



(B) BOREA



OUR MISSION:

Offer innovative digital solutions in the field of dental shade taking with high-performance, quality products and a service that meets the expectations of international dentistry.

OUR TEAM:

Strong, motivated and skilled team (average year: 33 yo)

GENERAL DATA:

Address: Limoges (France)

Established date: 10th of june 2013

Regulatory: ISO 13485 (2019)



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Two type of information are essential to transmit to the laboratory:

- The optimal dimension is scanned using your intraoral scanner.
- The color is now recorded and then transmitted thanks to Cobra.

For the first time, you benefit from an all-digital workflow and its many advantages.







PRACTITIONERS

Digitally oriented dentists

- Dentists equipped with intraoral scanners, cameras, etc.
- Dentistry in general is going digital (CEREC systems, scanners, 3D printers, etc.)

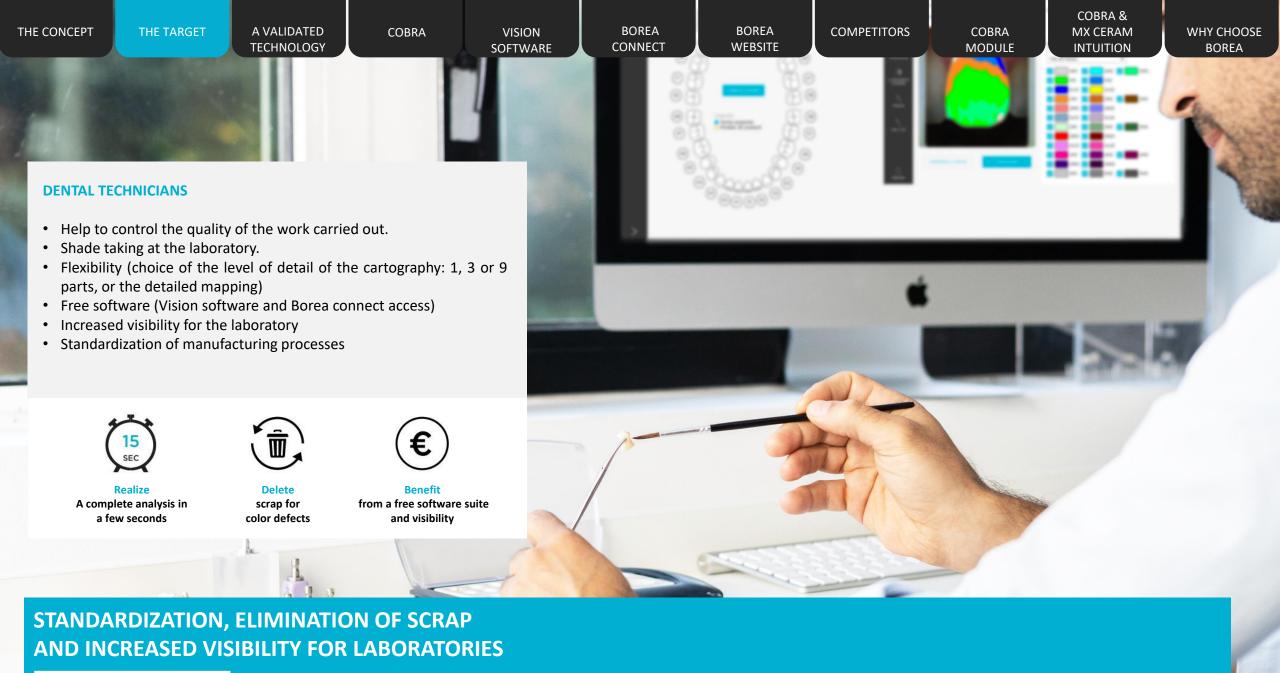
Specialists: implantologists and prosthodontists.

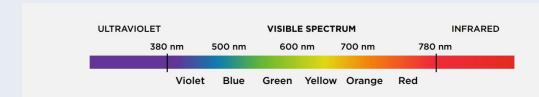
- Color is crucial and is usually a source of non-compliance.
- The aesthetic expectations of patients lead them to consider the purchase of a spectrophotometer

General practitioners:

- · Indirect and composite restorations.
- Bleaching treatments.

