

First Quotes - First Experiences



 Tokuyama Dental
OmniCHROMA

The Future of Composites.
From the Technology Pioneer.

 **Tokuyama Dental**
Dental High Tech from Japan



Dr. Erik-Jan Muts



“A dentist’s dream coming true:
always the right colour.”



Fig. 1



Fig. 4



Fig. 2



Fig. 5



Fig. 3



Fig. 6



Fig. 7



Fig. 9



Fig. 8



Fig. 10



Dr. Maarten de Beer



“At first I was a bit skeptical that OMNICHROMA could replace all the different colours of composite we use in daily practice. But I found out that it actually works in 9 out of 10 times. The handling of OMNICHROMA has quite a learning curve. The first time I used it I put it in the composite oven, but it became too soft and liquid to apply. So I stopped pre-heating OMNICHROMA. The composite itself is quite soft and it tends to flow so it’s difficult to create sharp fissure patterns because in a matter of time it flows back and you lose the sharp lines. But once you use it often, it gets easier and you can get stunning results. What I absolutely love about OMNICHROMA is the polishability of the material. It’s so easy to get a beautiful shine on the material, a lot easier than the other brands I use. The patients are also very happy with OMNICHROMA. The feedback I got is that the restorations feel really smooth and natural compared to the other restorations they have.”



Fig. 3



Fig. 1



Fig. 4



Fig. 2



Fig. 5



Dr. Christof Föcking



“The use of the blocker requires a little bit of intuition, but even anterior restorations can be solved excellently with OMNICHROMA.”



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Dr. Milan Lehotsky



“This case of a class I restoration demonstrates biomimetic colour properties of a novel dental composite resin material invented by TOKUYAMA

Dental. Highly acceptable aesthetic results are achieved by using only the universal shade of this unique material.”

