



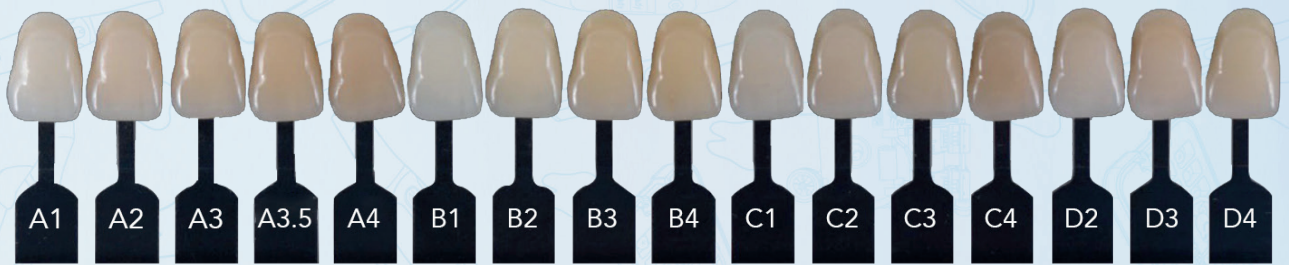
TRAINING FOR SHADEMAX



Why do we need to take the tooth shade when making dental prosthetics?

We take the tooth shade to ensure that the dental prosthesis looks natural and matches the patient's real teeth in color, brightness, and translucency. Accurate shade selection helps the restoration blend in aesthetically, mimic how natural teeth reflect light, and allows the dental lab to fabricate a prosthesis that looks realistic and harmonious with the smile.

Dentists relied on several traditional methods to determine tooth shade. The most common approach was visual shade selection, where the clinician depended on personal perception and experience to match the natural tooth color. This was often complemented by the use of standardized shade guides, most notably the **VITA Classical Shade Guide**, which allowed dentists to compare hue, chroma, and value directly with the patient's teeth. Although these methods were widely used, they were inherently subjective and influenced by factors such as lighting conditions, eye fatigue, and human variability—highlighting the need for more precise digital solutions.



DRAWBACKS OF TRADITIONAL SHADE-MATCHING

1. Subjective Results

Depends on the dentist's eyesight and experience, leading to inconsistent shade selection.

2. Lighting Variability

Shade appearance changes with different light sources, reducing accuracy.

3. Eye Fatigue

Human color perception decreases with fatigue, age, or visual limitations.

4. Limited Shade Options

Shade guides offer a restricted color range that may not match natural teeth exactly.

5. Shade Guide Degradation

Tabs can discolor or wear over time, affecting reliability.

6. Communication Errors

Interpretation of shade may differ between dentist and lab technician.

7. Poor Reproducibility

The same tooth can be assigned different shades on different days.

8. Time-Consuming

Achieving the correct shade often requires multiple comparisons and extra chairside time.

What is **SHADEMAX?**

ShadeMax is a digital dental device that objectively determines the color of a patient's tooth. Using controlled light, optical sensors, and spectrophotometric analysis, it measures the tooth's hue, chroma, value, translucency, and surface characteristics, then converts these measurements into standardized shade guide equivalents. This provides accurate, reproducible, and multi-zone shade information, eliminating the subjectivity and variability of traditional visual shade selection.



ADVANTAGES OF SHADEMAX

1.Objective and Accurate

Eliminates subjectivity of human vision, providing precise color measurements.

2.Consistent and Reproducible

Produces the same results every time, regardless of lighting conditions or operator fatigue.

3.Multi-Zone Shade Detection

Can measure cervical, middle, and incisal areas separately, capturing the full complexity of natural teeth.

4.Time-Saving

Faster than trial-and-error visual matching and reduces the need for multiple patient visits.

5.Standardized Communication with Lab

Generates digital reports that can be sent directly to the dental lab, reducing errors.

6.Detects Fine Color Differences

Measures translucency, brightness, and subtle variations that the human eye may miss.