OBJECTIVITY AND COMFORT WITH AN ACCURATE AND REPEATABLE SOLUTION







SPECTROPHOTOMETRY

- A spectrophotometer allows the acquisition of spectral data over the entire tooth.
- The wavelengths are analyzed and then compared to a database in order to deduce the color of a tooth.
- Each acquisition is a safe operation for the patient

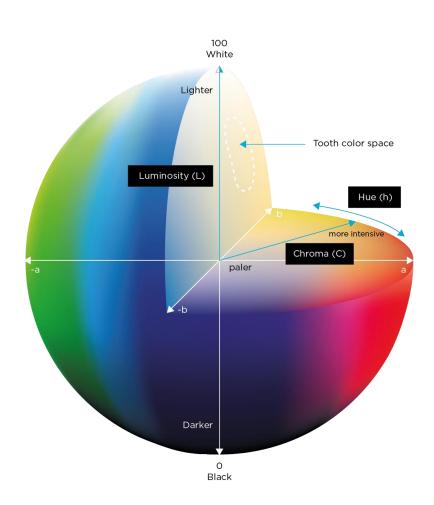
TECHNICAL SPECIFICATIONS

- Cobra performs acquisitions under 6 wavelengths.
- These wavelengths are in the visible spectrum (between 380 nm and 780 nm).
- 4 LEDs per wavelength for homogeneous emission on the tooth.
- An acquisition under white light for the tooth image.
- All acquisiton are polarized.

COBRA ANALYZES THE ENTIRE TOOTH THANKS TO THE BEST TECHNOLOGY AVAILABLE TODAY: SPECTOPHOTOMETRY

LCh toth color space

Complete Lab color space



CIE L*a*b* coordinates are a **colorimetric standard** defined by the Commission Internationale de l'Éclairage (CIE) in 1976. It allows a multitude of functionalities and standardized communication with the laboratory.

- Calculation of colorimetric differences (ΔΕ).
- Quantification of bleaching treatments.
- Editing help.
- Comparison of natural tooth and prosthesis in the mouth.
- Compatibility with manufacturing recipe applications.

This space expresses the color in three values:

- L* for the brightness indicated between black (0) and white (100)
- a* from green (-) to red (+)
- b* from blue (-) to yellow (+)

Based on a three-dimensional representation, the CIE Lab system allows a more precise description of colors and approaches the properties of the human eye. It is thus easy to quantify color deviations or to dissociate and study the luminosity (L) of a color.



- 1 L*a*b* / L*c*h values of the measured tooth
- 2 Choice of reference shade guide
- 4 Closest shade reference according to the selected shade guide
- 3 Delta E color difference between the two values
- Shade reference area (green dot)

The information transmitted on the software screen is very clear and show the L*a*b* coordinates of the tooth measured in parallel with the values of the selected commercial shade guide.



VISION SOFTWARE OFFERS INTUITIVE AND CLEAR READING OF THE L*a*b* COORDINATES

COBRA & **A VALIDATED BOREA** BOREA **COMPETITORS** COBRA MX CERAM **COBRA** VISION THE CONCEPT THE TARGET WHY CHOOSE WEBSITE **TECHNOLOGY SOFTWARE CONNECT MODULE** INTUITION **BOREA**

SPECTROPHOTOMETER vs COLORIMETER

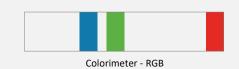
Colorimeters and **spectrophotometers** are the two types of color measurement instruments used to capture, analyze, and communicate color.

Confusion exists among many users and health professionals between spectrophotometry and colorimetry.

Spectrophotometer

- Colorimetric measuring instrument that takes into account the light intensity according to the color.
- **Full-spectrum** colorimetric measurement (as opposed to the trichromatic procedure of a colorimeter).
- Generates colorimetric data that is beyond observation by the human eye.





How does a spectrophotometer work?

- An internal light source emits at different wavelengths to represent the entire color spectrum.
- Each LED representing a specific wavelength of the spectrum emits one after the other so as to diffuse the light on the tooth.
- Under each emission wavelength, the sensor measures the light intensity and the absorbance of the analyzed tooth.
- These data collected are then analyzed by a comparison algorithm which compares the information collected with the spectral signatures of the various previously recorded shade guides.
- The spectrophotometer displays this information in digital form.



