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For Immediate Release

Automated Diamond Grading is a Reality

Philadelphia, PA - One of the biggest dilemmas with diamond grading is subjectivity. To compensate for differences in human perception and judgment, gem labs usually have two or more people grade stones to achieve consensus—if not always unanimity—in ratings for color and clarity. Nevertheless, the human factor remains a nagging problem.

Besides being plagued by observer differences of opinion, manual diamond grading is time-consuming. Waiting for diamond reports can take days and even weeks. No wonder, then, the jewelry industry has long hoped for automated diamond grading. Such technology would permit machines to handle every step of grading from diamond identification and measurement to grading for color, clarity and cut. Moreover, high accuracy standards and built-in calibration capability would assure repetition of results from the same machine and exact reproduction of them on like machines elsewhere.

Now there is just such a totally automated diamond measurement and grading system. It's called ImaGem and it completes the entire diamond grading process—from stone registration and fingerprinting through grading and report printout—in under seven minutes. Such gains in efficiency have drawn interest from diamond dealers and gem labs worldwide. Here's how ImaGem's laboratory information system works:

Diamond Grading in Five Quick Steps:

Step One: Registration: The new VeriGem™ device begins the grading process by weighing the stone, as well as measuring both its table and total depth percentage. This information becomes the first entries into what will become a complete data file for that stone—all of it contained on a bar code. This data file can be used to identify the diamond at any other place with ImaGem technology. In short, the VeriGem device can be used to track stones around the world and prove they are from legitimate sources. For dealers worried about "conflict diamonds," VeriGem is peace of mind. Time: 30 seconds.

Step Two: Grading

Once the diamond is registered in the ImaGem laboratory information system, it is sent to the first of two grading stations where it is measured for proportions, symmetry, fluorescence, color and three critical aspects of light performance: brilliance, intensity and sparkle. These data are digitized, processed and converted into grades consistent with international standards. These grades are entered into the data file. Time: less than three minutes.

Step Three: Clarity

After the initial phase of grading, the diamond is sent to a second grading station for clarity analysis. To ensure that stones are dirt-free, they are cleaned and then placed in an immersion cell that

eliminates reflections and glare. Next, the stone is photographed using a high-resolution digital camera. The number of images generated for a stone will depend on its clarity. IF through VS2 goods are photographed several times. More included stones, whose imperfections are more readily apparent, need fewer shots. The ImaGem system maps all inclusions. This plot can be translated into specific symbols by a gemologist. Once a clarity grade is decided, it is entered in the data file. Time: 3-5 minutes for high quality stones

Step Four: Review

With all critical measurements and grades made and recorded for the diamond, a gemologist runs a quick check to ensure completeness and accuracy of information. To perform this review, he runs a second VeriGem test and checks the bar code. If everything is in order, one click of a mouse or a keyboard finalizes the data file. Time: one minute.

Step Five: Data Printout

Once the gemologist approves the data file, ImaGem quickly produces an integrated diamond grading report or an electronic file that can be customized to a lab's or a store's specifications. Time: 30 seconds.

For more information about ImaGem's technology, grading center locations and capabilities, please visit our website at www.imageminc.com or call us at our Philadelphia office 215-477-9920.