7.Improves Aesthetics

Helps create restorations that blend seamlessly with natural teeth.

8.Reduces Remakes

Fewer restoration adjustments or remakes due to color mismatch.

COMPARISON BETWEEN SHADEMAX DEVICE & TRADITIONAL SHADE GUIDE

Comparison	SHADEMAX DEVICE	TRADITIONAL SHADE GUIDE
Accuracy & Objectivity	High, objective, and clinically proven accuracy; eliminates human visual subjectivity.	Highly subjective and variable; entirely dependent on the human eye under inconsistent lighting.
Operational Efficiency	One-click operation; provides results in 1 second, requiring no technical experience; and automatic calibration	Time-consuming process; requires skilled angling, repeated comparisons, and significant experience.
Consistency & Communication	Perfectly consistent and reproducible results across multiple users and sessions; enables clear digital communication with the lab.	Pronounced inconsistency between dentist and lab technician; relies on error-prone manual notes and photos.
Resistance to Ambient Factors	Unaffected by changes in ambient light or tooth surface moisture; ensures stable readings.	Highly susceptible to interference from artificial lighting, time of day, and oral environment.
Supported Shade Systems	Seamlessly supports multiple systems (VITA Classical & 3D-Master) within one device.	Limited to a single system per guide, causing confusion and system-matching errors.
Data Management & Traceability	Inherently digital records; results can be saved, photographed, and tracked for future reference.	No inherent archiving; prone to loss or miscommunication of handwritten notes and photos.
Hygiene & Infection Control	Smooth, non-porous surfaces are easy to wipe down and disinfect thoroughly after each use.	Porous cardboard guides contact the patient's teeth directly, posing a risk of cross-contamination.
Versatility & Workflow Integration	Suitable for the entire clinical and lab workflow, from diagnosis to final restoration verification.	Primarily limited to a preliminary, chairside assessment by the dentist.
Learning Curve	Virtually none; any staff member can operate it effectively after a brief introduction.	Steep learning curve; requires extensive training and practice to achieve basic proficiency.

Exceptional Battery Life

Integrated battery for compact portability.

Supports over 6,000 measurements per charge.

One-Touch Operation

Ready to use with no training required.

Minimalist interface delivers results with a single touch—no complex settings or subjective judgment needed.

Handle Weighs Only 113g

Lightweight design for comfortable grip and fatigue-free extended use.

Unaffected by Moisture & Ambient Light

All-weather colorimetric stability with built-in adaptive lighting. Impervious to moisture inside the oral cavity, natural light, surgical lamps, and varying lighting conditions.

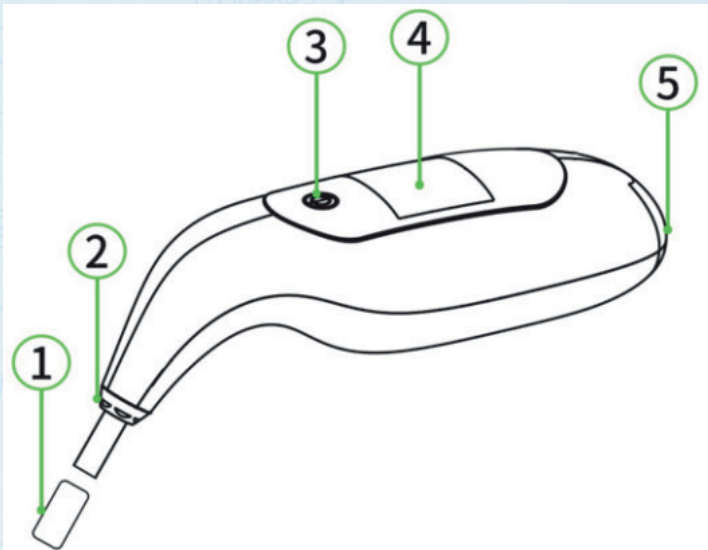
Clinically Proven Accuracy Exceeding %98

Utilizing high-sensitivity sensors and intelligent algorithms, color measurement accuracy reaches 10.1 ΔE, significantly improving shade matching success rates.