COBRA & **BOREA BOREA** COBRA A VALIDATED **COBRA** VISION COMPETITORS THE CONCEPT THE TARGET MX CERAM WHY CHOOSE CONNECT WEBSITE **TECHNOLOGY SOFTWARE MODULE** INTUITION **BOREA**

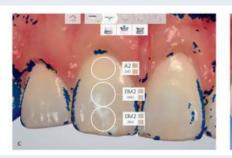
Colorimeter

- A trichromatic color measurement tool that provides an objective assessment of color characteristics from light passing through the red, green, and blue primary filters.
- It simulates the way the human eye perceives color.

How does a colorimeter work?

- The tooth is illuminated at a 45° angle by an internal light source.
- The light passes through the trichromatic filters, which indicates the amount of red, green and blue light reflected by the tooth.
- Filter measurements are quantized in RGB values, which simulate the sensitivity of human eyes to light.

Colorimeter = technology for analyzing the color of intraoral scanners





"

« Intraoral scanners (...) remain unreliable because they have a narrow choice of colors an yield results that are significantly different from those of spectrophotometers. As a result, they should not be used for deciding the shade for a final restoration.

Spectrophotometers are the best-adapted tools for shade matching since they record the L*, a*, and b* values of one color.

«A comparative in vivo study of new shade matching procedures» The International Journal of Computerized Dentistry

Dr. Hampé-Kautz, Dr. Ali Salehi, Dr. Bernard Senger & Dr. Olivier Etienne.

Discover the study here

INTRAORAL SCANNERS USE COLORIMETRY AND SHOULD NOT BE USED TO DECIDE THE SHADE!

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Evolution and limiting factors of manual shade guides

Ideal situation

- Neutral environment
- Day light
- Without direct sunlight
- End of the morning
- Cloudy sky

Subjectivity

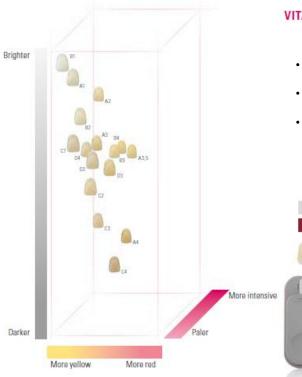
- Dependent on ocular physiology
- Retinal age
- visual education
- Surrounding light quality
- Patient (lipstick, color of clothes,...)



ANALYSIS WITH A MANUAL SHADE GUIDE IS TOTALLY SUBJECTIVE!

COBRA & A VALIDATED BOREA BOREA THE CONCEPT THE TARGET COBRA VISION COMPETITORS COBRA MX CERAM WHY CHOOSE **TECHNOLOGY** CONNECT WEBSITE MODULE INTUITION SOFTWARE BOREA

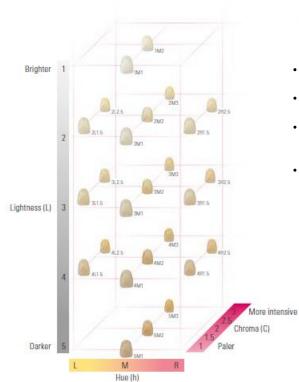
Evolution and limiting factors of manual shade guides



VITA classical A1-D4®.

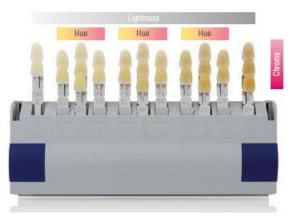
- Created in 1956
- 16 shades
- Practical shade sample sequence based on hues and empirical findings

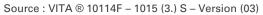




VITA SYSTEM 3D-MASTER®.

- Created 1998
- 26 Shades
- Shade sample sequence for optimum coverage of the color space of natural teeth
- Classified by L (luminosity), C (chroma) & h (hue)

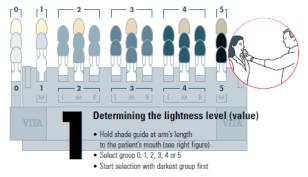


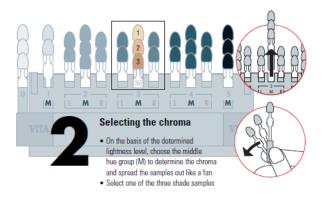


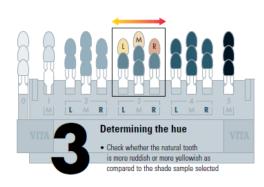


Protocol of use of the VITA 3D-MASTER shade guide:

VITA Toothguide 3D-MASTER Instructions for Use – Example







Source: VITA®

- Complex and time consuming protocol
- Subjective analysis
- Difficulty in transmitting true information to the laboratory
- While Cobra performs this analysis automatically and objectively on each pixel of the tooth!