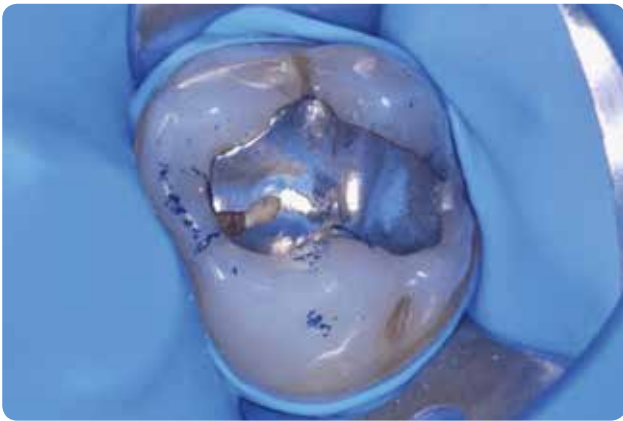


Fig. 1



Fig. 4

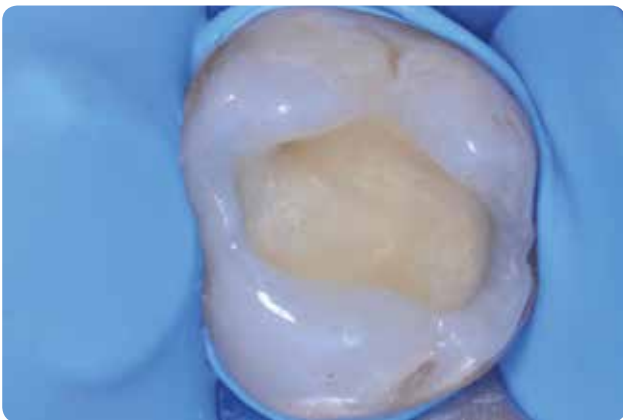


Fig. 2

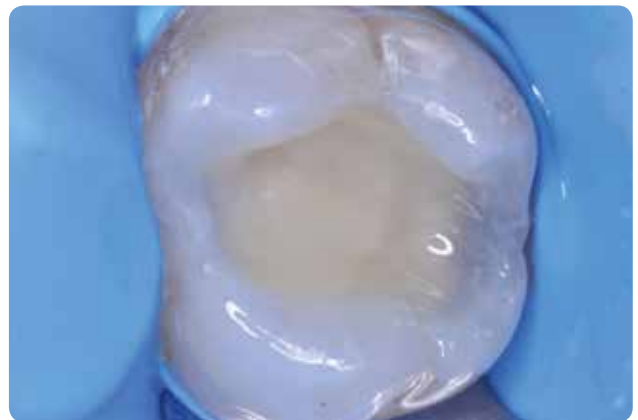


Fig. 5



Fig. 3

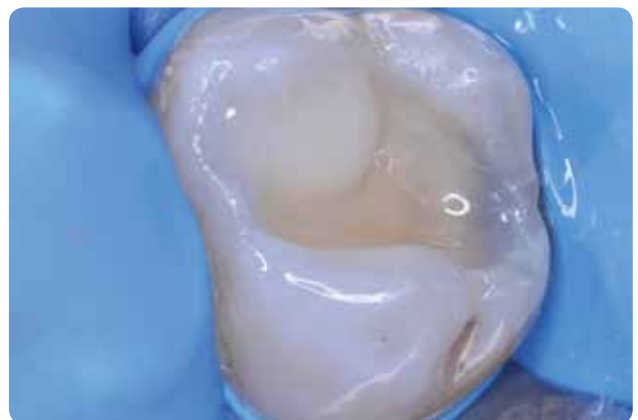


Fig. 6

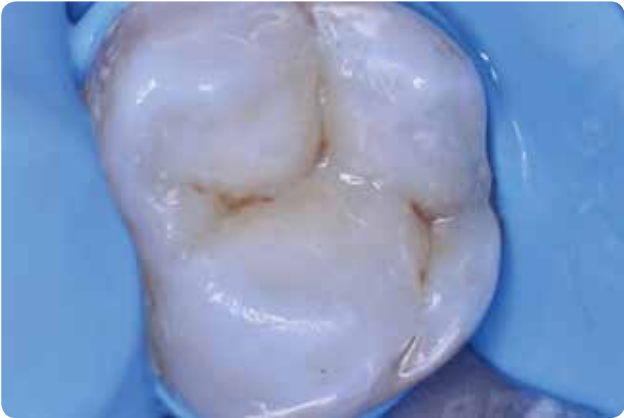


Fig. 7



Fig. 10



Fig. 8



Fig. 11



Fig. 9



Fig. 12



Dr. Markus Th. Firla



First clinical experiences with the new universal composite OMNICHROMA

At IDS 2019, the Japanese manufacturer TOKUYAMA is launching an “idiochromatic” resin filling material for direct adhesive restorations on the dental market.

With the innovative restoration materials OMNICHROMA and OMNICHROMA Blocker - i.e. with exactly only two (!) composite materials - it is possible for the practitioner to achieve a harmonious shade of all anterior and posterior fillings, direct composite veneers, diastema reductions as well as repairs of resin and ceramic defects - without prior complicated shade determination or subsequently noticeable shade discrepancies.

Sounds unbelievable? But it's true, as far as the author's own clinical experience has shown. See for yourself!

No more colour determination necessary!

With the two specially designed composites OMNICHROMA (for all normally translucent restorations) and OMNICHROMA Blocker (as substructuring supplementary material, if a significantly lower transparency of the restoration is required), TOKUYAMA has established a completely new group of restoration materials for direct adhesive restoration procedures within the framework of aesthetic tooth preservation measures:

„Idiochromatic“ filling materials.

These are [according to the definition proposed by the author here] “restoration materials which achieve their suitable colour and light-optical effect (after

light-curing) “on their own way” or “out of themselves” (equals “idio-”) in the defect area to be reconstructed.” These special, actually completely new dental materials for the aesthetic treatment of defects do not require any previous colour selection within the framework of their direct intraoral use. The colour matching ability of these materials, called “Colour Adjustment Potential” in the Anglo-American context, makes considerations regarding the tooth colour best suited for the restoration completely obsolete. Materials in this group of materials also render obsolete concerns regarding the reliable colour fidelity of the restoration material before and after light curing.