2ND. THE PURPOSE AND FUNCTION OF THE DIGITAL SHADE MATCHING DEVICE

- A. Principle: involves using spectrophotometer technology to objectively measure tooth color by analyzing reflectance at various light wavelengths.
- B. Primary components: include a detection fiber optic head, data processing module, display, and operating interface...



1- Silicone Cover

2- Detection Head

3- Buttons

4- Display

5- USB Type-c

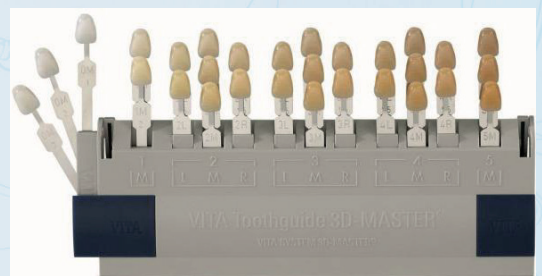
- C. Display interface: Measurement values are available for shade guides VITA 3D-MASTER (29 colors) and VITA Classical A1-D19(4 colors)



1- Current battery

2- VITA 3D-MASTER

3- VITA Classic A1-D4

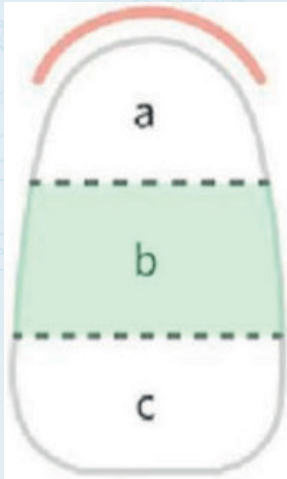


D. Measurement methods and techniques.:

D.1 Please ensure the patient is seated in the dental chair with her/his head resting on the headrest and lying comfortably to ensure accurate measurement.

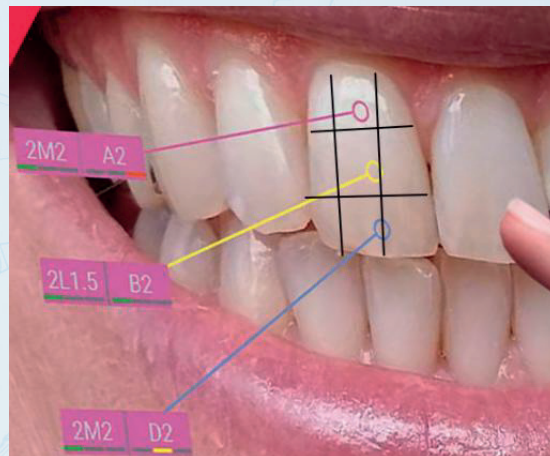
D.2 Before using the detector, observe the tooth's color gradation. For standard shades, take 6-3 mid-crown (area b) readings and use the highest value.

(Attention: When using the detector on the patient's teeth, ensure it remains steady and firmly pressed against the tooth surface.)