OCULAR PHISIOLOGY + ENVIRONEMENT = SUBJECTIVITY

COBRA & THE CONCEPT THE TARGET A VALIDATED COBRA BOREA BOREA COMPETITORS COBRA MX CERAM WHY CHOOSE VISION CONNECT WEBSITE TECHNOLOGY SOFTWARE MODULE INTUITION BOREA

PACK CONTENT





- 1 Cobra Spectrophotometer
- 6 Calibration tips (autoclavable)
- Docking station
- Charger
- Dongle
- Mobile app
- Microfiber wipe
- Quick Start Guide
- Disinfection and sterilization procedure

A sterilizable calibration tip and much more...

A multifunction tip combined with a patented measuring head:

- Precise: It allows automatic control of all your acquisitions.
- Objectivity: It frees from all external light disturbances.
- Assisted: It ensures precise positioning of the device on the tooth and control of the working distance for perfect acquisition.
- Hygienic: It eliminates all cross-contamination and each tip is designed for 100 sterilization cycles!!





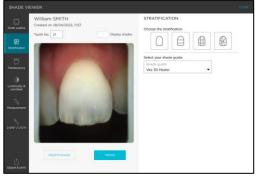
WORK WITH PEACE OF MIND THANKS TO AUTOMATIC CALIBRATION

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Available shade-guides

- AIDITE 3D Pro Zir
- IVOCLAR A-D Shade Guide
- IVOCLAR Chromascop
- IVOCLAR Vivodent SP E
- KURARAY Noritake
- ZIRKONZAHN Prettau 2 Dispersive
- ZIRKONZAHN Prettau 3 Dispersive
- SHOFU Vintage
- VITA classical A1-D4®
- VITA Classical A1-D4®+ bleach shades
- VITA Classical A1-D4® (2023)
- VITA Classical A1-D4® (2023) + bleach shades
- VITA Toothguide 3D-MASTER® with bleach shades
- VITA Bleachedguide 3D-MASTER®
- VITA VitaBlocs 3D Master

Shade analysis







Polarised picture

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artico.

The man and the ma

Overall shade



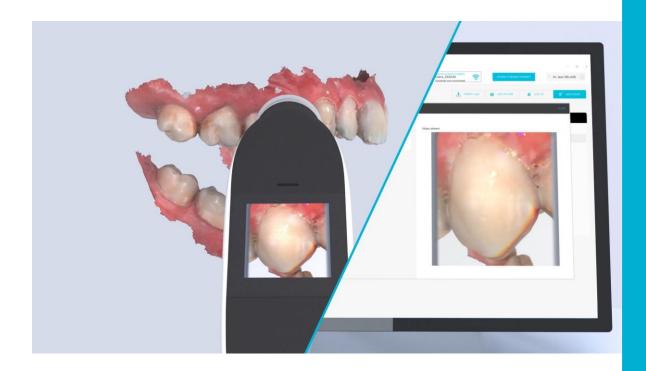
3 parts shade



9 parts shade Detailed mapping

Translucency

A COMPLETE MAPPING OF THE TOOTH IN A SINGLE ACQUISITION



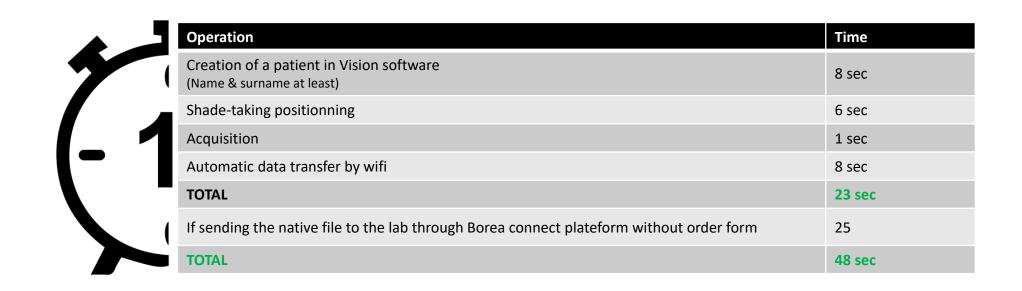
PRODUCT HIGHLIGHTS:

Positioning assistance with a video stream on the device screen and on your computer screen.

A real didactic and motivational experience with your patients.

