DentalDeal

Group M										
0M1	0.5M1	**1M1**	1.5M1	**2M1**	2.5M1	**3M1**	3.5M1	**4M1**	4.5M1	**5M1**
0M1.5	0.5M1.5	1M1.5	1.5M1.5	2M1.5	2.5M1.5	3M1.5	3.5M1.5	4M1.5	4.5M1.5	5M1.5
0M2	0.5M2	**1M2**	1.5M2	**2M2**	2.5M2	**3M2**	3.5M2	**4M2**	4.5M2	**5M2**
0M2.5	0.5M2.5		1.5M2.5	2M2.5	2.5M2.5	3M2.5	3.5M2.5	4M2.5	4.5M2.5	5M2.5
0M3				**2M3**	2.5M3	**3M3**	3.5M3	**4M3**	4.5M3	**5M3**

Group L				
2L1.5	2.5L1.5	**3L1.5**	3.5L1.5	**4L1.5**
2L2	2.5L2	3L2	3.5L2	4L2
2L2.5	2.5L2.5	**3L2.5**	3.5L2.5	**4L2.5**

Group R				
2R1.5	2.5R1.5	**3R1.5**	3.5R1.5	**4R1.5**
2R2	2.5R2	3R2	3.5R2	4R2
2R2.5	2.5R2.5	**3R2.5**	3.5R2.5	**4R2.5**

Ltable 5.1

6. Warranty and Copyright Statement

6.1 Warranty

The company promises to provide a 12-month warranty from the date of purchase. This warranty is applicable only to the original purchaser or the initial customer who uses the product according to the conditions specified in manual.

6.2 Exclusions from Warranty:

(1) Modification, tampering, or disassembly of the product.
(2) Damage caused by force majeure, misuse, abuse, negligence, accidents, or improper handling.
(3) Non-compliance with the instructions for use or maintenance in the manual.
(4) Damage where the device serial number is defaced, altered, or removed and cannot be identified.
(5) Damage caused by using the product with other manufacturers' products, resulting in incompatibility or unauthorized use leading to damage. The company is not responsible for such cases.

The limited warranty does not cover normal wear and tear, discoloration, or scratches and abrasions that do not affect product use. During the warranty period, if the device is damaged without violating the limited warranty, the company can provide comprehensive after-sales warranty services to ensure your normal use.

6.3 Legal Restrictions

If this limited warranty violates or partially violates the laws and regulations of certain countries or regions, local laws shall prevail. Depending on the laws of your location, you may have other rights beyond this limited warranty.

6.4 Copyright Notice

All related software, data, and other intellectual property rights involved in this product and documentation belong to the Corporation. The product and related materials do not imply the right or license to use any intellectual property of the Corporation, and the Corporation is not obligated to provide support or other related services.

Unauthorized use of the product's intellectual property for commercial or illicit profit operations is strictly prohibited. The Corporation retains permanent copyright ownership and reserves all legal rights. Any illegal activities that infringe upon the interests of the company will be pursued legally.

7. Safety and Warning

This product complies with safety equipment standards and meets electrical safety and emission standards. The impact on other specific medical devices (such as pacemakers, cochlear implants, or neurostimulators, etc.) has not been tested by the company.
Users should operate the device in specified environments. The power frequency magnetic field intensity should not exceed the requirements of standard commercial or medical environments.

7.1 Warnings

7.1.1: The colorimeter should not be stacked and should not be placed near devices that may generate electromagnetic interference.
7.1.2: Portable communication devices (including peripherals such as antenna cables, external antennas, etc.) should be kept more than 50 cm away from this product to avoid performance degradation.
7.1.3: Damaged colorimeter and data cables should not be used, as it may cause electric shock or further damage to the device.
7.1.4: Do not store the product and accessories near heat sources, as it may cause fires or permanent damage to the device.
7.1.5: Do not place the product and accessories near places where water may drop, such as sinks or bathtubs. If it falls into the water during charging, do not retrieve it directly with your hands; the power supply to the charging adapter must be cut off first.
7.1.6: Do not use accessories produced by other companies, such as chargers, data cables, etc., as it may increase electromagnetic radiation, reduce the lifespan of the device, or even damage the device. The company assumes no responsibility for any accidents.
7.1.7: Do not modify the device or replace the battery on your own. In case of charging or other malfunctions, contact customer support promptly.
7.1.8: To protect the environment, dispose of the colorimeter main unit, base, USB data cable, etc., at designated battery recycling locations.
7.1.9: Do not stare directly at the probe of the colorimeter; strong light may cause adverse effects.
7.1.10: Do not immerse the colorimeter main unit or base in water or other liquids for cleaning and disinfection.
7.1.11: Do not expose this device to temperatures above 60°C or below 0°C.
7.1.12: When using the colorimeter, adhere to safety guidelines for clinical and dental laboratory work.