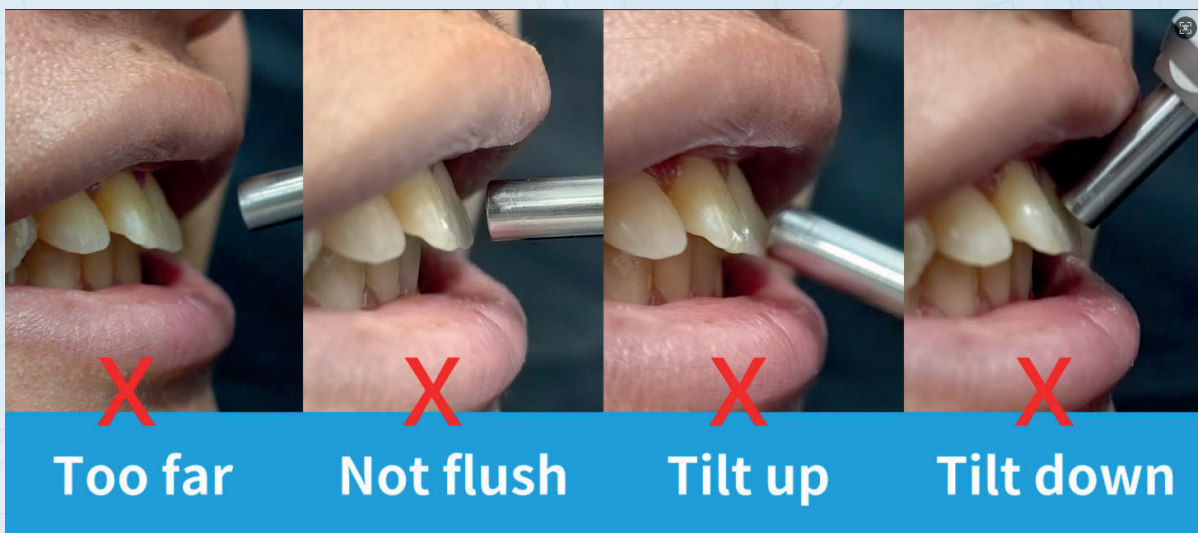


Recommend performing shade matching in the mid-crown region, specifically area b as shown in the diagram.

If the tooth color is complex, it's essential to measure both the cervical and incisal regions to obtain accurate color values in a 1:1 ratio to achieve the desired tooth color.



D.3 Place the probe at the thickest part of the dentine layer (mid-crown), ensuring it makes full contact with the tooth surface



D.4 Press the measurement button and keep the probe firmly on the tooth surface until you hear three beeps, indicating completion.

D.5 If the probe leaves the tooth surface before the signal tone sounds, the device will show an error or incorrect results. Please repeat the measurement in such cases.



E. Measurement Precautions:

- ① Before measuring, please ensure the tooth surface is clean and free of any debris.
- ② Ensure the tooth surface is cleaned with gauze to prevent the probe from slipping during use.
- ③ Hold the probe tip as flat as possible on the tooth's surface for accurate results.
- ④ Please note that place the probe tip entirely on the natural tooth, avoiding any contact with fillings and existing restorations, which can affect the reading.

Display Panel 显示屏	VITA Shade System VITA色系	Background & Values 背景与数值	Result 结果	Action Plan 方案
1st 第1行	3D-MASTER	3M3	Exact Match with Standard Shade Guide 标准色标颜色一致	
2nd 第2行	VITA Classic Shade(A1-D4) 经典色系(A1-D4)	B4		
1st 第1行	3D-MASTER	2L2.5 2L1.5	Within Acceptable Rang 可接受范围内	Mix in 1:1 ratio 1:1 的混合比例
2nd 第2行	VITA Classic Shade(A1-D4) 经典色系(A1-D4)	B2 D2		Left B2: primary match Right D2: secondary match 左侧B2为第一匹配值, 右侧D2为第二匹配值
1st 第1行	3D-MASTER	Retest	Significant Difference 明显差异	Retest 重复测试
2nd 第2行	VITA Classic Shade(A1-D4) 经典色系(A1-D4)	B1 ▲ □		▲: Lightness/Brightness 明度。 (▲ Too dark 偏暗 ▲ Too light 偏亮) □: Chroma shift required 色值。 (■ Reddish 偏红 ■ Yellowish 偏黄)

F. Battery:

F.1 Please stop using the device and recharge it immediately when the battery level drops below %15.

F.2 To maintain optimal battery performance, please fully charge the device at least once a month if unused for a long time.

F.3 Please avoid using batteries or chargers that are not produced by our company.

F.4 This device requires around 4.5 hours to fully charge from low power. Its battery lasts for approximately 500-400 charge cycles.