Improve the dental practice brand image.

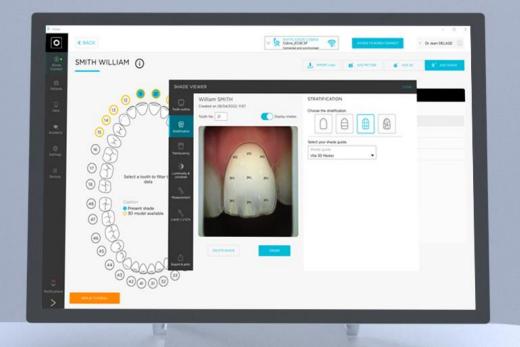
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LESS THAN A MINUTE FOR A COMPLETE DIGITAL WORKFLOW!



VISION SOFTWARE AND ITS APPLICATIONS

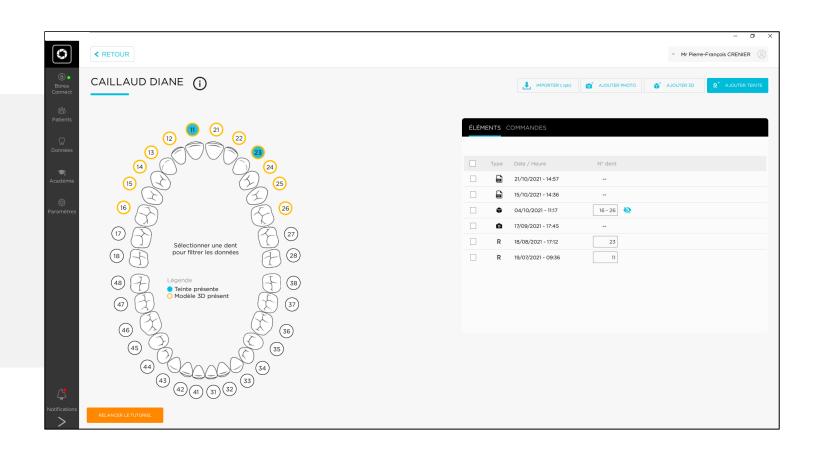






Save and centralize the patient's aesthetic data in a dedicated patient folder:

- Shade file (.rpk)
- Bleaching and Shade comparison report (.pdf)
- 3D model (stl, obj, ply)
- Patient pictures



SOFTWARE FOR SIMPLY CENTRALIZING AND ARCHIVING ALL THE AESTHETIC DATA OF YOUR PATIENTS

COBRA & **BOREA** BOREA THE CONCEPT THE TARGET A VALIDATED **COBRA** VISION COMPETITORS COBRA MX CERAM WHY CHOOSE **TECHNOLOGY CONNECT** WEBSITE **MODULE** INTUITION BOREA **SOFTWARE**

Tooth outline



- Automatically or manually define the tooth contour.
- The contour is essential for a complete analysis of the tooth.

Shade analysis



- Polarized image
- · Global analysis
- 3 and 9 parts
- · Detailed mapping
- Instant conversion to different shade guides

Translucency analysis



- Easily view a map of the tooth translucency.
- A gray scale indicates the presence of translucency on a scale of 0% to 100%.

AN INTERFACE FOR ANALYSIS ADAPTED TO YOUR NEEDS

Black and white analysis



- Convert color polarized photo to grayscale.
- Change brightness and contrast settings.
- Bring out the distribution of dentin, enamel, characterize the surface condition, highlight the remarkable characteristics of the analyzed tooth.

Measuring tool



 Locate and measure remarkable characteristics of a tooth.

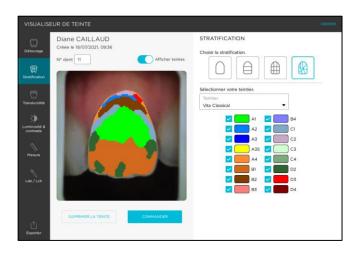
CIE L*a*b* / L*c*h analysis



- Determine pixel-by-pixel color coordinates according to CIE L*a*b* or L*C*h standards.
- Easily calculate to the pixel the colorimetric difference «Delta E or ΔE» between the actual shade of the tooth and the closest shade according to the reference shade guide.

AN INTERFACE FOR ANALYSIS ADAPTED TO YOUR NEEDS

In the case of direct restorations, it is possible to configure the selected shade guide by indicating the shades actually available in the practice.



