



GRADIA PLUS from GC

when innovation meets indication..



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GRADIA® PLUS

A new concept for indirect lab composite techniques

Interview with

Diederik Hellingh from GC EUROPE and master dental technicians **Mr Simone Maffei** and **Mr Michael Brüs** on a new indirect lab composite

GC is proud to introduce its new laboratory composite GRADIA® PLUS, a unique modular system approach for dental lab composite techniques. Developed by GC in close co-operation with a group of top dental technicians, guaranteeing a lifelike appearance that perfectly mimics the natural tooth. We spoke to Diederik Hellingh, Group Product Manager and master dental technician Mr Maffei and Mr Brüs who explain the innovative concept offering technicians a new standard in layering of composites.



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What is the thinking behind GRADIA® PLUS?

D. Hellingh: Well, as with all GC innovations, foremost in our minds is making technological and systematic improvements that actually relate to the needs and work practices of our customers. So GRADIA® PLUS is a complete lab composite system with a range of improvements relevant to the dental technician, including wider indications, exceptional durability and highly aesthetic replication of natural dentition, with particular emphasis on making it easier to create whatever colour the technician is looking for. We've managed to do all of that and at the same time make the system more compact.

MDT S. Maffei: There are half as many syringes as before, but the trick is that the technician can use the shades pure or mix them, using a very easy technique, offering a way of working that's similar to ceramic veneering, with no compromise to strength. It sets a new standard in the mixing and layering of shades for outstanding aesthetic outcomes.

MDT M. Brüsich: We are sure technicians will love it, dentists will love it and their patients will love it.



Why has GC developed GRADIA® PLUS as a modular concept and what does that actually mean?

D. Hellingh: We don't want to dictate to the technician how he or she should do their job. So GRADIA® PLUS was developed as a modular system with a number of standalone sets. These sets, for example the Layer sets, Paint set, Gum set are all standalone products that give optimum performance. We are not forcing the technician to adopt them all at once, although we want them to be aware that this is an integrated system and we're confident that used in its entirety it will produce the best outcomes.

MDT M. Brüsich: But the lab technician can choose to use whichever modules suit their way of working and the indications of each particular case, and use other modules or extend the system whenever they see fit. To make it even more user friendly, GRADIA® PLUS also has fewer standard colours, which makes it even more compact and cost-effective. GRADIA® PLUS is a unique material and, with this modular concept, offers a unique approach to in-lab composite restorations.

Technologically, what's especially new about GRADIA® PLUS?

D. Hellingh: Certainly we must talk about the technology behind. In a first - for lab indirect composites - GC has developed a nano-hybrid, light-cured composite that uses the latest nano-filler polymer technology. This uses high-density and homogeneously

dispersed ultra-fine fillers that are blended into the resin matrix. The resulting material has a brightness, translucency and chroma in the mouth that compares favourably with porcelain. GRADIA® PLUS has the highest physical properties, with the same high value for heavy and light body pastes. It has outstanding wear resistance and yet thanks to its mechanical properties is itself gentle on the opposing teeth. This makes it wonderfully versatile – suitable anywhere from anterior right through to high-wear, high-pressure posterior restorations that are at risk of cracking or chipping if made from porcelain.

MDT M. Brüsich: The composite is also remarkably easy to polish thanks to its highly compacted surface and inherent self-polishing properties, so a durable, natural and beautiful gloss is routinely achieved.



You have talked generally about wider indications for use, but where specifically can we use GRADIA® PLUS?

MDT M. Brüsich: GRADIA® PLUS certainly has wide indications, so, for example, the technician can use it with the utmost confidence in metal-backed crown and bridge restorations, metal-free restorations including jacket crowns, inlays, onlays and laminated veneers, as well as implant superstructures and the reproduction of gum tissue for crown and bridge work.

You say that GC is always considering the needs of the user, so what is different about GRADIA® PLUS in making the technician's job easier?

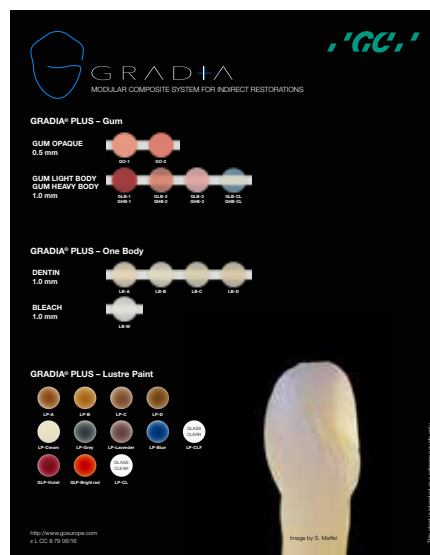
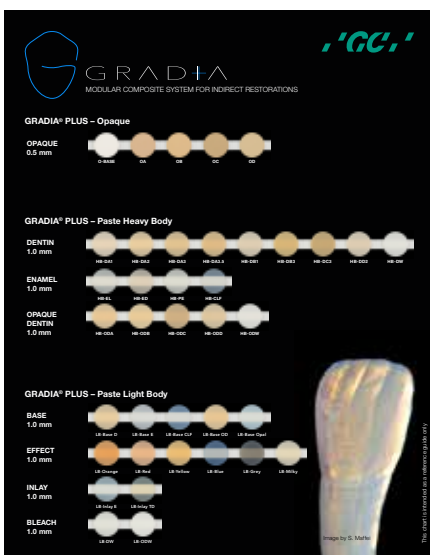
D. Hellingh: We know that technicians get frustrated when they are offered too many choices, so we have halved the number of syringes – with absolutely no compromise to the end result. So now with just eight dentins and five opaques we can offer 16 V-shades. We have Heavy and Light Body pastes



with the ideal consistency for their indications and area of application, including tooth structure and gingival tissue – they're very technique-tolerant – and you can also mix the pastes to achieve your own desired colour tone, opalescence level and translucent level of every shade when desired.

