white, which means it’s starting to fail. But note that the fissure line goes from one edge to the other. **2** | From the back side, the fissure line continues and makes a complete circle with the top fissure. The stone’s corner was enhanced as a preform, which is why it’s still in one piece. **3** | After informing the client that the stone would almost certainly fall apart upon Perma removal and attempt to re-enhance the stone, the inevitable happened.



4 | This stone was in a parcel of emeralds that had arrived at CEL for re-enhancement. The filling was obviously failing, turning white along the edge of the fissure. **5** | Fissure was one continuous break, and only the enhancement held it together. If the enhancement is removed the stone will probably be in two pieces.

PHOTOS COURTESY OF CEL, NEW YORK

PHOTOS: GARY ROSSINI

on a preform or rough emerald, Garzon is reluctant. “The problem is in trying to remove it. It’s very labor intensive,” he says. “People don’t realize that this is something that runs significant risk.”

JCK asked several New York emerald merchants if they’ve encountered stones that had been filled in the rough or in preform. None wished to comment. So we visited Garzon and Groom at CEL and examined some emeralds. One stone, which had arrived that day from a regular client, had dried whitish Perma that needed to be removed and replaced with new enhancement. But the fissure went all the way around the stone. If they attempted to take out the old filler, one third of the stone would probably fall off.

On his computer Garzon showed several before-and-after images of stones that had fallen apart. The emerald dealers who submitted them couldn’t sell the stones as is and had to take a chance that the stones would remain intact. But when Garzon saw continuous fissures, he knew the stones were held together only by the enhancement. Remove the enhancement, and the stones fall apart.

“I just got a stone [previously enhanced as a preform] from a prominent dealer,” Garzon said. “It weighed close to 40 carats. He repolished it. It opened up new fissures. If I go and clean this stone, his \$135,000 emerald will fall into four pieces.”

Carlos Osorio, director of the Centro Gemológico Colombiano laboratory in Bogotá, Colombia, acknowledges the use of Perma on rough and preform emeralds. “They are using around 10 types of hardener resins to treat emeralds in Bogotá,” he says. “They are called Permasafe or Gematrat. They are treating rough [and] preform, this is correct.”

Osorio doesn’t dispute Groom’s view of the disclosure issue. “The disclosure is between the dealer and the lab,” he says. “Actually, the loss of memory occurs when the owner treats the stone—cut or rough—and goes to sell it. Everyone says, ‘It has cedarwood oil.’ I [used to offer a] certification service here and had too many problems telling those people that most of their stones had permanent treatment.” The clients always denied it, Osorio says.

“Buying clients say they do not buy emeralds filled with permanent, but they really cannot tell if it has it or not,” Osorio explains. “With a loupe, it is almost impossible.”

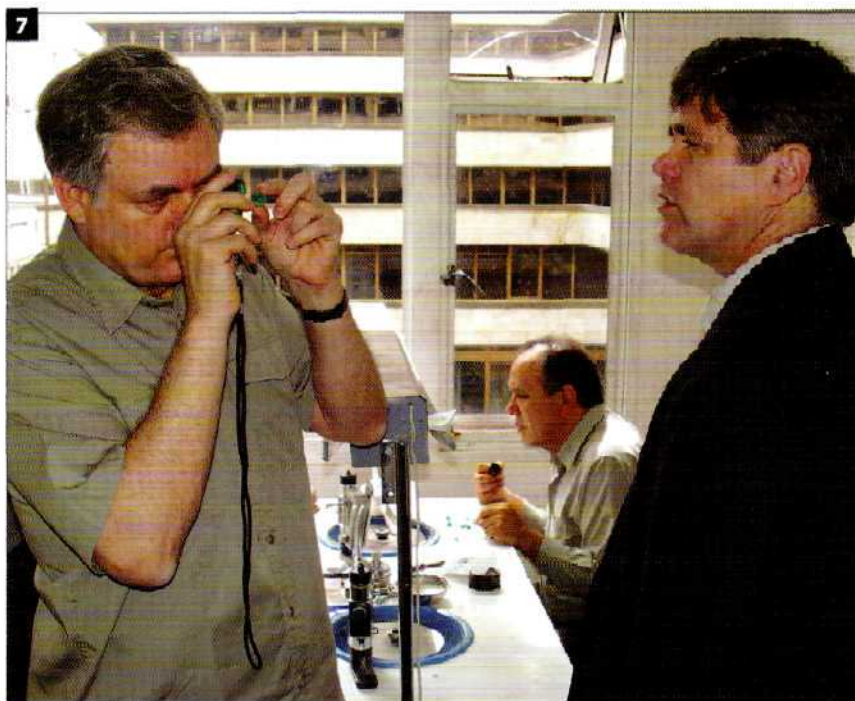
Osorio offers retailers one clue: “Stones from La Pita, the new mining area, Pita Cuñas, are heavily fractured. They have also very deep colors, so it is almost certain that deep-color dull stones have permanent treatment.” ■



PHOTO: GARY ROSKIN

6 | Inside CEL, JCK got a firsthand look at enhancement apparatus and stones submitted for re-enhancement.

7 | Arthur Groom [left] visits an emerald-enhancement laboratory in Bogotá. Groom sounded the alarm about potential problems stemming from the practice of treating rough and preformed emeralds with Perma.



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GIA’s Take on Fillers

The Gemological Institute of America says fillers should hide fissures, flow into fractures, hold up over time (or be easy to restore), and be removable (or have no properties that might later harm the stone).