Mapping with all the shades of the Vita classical



Cartography after removal of shades B2 to D4.

IVOCLAR ©,tetric-evoceram-1-seringue.html

Source: https://www.dentalclick.fr

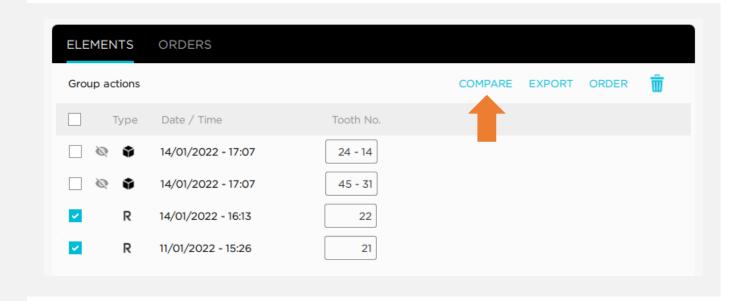
CONFIGURE YOUR SHADE GUIDE ACCORDING TO YOUR AVAILABLE COMPOSITE REFERENCES!

What's the point?

The Vision software allows the comparison between several acquisitions.

This shade comparator allows a visual and colorimetric comparison (L*a*b*) with the referenced shade guides.

It is the ideal tool to evaluate and quantify bleaching treatments but also to help with correction by allowing the lab to adjust the achievements based on objective criteria.



A COMPARATOR TO EVALUATE ON OBJECTIVE CRITERIA

Shade comparison

- Compare specific areas of the tooth.
- Ability to select the type of analysis area, circular or rectangular.
- Perform analyzes on one or three areas.



Visual comparison

- Allows to compare two or three polarized images.
- Use the mouse to move the cursor to the right or to the left.





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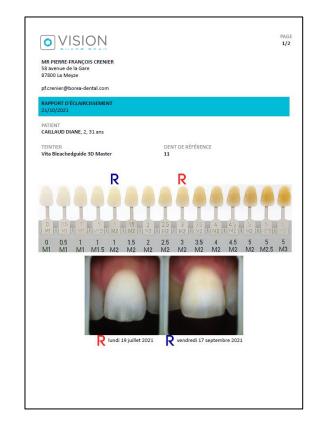
Easily generate pdf reports:

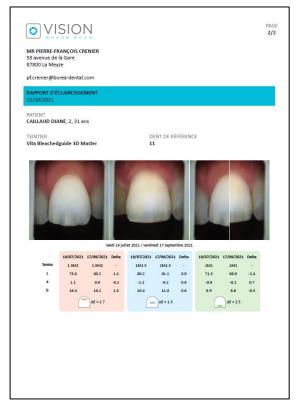
- "shade comparison report"
- "Bleaching reports" based on Vita Bleachguide 3D Master®.





Scan to discover a clinical case
Or click here





EASILY PRODUCE BLEACHING REPORTS AND IMPROVE COMMUNICATION WITH PATIENTS!

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Smartphone application



"Pics App solution"

- Quickly add context photos of your patient through the app.
- Automatic transmission in the patient folder.
- Send up to 4 photos.
- Image editing tools (Crop, rotate ...).
- Free download on Play store and Apple store.
- Photos are not saved on the smartphone.

DESCRIBE THE AESTHETIC CONTEXT THROUGH A FREE APPLICATION!





What is Borea Connect?

- A free order management platform (Practice and laboratory access).
- Easy sending of aesthetic data (shades, patient photos, 3D files)
- Total accessibility from a web browser on computer, smartphone, tablet.

A FREE COMMUNICATION PLATFORM FOR THE DENTAL PRACTICE AND ITS LABORATORIES PARTNERS!

THE CONCEPT

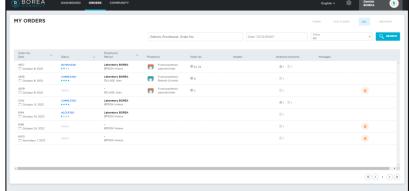
COBRA & A VALIDATED **BOREA** COBRA **BOREA** COMPETITORS COBRA MX CERAM THE CONCEPT THE TARGET VISION WHY CHOOSE WEBSITE MODULE INTUITION **BOREA TECHNOLOGY SOFTWARE CONNECT**

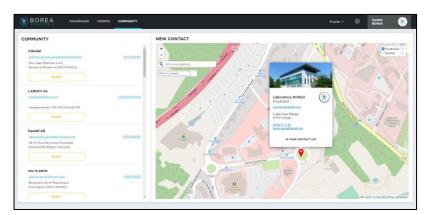
The advantages of the Borea Connect community:

- Monitor prosthetic orders in real time.
- Receive source files (.rpk) and generate complete pdf order forms.
- Benefit from a powerful platform, updated regularly and free of charge.
- Bring visibility to its activity on a community platform where everyone can be seen.









