How a technical advisor can help your lab

Introducing a bimonthly column focused on the liaison between the clinician and technicians

By Kevin Kim

“...You have one new voicemail,” my cell phone read early one Saturday morning. I knew who it was, and I knew what it was about. One of my clinicians in Ohio was calling to thank me regarding the Jane Doe case that we arduously planned over a period of a month. And although 2,000 miles separated myself and the clinician, because we stayed in constant contact, the case dropped right in with no adjustments.

The key to every successful clinician/laboratory relationship is clear communication. Keating Dental Arts has set aside a whole department dedicated solely for this purpose, and this has played a key role in our success.

As a technical advisor, it is my job to act as a liaison between the clinician and the technicians to ensure the best result for the patient. On any given day, each technical advisor at Keating Dental Arts will evaluate 30-40 cases that need to be addressed with our respective accounts. These cases range from simple calls such as a needed shade or a missing opposing restoration and stops as soon as the vibration ceases.

Even though dental cases have been modeled for decades mainly using the most varied types of dental waxes or PMMA powder-liquid resins, “The better is the enemy of the good.”

As the requirements of modern dental technology change, a modern modeling material should also have new, improved and user-friendly properties.

An advanced material that incorporates these properties is primopattern LC from primotec (Westport, Conn.). This article will explain in detail why patterns can be modeled particularly easily and quickly using primopattern due to its material properties.

Dental sculpting waxes are well-established and certainly have many advantages, though they also have disadvantages that are no longer questioned but simply accepted. Technicians have come to terms with them.

Nevertheless, it is, of course, annoying if a bridge distorts unnoticed on removal, if the wax retracts slightly from the metal surfaces of the primary crowns or abutments in the marginal region, if a different wax must be used for every imaginable indication or if there is not a suitable wax available for specific applications (e.g., contact scanning).

Primopattern LC was developed in order to eliminate all these inconvenient disadvantages of conventional modeling materials.

Primopattern is a light-curing, ready-to-use, one-component material that is available as a modeling gel or modeling paste (Fig. 1). As a universal composite material in two consistencies (gel or paste), it can be used for virtually all conventional as well as modern laboratory applications.

In the form of a modeling gel, primopattern LC is easily and precisely applied directly from the dispensing syringe, almost in one step (Fig. 2).

The viscosity of the gel is exactly preset and guarantees quick, precise modeling with high dimensional stability, which ensures that the gel applied does not run (Fig. 3). Primopattern gel is also thixotropic, i.e., it flows more easily with vibration and stops as soon as the vibration ceases.

These properties make primopattern LC gel ideal for use in attachment and telescope crown cases (Figs. 4–6).

Other areas of application include the entire range of fixed restorations as well as implant prosthetics. Primopattern LC modeling paste (Fig. 7) has a more kneadable consistency in comparison with the gel. This allows the material to be easily kneaded to the shape and adapted.

Fig. 1: primopattern LC — light curing and available in two viscosities as a gel or paste. (Photos/Provided by Joachim Mosch)

Fig. 2: No more mixing too much material and then discarding it — primopattern gel is ready to use directly from the syringe.

Fig. 3: The thixotropic behavior of the gel facilitates modeling and ensures flexible application.
Global lab revenues projected to exceed $14.5 billion by 2015

By Fred Michmershuizen, Online Editor

Increasing numbers of elderly people and more demand for high-quality dental esthetics are cited among reasons for an increase in global demand for the services of dental laboratories. According to a recent report, the world market for dental laboratories is projected to exceed $14.5 billion by 2015.

The report, by Global Industry Analysts, a publisher of market research, states that dental laboratories are witnessing a significant increase in demand for dental prosthetics as well as other restoratives. The report also cites the increasing purchasing power of the Baby Boomer generation as another factor driving the dental laboratory market.

The United States represents the largest market for dental laboratories worldwide, according to the report.

Key players profiled in the report include 1st Dental Laboratories, Attenborough Dental, Champlain Dental Laboratory, Dental Services Group, iDent Dental Lab, Lord’s Dental Studio, National Dentex Corp., Southern Craft Dental Laboratory, Utah Valley Dental Lab and others. The report is available for purchase from Global Industry Analysts. More information is available at www.strategyr.com/Dental_Laboratories_Market_Report.asp.