In summary, it can therefore be stated that the clinically extremely relevant questions regarding “shade compatibility”, “shade fidelity” and “shade interactions” no longer arise in direct adhesive tooth-coloured restorations using the OMNICHROMA composites presented here.

The innovatively developed OMNICHROMA composites are based on TOKUYAMA'S proven and continuously optimized resin filling materials. According to the manufacturer, all important material properties are of the same high quality as those of ESTELITE composites. In the opinion of the author, this cannot be contradicted from my experience of using OMNICHROMA and OMNICHROMA Blocker: Handling, processing, user-friendly light-curing, finishing (contouring/finishing), polishing and other important, clinically important characteristics of these new composites do not differ from the comparable ESTELITE products of the Japanese manufacturer and developer of dental consumables.

“Smart Chromatic Technology” makes it possible

These practical, clinically absolutely amazing aesthetic properties of the two “diachromatic” OMNICHROMA composites are based on further material characteristics exclusively created by TOKUYAMA. These can be described very simply in this way: The inorganic filler particles have an almost uniformly sized spherical shape of approx. 260 nm diameter each. At a filler content of 79 percent by weight, these spherical bodies are in such close contact with each other that, with this special particle size, shape and distribution, light entering the composite material (apparently only white, but nevertheless “containing spectral colours”) is brought back to the observer within the framework of a physical-light-optical effect - the so-called “structural colour phenomenon” - exclusively in the red-yellow wavelength range. This selected colour range of the visible light is caused by the “additive colour mixing” occurring with this effect and corresponds exactly to the colour or light wave range of natural teeth. As the “structural shade phenomenon” does not cause any “subtractive shade mixing” of the incident light, the restoration material can independently adopt to the predominant tooth shade of the surrounding natural or artificial tooth substance in a kind of “super chameleon effect”.

Case studies

In this section, the use of OMNICHROMA and OMNICHROMA Blocker in the author’s practice will be demonstrated by means of clinical illustrations. The use of these two composites represents a significant change compared to all conventional procedures for direct aesthetic adhesive restorations. This is because there is no prior determination of the tooth shade that is at least arbitrary. An exactly scaled determination in the interest of safety would of course be even better. In addition, both OMNICHROMA and OMNICHROMA Blocker are greyish-yellow and absolutely opaque prior to light-curing (Fig. 2 and Fig. 5). These features can therefore have an influence on the user’s feelings when using OMNICHROMA for the first time on a “real patient”, as they may be before the first ride on a roller coaster, for example [or, to be honest, were the case with the author at the time]: You don’t know exactly what to expect right away. And you already feel a bit queasy, but after successfully completing your first trip, you’re totally positively surprised, fully enthusiastic about the whole thing, would like to start again immediately... and experience this thrill again and again... Restorative dentistry can therefore be pleasantly spectacular.

OMNICHROMA

Figures 1 to 7 show the use of OMNICHROMA alone. The sequence of the purely technical filling procedure (for direct adhesive composite restorations) does not change at all, as already explained above. As developer and manufacturer of the product, TOKUYAMA recommends a light-curing time of 20 seconds for a maximum layer thickness of 2 millimeters per composite increment if the halogen photopolymerization lamp has a light output of at least 600 mW/cm². This specification should be observed at all costs, as the opacity of OMNICHROMA is very conspicuous.

What also catches the eye during clinical use is that OMNICHROMA can also become amazingly transparent after light-curing - depending on the structural requirements of the surrounding natural tooth structure. This becomes particularly obvious in the direct comparison of Figures 4, 5 and 6, which show the restoration of incisal enamel defects.

OMNICHROMA Blocker

Figures 8 to 11 show the use of the OMNICHROMA Blocker, which is clearly opaque after light curing. In Figures 8 and 9 the use is targeted and intentional. In Figures 10 and 11 erroneously! Since the less transparent composite from this “idiachromatic” restorative material group is expressly designated by the manufacturer as a composite material that reduces the translucency of a filling, this should also be taken into account. Therefore, never use OMNICHROMA Blocker for cover fillings. The domain of this composite is the base lining underneath a covering layer. According to the author’s experience, OMNICHROMA Blocker is the material of choice when post-endodontic final fillings are to give an impression that is both aesthetically pleasing and biomimetically lightfast, without the need for complicated determination of the dentin or enamel shade.