Borea Connect – Dashboard

Borea Connect - Order tab

Borea Connect – Community map

OPTIMIZE ORDER MANAGEMENT AND BRING VISIBILITY TO YOUR ACTIVITY!





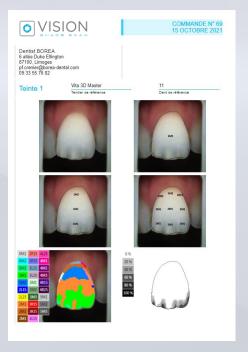
A VALIDATED

TECHNOLOGY

Access to digital order form and color information.

Generate a complete pdf order form.











Full description of the solutions offered by Borea.

- Cobra
- Vision software
- Borea Connect

"Academy" page

- Video
- Tutorials
- Webinars
- Studies
- Clinical cases
- Testimonials

A « Resources" page

- · Software download
- Brochures
- Guides
- FAQs
- · Support page.

A COMPLETE WEBSITE FOR AN IN-DEPTH UNDERSTANDING AND TRAINING!

What solutions exist for shade taking in the dental office?















Technology	Polarised image	Polarised image	Colorimetry	Colorimetry	Spectrocolorimetry	Spectrophotometry	Spectrophotometry
Solutions	Smartphones	Cameras	Intra oral scanners	Optishade	Vita - Easyshade	Handy	Cobra
Digital shade indication			✓	✓	✓	✓	✓
Polarised image	✓	✓		✓	Χ	✓	✓
Translucency						✓	✓
CIE L*a*b* Coordinates		✓	X	✓	✓	✓	✓
Shade comparison		✓		✓	Χ	✓	✓
Bleaching evaluation		✓	Х	✓	Χ	✓	✓
Objectivity / Accuracy		✓	X	✓	✓	✓	✓
Autocalibration	X		X	✓	Χ	✓	✓
Calibrated system		✓	Х	✓	\checkmark	✓	✓
Compatibility PC / MAC		✓	✓	Χ		✓	X (2024)
Without subscription fee (Operation / update)			X		✓	✓	✓
Compatibility with softwares for recipes		✓	Х	✓	Χ		✓
Remote video stream			✓	✓	Χ		✓
Order follow up plateform	X		✓	Х		✓	✓
Acquisition cost	525 € Ex. Tax 630 € Incl. Tax	Approx. 3300 € Ex. Tax Approx . 4000 € In. Tax		1590 € Ex. Tax 1908 € In. Tax	1600 € Ex. Tax 1920 € In. Tax	2750 € Ex. Tax 3300 € In. Tax	3300 € Ex. Tax 3960 € In. Tax
	(ie: Smile Lite)		(ie: Trios, Emerald, CS)	(ie: Optishade)			

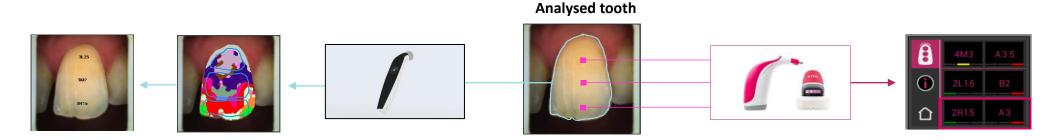


- Color and translucency analysis + Patient photos « Pics App Solution »
- Dental impression with intraoral scanner.
- - Vision software for processing and sending data via Borea connect.
- Manufacture of dental prostheses in the laboratory.
- Integrated crown in the smile

- Shade taking reports are compatible with all scanners and management software (.pdf).
- Cobra native files (.rpk) are compatible with the majority of intraoral scanner platforms (Medit, Planmeca, Carestream, 3DISC...).
- Digital impressions import to Borea Connect for an independent workflow.