F.5 This product features a built-in battery and is designed for durability, offering over 500,000 uses

3RD. GUIDELINES FOR THE PROPER DAILY USE OF DETECTOR

- I) To disinfect the detector daily, gently wipe its glass probe using a clean cloth soaked in %75 medical-grade alcohol.
- II) To prevent scratches or impacts, always replace the transparent protective cover over the detector's measuring head after each use.

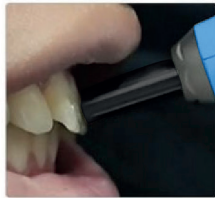
Precautions for Using Digital Dental Shade Matching Devices

1 Pre-Calibration Preparation



Rotate and remove the transparent tip cover from the measurement head.

2 Press the probe firmly against the center of the tooth surface.



Ensure the probe is held perpendicular to the tooth surface; avoid tilting.

3 Take multiple measurements.



Repeat the measurement 3-2 times and use the stable reading.

4 Prevent cross-contamination.



After use, strictly disinfect the measurement probe to avoid saliva contamination.

5 Do not touch the measurement probe with your hands.



Avoid direct contact with the measurement probe with your fingers.

6 Do not autoclave or use high-temperature /high-pressure disinfection.



The device housing is made of plastic; high temperature or pressure may cause deformation.

7 Do not place the device carelessly.



After disinfection, place the protective cap back onto the probe and return the device to its base.

8 Color Tab Calibration



If multiple measurements show inconsistent results, recalibrate using the color tabs/cards.

Daily Maintenance for the Digital Shade Matching Device

1 Prevent Cross-Contamination



After each use, strictly disinfect the measurement tip to avoid saliva contamination.

2 Replace the Protective Sleeve



After disinfection, please replace the transparent protective sleeve onto the measurement tip.

3 Return to the Base



Please place the disinfected shade matching device back into the Base. For next use

4TH. FAQ FOR THE SHADEMAX

Q1: What's included in the package? Do I need to buy tips?

A: ① Main unit and the base 1pcs ② Adapter 1pcs ③ User manual 1pcs;
Please check the photo, You do not need to buy any separate tips.
Just remember to disinfect the probe with alcohol before each use.

Q2: What is the warranty?

A: We offer a one-year warranty. If any issues occur, please send us videos and photos of the malfunction. After our engineers analyze and confirm the damage is not caused by human factors, we will provide replacement parts or a new product based on the specific issue.

Q3: How accurate is the data? Is the lighting in my office affecting it?

A: Precision is not applicable in this context. It serves as an auxiliary tool to help doctors quickly identify and match/lock color ranges. No, normal office lighting does not affect it.

Q4: How much time does it take to fully charge, and how long can it operate after being fully charged?

A: It takes approximately 4.5 hours to fully charge from the lowest battery level, allowing for over 5,000 measurements per full charge.

Q5: How can it disinfect properly? Could you explain how it works?

What do the green, yellow, and red lights indicate?

A: Simply clean the probe using gauze moistened with alcohol before and after use, following the sterilization protocol of the original VITA shade guide. The entire unit should not be allowed in a sterilization cabinet for high-temperature sterilization. It is a tool designed to help doctors quickly identify tooth color. Measure the natural tooth and compare it with the shade guide. For optimal results, measure each tooth in three positions and take 6-3 readings per tooth.

Display Panel 显示屏	VITA Shade System VITA色系	Background & Values 背景与数值	Result 结果	Action Plan 方案
1st 第1行	3D-MASTER	3M3	Exact Match with Standard Shade Guide 标准色标颜色一致	
2nd 第2行	VITA Classic Shade(A1-D4) 经典色系(A1-D4)	B4		
1st 第1行	3D-MASTER	2L2.5 2L1.5	Within Acceptable Rang 可接受范围内	Mix in 1:1 ratio 1:1 的混合比例
2nd 第2行	VITA Classic Shade(A1-D4) 经典色系(A1-D4)	B2 D2		Left B2: primary match Right D2: secondary match 左侧B2为第一匹配值, 右侧D2为第二匹配值
1st 第1行	3D-MASTER	Retest	Significant Difference 明显差异	Retest 重复测试
2nd 第2行	VITA Classic Shade(A1-D4) 经典色系(A1-D4)	B1 ▲ □		▲: Lightness/Brightness 明度。 (▲ Too dark 偏暗 ▲ Too light 偏亮) □: Chroma shift required 色值。 (■ Reddish 偏红 ■ Yellowish 偏黄)