OMNICHROMA + OMNICHROMA Blocker

Figures 12 and 13 illustrate the combined use of the OMNICHROMA and OMNICHROMA Blocker. The reader is allowed to critically consider this direct adhesive build-up filling, which could also be said to be a somewhat meaningful direct composite veneer. Before a judgement is made, however, it should be noted that this composite restoration - with adherence to all requirements of an adhesive-technologically lege artis direct filling - could only take about 15 minutes to complete due to time constraints.

With a preceding detailed shade determination, it would not have been possible to maintain this time span for a shade and morphologically satisfactory restoration of the tooth crown.

Conclusion

The truly innovative OMNICHROMA and OMNICHROMA Blocker restorative materials open up a further opportunity to come a significant step closer to the fundamental wish of dental practitioners to be able to use „only one, but universally applicable filling composite“.

It remains to be seen to what extent these “idiochromatic” materials for the direct adhesive restoration of hard tooth substance defects will be able to establish themselves as generally accepted resin restorative materials, just as the ‘technical term’ chosen by the author for the light-optical shade matching properties will establish itself in general. Last, but not least, it remains to be seen what independent research and science will have to say about this truly revolutionary and innovative material.

From the point of view of the author - as a clinical user in the context of routine everyday dental restorations - this promising material category, to which OMNICHROMA and OMNICHROMA Blocker belong as pioneers, is without doubt very promising.



Fig. 3

Illustration legend for Fig. 1 to Fig.3

Figures 1 to 3 show the clinical restoration of a buccal-cervical cavity using OMNICHROMA. The unique “idiochromatic” adaptability of this innovative composite restorative material to the adjacent hard tooth substance - i.e. the ability to adapt the shade to the adjacent tooth substance - is particularly noticeable when comparing Fig. 2 with Fig. 3. The latter is shown in the new filling material after 20 seconds of photopolymerization, the former before light-curing. It should also be noted that the cavity shape and the non-uniform cavity depth have no negative influence on the colour appearance of the resin restorative material.



Fig. 1



Fig. 4



Fig. 2



Fig. 5



Fig. 6



Fig. 8



Fig. 7



Fig. 9

Illustration legend for Fig. 4 to Fig. 7:

The translucency of OMNICHROMA to the surrounding tooth structure is also impressive. Fig. 5 shows a second, as yet uncured layer of the restorative material as part of a restoration of very translucent incisal edges on upper central incisors. In Fig. 6, this second increment is completely photopolymerized and, although still clearly too big, shows an outstanding shade and translucency adjustment before contouring. The now completed incisal edge restorations of the two upper incisors shown in Fig. 7 give an unobjectionable “biomimetic” shade and translucency impression.

Illustration legend for Fig. 8 and Fig. 9:

These two figures show the use of OMNICHROMA Blocker. This restoration material serves as a “colour aesthetic opaquer” if OMNICHROMA itself could be compromised due to its high adaptation to the shade and translucency requirements of the surrounding tooth structure. Fig. 8 shows a premolar filled with root canals that is to be restored in a colour and light optically appealing manner. Fig. 9 shows this tooth after it has been given an adhesive direct base that fills two-thirds of the cavity using OMNICHROMA Blocker. The very good masking, yet also “biomimetic” colour and translucency properties of the material are clearly visible.



Fig. 10



Fig. 12



Fig. 11



Fig. 13

Illustration legend for Fig. 10 and Fig. 11:

Caution Error! - In these two illustrations it is shown that the author and dentist mistakenly used OMNICHROMA Blocker as a superficial layer, for which is not intended. The patient was informed, but found the shade, shape and appearance of the composite fillings in tooth 11 to be without any complaints, so that the restorations were left until further notice.