MDT M. Brüsich: GRADIA® PLUS also offers an almost unlimited number of colour and texture combinations despite the smaller number of syringes, to produce highly aesthetic crown and bridge work using the layering technique.

MDT S. Maffei: GRADIA® PLUS screams "ease of use". Just take the monolithical reproduction of standard Vita shades. With our single One Body pastes you get perfect results quickly and easily. Being a light body type, they are simply injected using a transparent mould and are then light-cured.



GRADIA® PLUS

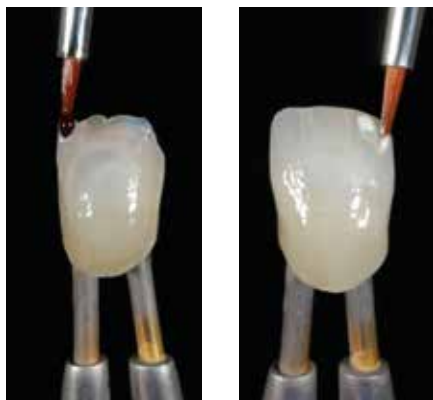
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Moreover, with its combination of durability and aesthetics, GRADIA® PLUS is equally at home in posterior and anterior restorations and is up to the most aesthetically demanding case.

Added colour, internally and externally, is crucial to the aesthetics of a restoration. What does GRADIA® PLUS have to offer that improves the options for the technician?

D. Hellingh: We've used the "less is more" philosophy with Lustre Paint; our paint-on set that includes a wide range of colours for both internal and external characterisation and adds a key dimension to the GRADIA® PLUS system.

MDTM. Brüsich: Lustre Paint has a simple technique for achieving durable colour and superb surface gloss with great wear resistance, and using this



light-cured characterisation on your surfaces reduces the polishing stage, saving valuable time. The results are just beautiful.

MDT S. Maffei: Oh, and you can easily mix the colours to produce subtle changes, and alter the consistency if necessary by using the diluting liquid provided.

Tell us more about GRADIA® PLUS's approach to complex "red" aesthetic cases. What is the GC solution?

MDTM. Brüsich: We know that matching the countless variations in gingival tissue is challenging. But with the GRADIA® PLUS Gum set, which includes a wide variety of red shades, we believe close matches in colour and texture are made much easier, regardless of age or ethnicity.

MDT S. Maffei: The gum set is for implant superstructures and other fixed or removable prostheses like crowns, bridges and partial dentures. GRADIA® PLUS gum shades have the same strength, durability and handling properties as GRADIA® PLUS tooth shades.



The GRADIA® PLUS modular concept includes a new light-curing unit. Just what is "new" about it that will appeal to the technician?

D. Hellingh: We call it the LABOLIGHT DUO. It's an all-in-one device for step-by-step intermediate curing and final curing. Thanks to GC, no more need for two separate devices – imagine that! This dual purpose is achieved with two curing modes – pre-curing, which is the step

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mode, and final curing, on full mode. It uses high-output, long-life, double wavelength LED technology and we're confident technicians will love the LABOLIGHT DUO's compact and ergonomic design, which has already been recognised with a win at the 2016 IF Design Awards. This curing

light causes no change at all to the colour of GRADIA® PLUS, so technicians can monitor the precise colour of the restoration throughout its fabrication. Not only that, thanks to an automated rotary system and the reflective plate, the LABOLIGHT DUO distributes light with optimum efficiency, so the

restoration receives even light on all sides. It's worth noting, too, that GRADIA® PLUS can be cured with both the LABOLIGHT LV-III and GC's STEPLIGHT SL-I.

Thank you very much for this interview.



About the interviewees:



CDT Diederik Hellingh – Leuven
Group Product Manager for dental technician products. In this position he is responsible for the further development of GC's laboratory & digital dentistry product lines.



MDT Michael Brusch – Düsseldorf (Germany)
Michael Brusch trained as a dental technician from 1976-1979, after which he was employed as a dental technician. In 1986 he completed his Master Dental Technician degree in Düsseldorf and then became a laboratory director focusing on all-ceramic restoration work. In 1989 he set up his own, privately based dental laboratory specialising in functional and aesthetic prosthetics with a focus on multichromatic-additive veneering techniques for composite and porcelain. He is considered to be an authority on the subject of all-ceramic and biomaterials and functional restoration work and regularly presents workshops and publishes papers.



MDT Simone Maffei – Modena (Italy)
Graduated dental technician in 1996, began working in laboratory of his father William in Modena, since then has attended numerous courses with the most important speakers at the International level, both in dental technology and in the field of dental photography. He has written various articles on national and international journals on applied photography in the dental field and on the aesthetics. He currently teaches courses on Dental Photography, Digital Smile Design, ceramic veneers on refractory and natural layering technique on metal and zirconium. Holder of the Maffei Dental Laboratory in Modena, together with his sister Elisa, they focus on advanced aesthetic solutions using composites and ceramics.