Q6: IS CALIBRATION NECESSARY FOR THIS PRODUCT? WHICH COLOR SYSTEMS IT USES

A: Calibrated before leaving the factory, equipped with a smart chip for automatic calibration, ready to use instantly, delivering results in one second. It features two built-in systems: the classic VITA shade guide and the VITA 3D Master shade guide. We recommend using the 3D Master for its wider range of color options.

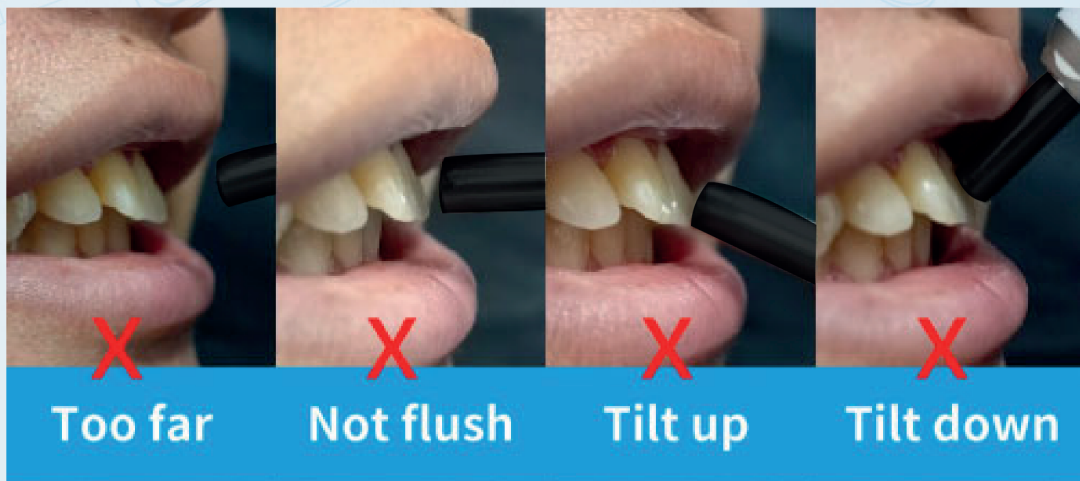
Q7: WHY MIGHT THE SAME TOOTH SHOW INCONSISTENT RESULTS DURING EXAMINATION?

A: This issue is usually caused by the following reasons:

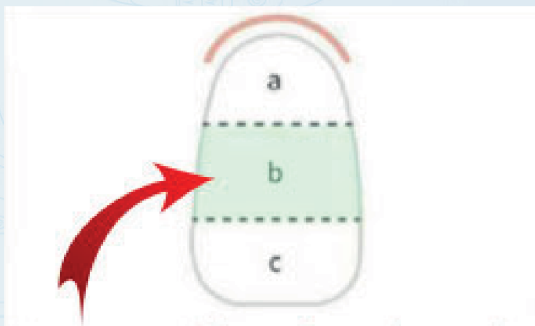
- ① Natural teeth typically show variations in color distribution;
- ② Operational issues, such as slight displacement, may occur

Q8: HOW CAN WE SOLVE THE ISSUE OF OBTAINING DIFFERENT RESULTS FOR THE SAME TOOTH?

A: Kindly follow the illustrated instructions: divide each tooth into three regions. Take 3 – 6 readings in the crown's middle region, then analyze the results using our numerical annotation table.



Make sure it is pressed firmly against the front surface of the tooth being measured



It is recommended to perform color matching in the middle third of the dental crown (Zone B as this picture)