Illustration legend for Fig. 12 and Fig. 13:

Here is a “Friday afternoon, shortly before the practice closes, emergency-case”. Tooth 22, which had been endodontically treated for a long time and filled with large areas of another material, had broken off in the coronal area during the lunch of the 26 year old patient. In order to help the young man out of his predicament, it was agreed to carry out a direct adhesive veneer build-up using adhesive composite materials. Materials of choice: OMNICHROMA and OMNICHROMA Blocker. A larger quantity of the relatively opaque OMNICHROMA Blocker was applied in layers, followed by a smaller quantity of the universally applicable OMNICHROMA. Tooth 22 was morphologically identical to counterpart in the other quadrant in terms of shape and dimension!

literature

1. Kraus L. A.: Etymological medical lexicon. Anton v. Haykul, printer and Michael Lechner, university bookseller. Vienna 1831.
2. Pereira Sanchez N., Powers J. M. et al.: Instrumental Evaluation of Colour Adjustment Potential of Resin Composites. The University of Texas, School of Dentistry. Abstract Control ID#: 2957194, 2018.
3. Pereira Sanchez N., Powers J. M., Paravina R. D.: Visual Evaluation of Colour Adjustment Potential of Resin Composites. The University of Texas, School of Dentistry. PP Presentation, 2018.
4. TOKUYAMA Dental Corporation: OMNICHROMA - Technical Report. Tokyo, 2018.



Dr. Clas Oscarsson



“My first reaction was that it’s truly magic. The result is also beautiful, high gloss, easy to sculpt and the procedure is simple. Except for the fact that you can skip the shade selection step your workflow is the same

as with regular composites. The only addition is the blocker which you can use to cover heavy discoloration which you don’t want the composite to take it’s colour from.”



Fig. 1



Fig. 3



Fig. 2



Dr. Markus Lenders



"First I was sceptical, if the colour matching would fit. But easy application, convincing polishing results and surprisingly good colour matching convinced me."



Fig. 4



Fig. 1



Fig. 5



Fig. 2



Fig. 6



Fig. 3



Fig. 7



Fig. 8



Fig. 12



Fig. 9



Fig. 13



Fig. 10



Fig. 14



Fig. 11



Fig. 15



Dr. Thomas Taha



“OMNICHROMA is an essential composite for any restorative dentist as its colour matching after curing in circumferential enamel cavities is truly unique.”



Fig. 1



Fig. 4



Fig. 2



Fig. 5

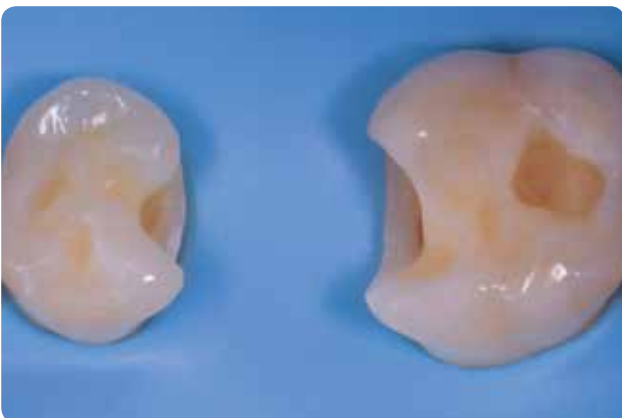


Fig. 3



Fig. 6



Fig. 7

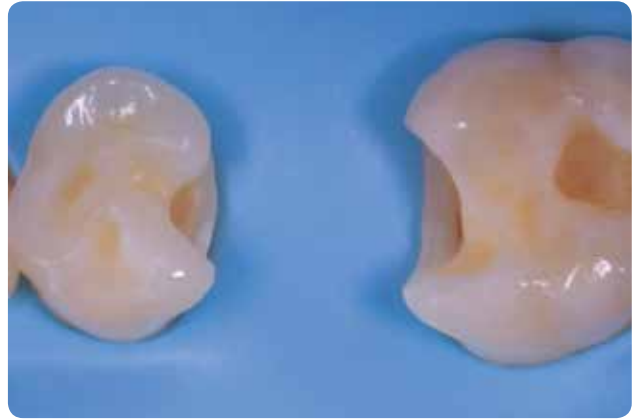


Fig. 10 before



Fig. 8



Fig. 11 after



Fig. 9



Prof. Dr. Claus-Peter Ernst



“One colour for all fillings? Sounds completely unbelievable – but actually works!”
(Source: ZMK, edition 3/19)



Fig. 1
Initial situation: Gap between middle and lateral right incisor. Labial view.