(Source: Global Industry Analysts)

Outsourcing is a key element in the U.S. dental laboratory industry.

The threat of outsourcing, the scarcity of technicians and the availability of modern restorative technologies and systems are driving dental laboratories to deliver quality dental restorations to dentists on time. Outsourcing is a key element in the U.S. dental laboratory industry.

The report, titled “Dental Laboratories: A Global Strategic Business Report,” provides a comprehensive review of dental laboratories, market trends, recent industry activity and focus on market participants.

The study analyzes market data and analytics in terms of value sales for regions, including the United States, Canada, Japan, Europe, Asia Pacific, Latin America and the rest of the world.

About the author

Kevin Kim began in the dental lab industry as an outside sales representative for a small lab in Anaheim, Calif. While attending Los Angeles City College’s dental technology program, he was taken under the wing of the late John C. Ness, CDT, of Productivity Training Corporation. Currently, Kim works as a technical advisor for Keating Dental Arts in Irvine, Calif.

When I get those Saturday morning voicemails, thanking me for Jane Doe’s case … speaking of which, I just got another voicemail I have to check — it must be about John’s case.
The paste is always used when larger amounts of material (bars, pontics, etc.) need to be applied quickly. It can be combined with primopattern gel without any problem.

For example, with bridge frameworks where the copings of abutment teeth have to be modeled first using primopattern gel, light cured and then prepared. The pontic, which is fabricated using primopattern LC paste, is then simply placed between the finished copings (Fig. 8). The connectors can then be adjusted using gel, if required (Fig. 9).

The gel ensures a good connection between both the polymerized copings and the paste. Additional areas of application for the combined use of paste and gel are:

- All types of implant work.
- Frameworks for zirconia copy milling machines.
- Tertiary frameworks over electroformed mesostructures.
- Frameworks for electroformed bridges.

Generally, primopattern can...
be polymerized in all conventional units with a light spectrum of 320 nm to 500 nm. Metalight units (primotec, Westport, Conn.) are particularly suitable as they have a cooling function that enables the material to be polymerized more gently (Fig. 10). The average polymerization time is between 1.5 and 5 minutes, depending on the light-curing unit.

During polymerization, primopattern maintains its properties and dimensional stability. The material does not have any clinically relevant shrinkage and does not distort, even when it is polymerized in stroboscope units.

It is very satisfying how perfectly the patterns fit following polymerization, without having to separate and reconnect them or insert relief cuts.

Accuracy of fit and stability of the patterns are therefore very basic requirements for the success of laboratory work, particularly with implant bridges (Fig. 11) and bars. In both cases, the implant abutments and copings over the abutments are modeled very effectively with primopattern gel and the pontics and bars with primopattern paste (Fig. 12).

The light-cured patterns should be trimmed and finished with cross-cut carbide burs or rubber polishers. As primopattern burns out cleanly and completely without residue, it can even be decided at this working stage whether the pattern should be sprayed and cast, scanned, copy milled or pressed.

Taking everything into consideration, primopattern LC is an advanced modeling material that meets all the requirements of modern dental technology and is completely universal.

Joachim Mosch completed his dental technology and commercial training in Frankfurt am Main, Germany. He was employed for 18 years in the European headquarters of an American dental company, the last 10 years of which was in a general management position.

In 2000, he founded his own companies: primotec and primodent. As the innovative engine of the companies, together with his team, he develops new products, technologies and procedures that help increase the quality and efficiency of dental and laboratory work compared with conventional methods. Mosch has published numerous articles on dental technology topics in the best-known dental journals. He is an international lecturer who presents a variety of innovative topics.

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Fig. 10: Metalight light-curing units have a special cooling system and are particularly suitable for gentle polymerization.

Fig. 11: Practical combination of primopattern gel and paste. The abutments have been fabricated using gel and the pontics with paste.

Fig. 12: As primopattern burns out without residue, the pattern can be cast, scanned, copy milled or pressed.