7.2 Preventive Measures

7.2.1: Before use, follow the content of Section 3 in this manual for correct cleaning and disinfection.
7.2.2: Store the device in a dark place to avoid damage.
7.2.3: Handle the device with care to prevent damage, avoiding dropping or collisions.
7.2.4: Do not use a damaged colorimeter.
7.2.5: Use the product only in the natural environment specified in this manual.
7.2.6: Use the product only in the specified electromagnetic environment in this manual.
7.2.7: Do not use a dishwasher or microwave to clean any components of this product.
7.2.8: Do not heat any components of this product using boiling water, steam, or other heating disinfection devices.
7.2.9: Do not attempt to repair this product; it does not contain consumer-repairable parts.
7.2.10: Do not use products other than those specified by the company to charge this device.
7.2.11: Do not expose the product to ultraviolet light for extended periods, as it may cause fading.
7.2.12: Do not place the product in a location where it cannot be disconnected from the power source for charging.
7.2.13: When not in use for an extended period, ensure charging once a month.

8. Operating Environment

8.1 Extreme Environment

Minimum/Maximum Ambient Temperature for any component: -10°C / +60°C
Relative Humidity: 15% - 90% RH
Atmospheric Pressure: 700 hPa - 1060 hPa

8.2 Transportation and Storage Environment Conditions

Ambient Temperature: 0°C - 50°C
Relative Humidity: 30% - 90% RH
If the Colorimeter is transported or stored under its highest or lowest temperature conditions, the product should be placed at room temperature for at least 1 hour before use.

8.3 Operating Environment

Ambient Temperature: 5°C - 45°C
Relative Humidity: 50% - 90% RH
During normal use, ensure that the ambient temperature is between 5°C and 45°C for optimal performance of the Colorimeter. Operating outside this temperature range may result in measurement errors.

9. Assistance

If you have any questions, concerns, unexpected operations, or activities related to the Colorimeter, please consult the after-sales service for further assistance.

Certificate of Conformity

This product has undergone strict inspection and complies with standards, authorized for sale.

Inspector::_____ QC PASS 检0

Dental Teeth Color Comparator



1Product List



Base X1 | Colorimeter Main Unit X1 | Data Cable X1 | Charger X1

Picture 1

2 Product introduction

Thank you for purchasing the Dental Colorimeter! To better understand and use this product, please read this manual carefully before use.
The measurement values of this product cover the VITA 3D-MASTER color system and VITA Classical color system A1-D4.



Figure 2.1

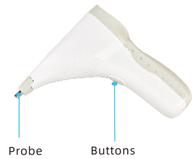


Figure 2.2

Declaration:

1. This product is only suitable for measuring the color of natural tooth, and the measurement results are for reference only.
2. This product does not have any diagnostic, preventive, or therapeutic effects.

3.Basic operation instructions

3.1 Power On/Off

1. Press and hold the button for more than 3 seconds to power on/off.
2. After turning on, perform white balance calibration, see section 3.2 for details. After turning on, if there is no operation within 1 minute, the LCD screen will automatically turn off. If there is no operation within 3 minutes, the device will automatically shut down. During this period, press the button once to illuminate the screen for normal use and restart the 3-minute countdown.

Note: When the device's battery is too low, it cannot be turned on normally; please charge it promptly.

3.2 White Balance Calibration

To ensure the normal operation and measurement accuracy of the device, white balance calibration needs to be performed each time it is turned on. The method is as follows: place the main unit on the base, press and hold the power button to perform white balance calibration (the device will co mplete this automatically). The machine that has not undergone white balance calibration cannot be used normally. After calibration, the "Ready" screen in Figure 3.1 will appear, indicating normal measurement.



Figure 3.1

Note:

1.If the main unit is turned on without being placed on the base, the screen in Figure 3.2 will appear. Please place the main unit on the base.



Figure 3.2

2. If white balance calibration fails, the screen in Figure 3.3 will appear. Possible reasons include the main unit not being placed correctly, or the probe and white ceramic block need to be cleaned. If calibration fails after multiple attempts, please contact customer support for assistance.



Figure 3.3

3.3 Disinfection Before Use

Before measuring human tooth with this product each time, be sure to disinfect the probe to prevent cross-infection. It is recommended to use disinfectant wipes suitable for medical devices and sensitive surfaces. Be sure to ensure that the disinfection equipment used complies with regulations and follow the manufacturer's instructions and operations.