Fig. 3
The former is placed using a vertically inserted partial matrix, fixed to tooth 12 with Clip. The chalky etching pattern on tooth 11 shows the situation after phosphoric acid conditioning.



Fig. 2
Initial situation: Gap between middle and lateral right incisor. View from right lateral.



Fig. 4
After approximal build-up of tooth 11 with OMNICHROMA: etching of tooth 12 for its mesial build-up.



Fig. 5
Etching pattern after phosphoric acid conditioning.



Fig. 7
OMNICHROMA gap closure, lateral view.



Fig. 6
Gap closure using OMNICHROMA viewed from the right lateral side.



Dr. Ulf Krueger-Janson



“A very descriptive case of an incisal edge fracture with low primary incisal application of OMNICHROMA Blocker and further layering with OMNICHROMA. The first image shows the incisal edge fracture after conditioning with

etching gel and an adhesive. The second image shows the application of the blocker and the third the perfect integration after further layering with OMNICHROMA.”



Fig. 1

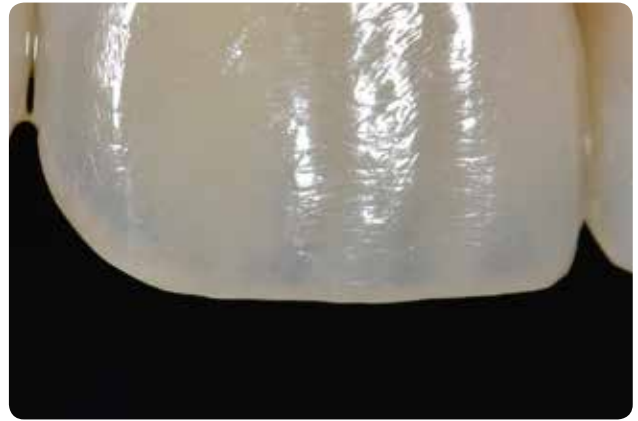


Fig. 3



Fig. 2



Dr. Richard Field



Fig. 1



Fig. 4



Fig. 2



Fig. 5



Fig. 3

Quotes from the USA



Dr. Peter Auster

“OMNICHROMA is GROUNDBREAKING - a win-win for all offices. No need to stock 30 composite shades that expire and take up space. So economical and it works great!”



Dr. Kevin Brown

“From the patients point of view, OMNICHROMA improves their restorative experience by taking the guess work out of shade matching and provides a more consistent colour match and colour stability of their restorations. We all see things a little differently and when restoring an anterior tooth it is important to get as good of an aesthetic result as possible. Since OMNICHROMA uses structural colour rather than chemical colour, it uses the patient’s own natural tooth colour to blend the restoration seamlessly into the tooth.”



Dr. James Chae

“OMNICHROMA blends nicely to any tooth shade, even the most challenging to match shades. It polishes easily and the final restoration looks very natural.”



Dr. Pamela
Maragliano-Muniz

“I despise looking through my dental materials and finding something that has barely been used and is now expired; it is such a waste of space and money. OMNICHROMA, a 1-shade composite, can improve a dental practice because it greatly reduces the amount of inventory that has to be maintained in the office. Since OMNICHROMA can be used in nearly every direct restorative clinical situation, it is unlikely that this material will be wasted.”

10112 | OMNICHROMA composite
Single syringe (à 4 g)

10122 | OMNICHROMA composite
20 dose capsules (à 0.2 g)

10113 | OMNICHROMA Blocker
Single syringe (à 4 g)

10123 | OMNICHROMA Blocker
20 dose capsules (à 0.2 g)





To be
continued...

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