THE SHADE SCANNER IS THE UNIQUE COMPLEMENT TO THE INTRA ORAL **SCANNER FOR A 100% DIGITAL WORKFLOW!**

Comparison with the Vita spectrocolorimeter - Easyshade V $\ \ \, \mathbb{C}$



RAYPLICKER COBRA

- Complete analysis of the tooth.
- Spectral analysis of about 419,000 Px
- Different level of cartography (from + to detailed).
- 3 parts mapping represents an average of all pixels present on each third of the tooth and not a single point.
- · Multi shade guides.
- Translucency.
- Self-calibration at each acquisition.
- Immediate transfer to the computer.
- Help with video positioning.

VITA EASYSHADE V ©

- · Spectral analysis on a restricted area.
- Area of approximately 9px per acquisition
- Result: 3 reference shades that required 3 color shots
- Compatible Vita classic and Vita 3D master only.
- Non-automatic calibration

1 SINGLE ANALYSIS WITH COBRA = HUNDREDS OF EASYSHADE ANALYZES!

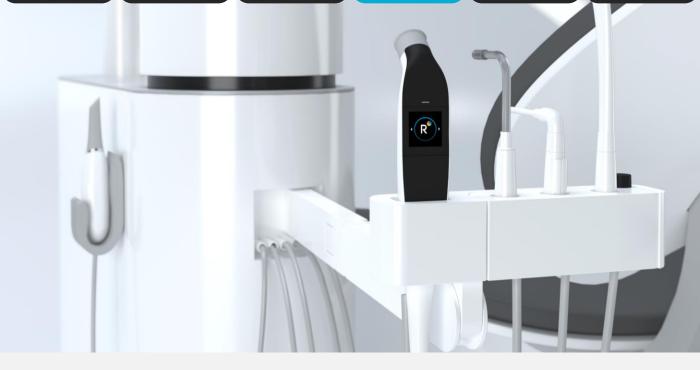
TECHNOLOGY

upcoming development

THE CONCEPT



All Cobra technology, reliability and accuracy at your fingertips.



A device designed to be integrated into the dental unit:

- Shade taking becomes available like any other handpiece.
- · Compatibility with all screens available in the dental office.
- The association with intra-oral scanners allows a complete digital workflow.

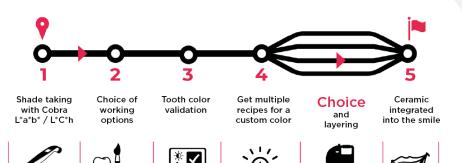
THE COLOR SCANNER INTEGRATED IN THE CHAIR FOR INCREASED ERGONOMICS!

COBRA & A VALIDATED COBRA **BOREA** BOREA COMPETITORS COBRA **MX CERAM** THE CONCEPT THE TARGET VISION WHY CHOOSE WEBSITE MODULE **BOREA TECHNOLOGY SOFTWARE** CONNECT INTUITION

Everything becomes easier with prosthesis manufacturing recipes for the laboratory

upcoming development





The ideal recipe application for laboratories

- Compatible with most ceramic powder references on the market.
- Personalized recipes according to the user's stock references.
- A high-performance work tool that standardizes manufacturing processes.
- Accessible from an Internet browser. (computer, smartphone, tablet)



COBRA & MXCERAM INTUITION WITH THEIR RECIPE SYSTEM GUIDE YOU TOWARDS THE RIGHT COLOR!



JOIN THE COBRA COMMUNITY

A validated and recognized solution, take advantage of the experience of many users.

AIMING FOR QUALITY WITHOUT ADDITIONAL COST

Our products are guaranteed for 2 years, parts and labour.

Our solution includes the handpiece, the Vision software and the Borea Connect platform.

No hidden costs, no extras. Only consumables: calibration tips Each tip is validated for 100 autoclave cycles.

ENJOY FRENCH MANUFACTURING & KNOW-HOW

Our products are medical devices made in France.

We favor local and national suppliers.

Our mission: to develop, innovate and design in compliance with quality standards. BOREA is ISO 13485 certified.

MASTER THE TECHNOLOGY

BOREA is made up of a team of experts who works on possible developments to offer you the best of technology. BOREA has also patented all its innovations.

A MULTI PATENTED SOLUTION:



- Dental shade taking device (2015)
- Process for carrying out and checking compliance of a dental prosthesis from the parameters obtained with a shade taking device (2016)
- Lighting device for tooth shade analysis (2016)
- Automatic association of a tooth shade analysis with a digital dental impression file (stl). (2019)

More info at www.borea-dental.com









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