Note: When wiping the probe, do not use excessive force. Wait for the disinfectant residue on the probe surface to evaporate before starting the measurement; otherwise, it may affect the measurement accuracy.



Figure 3.4

3.4 Mode Switching

This product has two measurement modes: intraoral and extraoral. The intraoral mode is used to measure real tooth, while the extraoral mode is used to measure the standard -color tooth. Before measurement, use the corresponding mode to obtain accurate results; otherwise, different results may be obtained.
The switching method is a triple-click of the button.



Figure 3.5



Figure 3.6

3.5 Shake Reminder

Hold the device steadily during the measurement process. If there is shaking, it will affect the measurement, and the screen in Figure 3.7 will appear. Simply redo the measurement.



Figure 3.7

3.6 No Tooth Detected

If the screen in Figure 3.8 appears during the measurement process, it indicates that the object being measured is not a standard-color tooth or a real tooth. However, it may also be due to incorrect measurement methods, such as the probe not being close to the object being measured. Please redo the measurement.



Figure 3.8

3.7 Battery Life and Charging

1. With a full charge, it can complete more than 2000 measurements.
2. If the battery icon in the upper right corner flashes as shown in Figure 3.9, it is in a low battery state, so please charge it promptly.
3. In low battery conditions, it takes about 3 to 4 hours to fully charge.



Figure 3.9

Note:

1. The above parameters are obtained from laboratory tests.
2. If not used for a long time, it is strongly recommended to charge it once a month to maintain battery vitality and prevent the battery from entering the lock mode after self-discharge.

4. Measurement instructions

This device is primarily used for obtaining the color of natural tooth, so measuring other materials with it will result in deviations.
The device displays results in two rows:
The first row is based on the VITA 3D-MASTER color system.
The second row is based on the VITA Classical color system (A1-D4).
It is recommended to prioritize the results from the first row because the VITA 3D-MASTER color system covers a broader range of tooth, providing more practical results.
To ensure high accuracy, carefully observe the tested tooth, determine the center position of the tooth's core, place the probe on the thickest area of the tooth's core (usually in the central or cervical area based on experience), then gently press the probe to make full contact with the tooth surface (keeping the probe parallel to the tooth surface), and press the button to perform the measurement.

4.1 Extraoral Mode (Standard-color Tooth Measurement)

The extraoral mode is used to measure VITA 3D-MASTER Colorimeter and VITA A1-D4 Colorimeter. In this mode, both the first and second rows display a single result, represented by green, yellow, and red to indicate the similarity level. When the result is red, it has little reference significance.

4.2 Intraoral Mode (Real Tooth Measurement)

The intraoral mode is used to measure human natural tooth, providing highly accurate tooth data. Refer to the following explanations for specific measurement results.

4.2.1 Green Background

As shown in Figure 4.1, green indicates that the measurement result is consistent with the colorimeter color or has a slight color difference, indicating a high reference level. The green values may not appear simultaneously in both the first and second rows; which row appears depends on the measurement situation.



Figure 4.1

4.2.2 First Row Yellow Background

As shown in Figure 4.2, the larger value on the left side of the first row is the best match, with a slight difference from the VITA 3D-MASTER standard color but within an acceptable range.
The smaller value on the right side is the second matching value. You can use the intermediate color table listed in Section 5 by blending these two colors in a 1:1 ratio to achieve a satisfactory solution.



Figure 4.2

4.2.3 Second Row Yellow Background

As shown in Figure 4.3, the larger value on the left side of the second row is the best matching value. It has a certain difference from the standard color number of the VITA Classical color system (A1-D4) but within an acceptable range. The smaller value on the right side is the second matching value, different from the VITA 3D-MASTER color system result. These two values here represent not a blending solution but rather two results that are closer to the color of the tested tooth, providing for reference only.



Figure 4.3

4.2.4 Second Row Red Background

As shown in Figure 4.4, when a red background appears during the measurement, it indicates a significant difference between the color of the tested tooth and the standard color number. You can observe a circular and square symbol on the right side of the result. These two symbols provide some information about the color bias of the real tooth.



Figure 4.4

Specifically:

Circle: Represents brightness deviation.
1. White circle: Indicates that the tested tooth is brighter than the displayed result.
2. Gray circle: Indicates that the tested tooth is darker than the displayed result.

Square: Represents hue deviation.
1. Red square: Indicates that the tested tooth is redder than the displayed result.
2. Yellow square: Indicates that the tested tooth is yellower than the displayed result.

5. Intermediate color Table

The 29 colors of the VITA 3D-MASTER color system are marked in bold in Table 5.1 below. The table also lists 52 intermediate colors, which can be used with VITA 3D color materials to mix and match, producing corresponding restoration colors.