



IPS e.max Lithium Disilicate

Since the inception of the IPS e.max system, 40 million restorations have been fabricated and the material has been extensively monitored by the scientific community. There have been more than 20 clinical in vivo studies, even more in vitro studies and there are additional studies in progress throughout the world. A summary of these clinical results shows a 98.2% success rate in the oral cavity.

IPS e.max Press is a lithium disilicate glass-ceramic ingot for the press technique. The lifelike restorations offer excellent fit, form and function combined with a strength of 400 MPa. Available in four levels of translucency and two sizes, IPS e.max Press is used to produce single-tooth restorations, bridges for the anterior and premolar region, implant superstructures, minimally invasive inlays and onlays (1 mm) and thin veneers (0.3 mm).

A wide selection of ingots is available and allows users to choose their preferred processing technique—staining, cut-back or layering. The restorations are characterized or veneered with matching staining materials or layering ceramic from the IPS e.max Ceram assortment. The press material for the fabrication of full contour restorations is available in 16 A-D and four Bleach BL shades.

The comprehensive IPS e.max system also includes IPS e.max CAD lithium disilicate glass-ceramic blocks for CAD/CAM milling of single-unit restorations; IPS e.max ZirCAD, zirconium oxide blocks ideal for milling CAD/CAM bridges; IPS e.max CAD-on for fabricating up to four-unit posterior bridges in combination with IPS e.max ZirCAD; and IPS e.max ZirPress, fluorapatite glass-ceramic ingots for pressing over e.max ZirCAD frameworks.

For details, call 800-533-6825 (U.S.), 800-263-8182 (Canada) or visit www.ivoclarvivadent.com. ■

IPS e.max: A Solid Business-Building Solution

Since hitting the industry in 2005, Ivoclar Vivadent's IPS e.max Press lithium disilicate—the only material of its kind—has taken the market by storm. To date, there are 5,700 laboratories of all sizes and types having success with IPS e.max Press restorations; here, LMT profiles three laboratories with very different business models that have all made IPS e.max restorations a core part of their services.

Small Laboratory Services a Bioesthetic Niche

In 2004, Dan O'Rourke, President of O'Rourke Dental Studio in Bristol, NH, made a business-changing decision to get involved with bioesthetic dentistry. This philosophy considers not only a patient's teeth, but his jaw joints and head and neck muscles, and maintains that problems—such as TMJ pain or damage to teeth—occur when these components aren't working in biological harmony. Only once these components are in harmony, are the patient's restorations fabricated.

Today, O'Rourke is one of only 11 certified Bioesthetic Dental Technicians in the world and a faculty member at Orognathic Bioesthetics International where he received his training, and the bulk of his work is for bioesthetic dentist-clients.

In addition to putting the mouth in "harmony," bioesthetic cases must also be strong and this presented a challenge when O'Rourke

wanted to use a pressed restoration in the posterior. "I liked the labor-saving aspect of pressing monolithic restorations but I couldn't find a system indicated for the posterior," he says. "When IPS e.max Press came out, all that changed. It was the first pressed restoration I found that was strong enough."

Since the bite on all bioesthetic cases must be within eight microns, the material also allows O'Rourke to create these incredibly precise restorations. "A full mouth reconstruction requires two to three days of waxing and when I press my posteriors I don't want to lose any of the occlusal contacts I've created. After I press my IPS

e.max waxups, my contacts are always maintained."

O'Rourke fabricates about 50 IPS e.max units per month—about two-thirds of his entire caseload—and it's now the only pressed system he uses for his posterior as well as anterior restorations. "With our focus on bioesthetics, IPS e.max was a perfect marriage with our laboratory," he says. "Every bioesthetic technician I know is using this material." ■



Above: An IPS e.max waxup and the final crown.

Right: Dan O'Rourke, President, O'Rourke Dental Studio, uses IPS e.max Press restorations in his bioesthetic cases.



Gold Specialty Lab Transitions to All Ceramic

In the 1980s, Steve Alibrandi and his dentist-clients got burned by problems with alumina porcelain jacket crowns. As a result, Alibrandi, Owner of Alibrandi Dental Lab, Wakefield, MA, decided to focus exclusively on porcelain-to-gold and full-gold restorations—and he made this his niche for the next 30 years.

Then, in 2010, he heard about the success laboratories were having with IPS e.max Press lithium disilicate. And once he found out the fabrication technique was similar to that of full gold crowns—but with pressing

instead of casting—he was really intrigued. While his “old school” clients were still wary of all-ceramic restorations, Alibrandi’s research, plus the volatility of the high-priced gold market, made him confident enough to move ahead. “I just went for it,” he says.

He took a four-day IPS e.max training course at Ivoclar Vivadent and was immediately impressed with the material. “The pressings are extremely accurate, the margins are excellent and the esthetics are fantastic,” says Alibrandi. “The fabrication technique is also fast—in one day, I can produce

twice as many IPS e.max crowns as conventional PFMs. Start to finish, a gold PFM crown takes me six hours and an IPS e.max crown takes three.”

Following his training, Alibrandi was excited to offer IPS e.max restorations to his clients, but he still had to get them on board. He made in-office visits, sharing literature on the material and samples of cases he fabricated during training, and gave each office a model with an IPS e.max crown to keep. “It took some time, but slowly they tried a couple crowns and once they saw the

results they requested IPS e.max more and more—especially my largest account. They also liked the fact that they no longer had a gold surcharge on their invoices.”

Today, while Alibrandi still fabricates some gold restorations, the bulk of his cases have shifted to all ceramic. In fact, IPS e.max now makes up 80% of his workload and the material and its labor-saving benefits have also dramatically affected his bottom line: since adding IPS e.max his profits have gone up about 50%. “In the past, my dentist-clients had to use other labs to get all-ceramic crowns; now I’m getting that all-ceramic business I never got before,” says Alibrandi. “I feel good about that and the fact that IPS e.max helps me compete with anyone esthetically on an all-ceramic case. It’s given me confidence I didn’t have before.” ■

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All-Digital Workflow Streamlines, Boosts Production

Two years ago, after getting many requests for IPS e.max Press, Fager Dental Laboratory began offering the restorations to its clients. “We had success with it right from the start,” says Charlie Fager, BS, CDT, Owner of the six-person operation in Camp Hill, PA. “Our clients started with a case or two, then kept expanding the applications of it, doing more units and larger cases. Ivoclar Vivadent has done a good job creating awareness among dentists and basically IPS e.max sells itself.” In fact, after introducing e.max, the laboratory’s all-ceramic work increased by 30%.

At the same time, the laboratory was automating part of its production process. It had invested in a 3Shape scanner and used it to scan and design PFM and zirconia cases in house, then outsourced the files for fabrication. But the laboratory was still doing a lot of hand waxing and Fager wanted to digitize and streamline production even further. “We were using two divergent workflows to fabricate restorations—one digital, one manual—and we weren’t as efficient as we wanted to be,” he says.

The lab decided to invest in an in-

house milling machine that would allow it to eliminate outsourcing, shorten its turnaround times and also support the high demand for IPS e.max Press. Rather than manually waxing copings one by one, the machine could mill several wax copings at once and then the technicians could press them in the usual way.

The laboratory chose Wieland Dental’s compact Zenotec Mini milling machine and after training waxers how to scan and design cases and teaching office personnel how to operate the milling unit, the lab was ready to implement the new equipment. “Since it was a change in workflow, we planned to start slowly, initially just milling PFM patterns in wax and casting them,” says Fager. “But everything went so smoothly that we integrated our IPS e.max restorations and converted our entire process in one week and never looked back. Now we can’t imagine doing the work any other way.”

Today, the lab’s entire production process is automated: technicians scan every case, design it using 3Shape software and then mill it out of zirconia or wax for pressing or casting. As a result, the laboratory is enjoying a more

streamlined workflow, faster turnaround times—from three weeks to less than 10 days—and a boost in productivity. For instance, when technicians were hand waxing IPS e.max, they could fabricate about 60 units a month; now the lab is fabricating nearly three times that amount and has the capability to produce even more. In addition, if the lab has a mis-press, another

wax pattern can be milled in minutes because the CAD design is saved in the software.

“Our clients have noticed that we’re meeting our return times and commented that the quality of our restorations has improved,” says Fager. “They’re asking for IPS e.max by name and our digital set up means we’re easily able to meet that demand.” ■



Left: Charlie Fager, BS, CDT, Owner of Fager Dental Laboratory, Camp Hill, PA.

Below: This smile features an IPS e.max crown on tooth #8 that was designed, wax milled and pressed in the lab.