VEYKOLOR VEYKOLOR Portable Colorimeter D/8

VEYKOLOR Portable Colorimeter User Manual

Model: Portable Colorimeter D/8 Structure, 8mm Caliber

1. PRODUCT OVERVIEW

The VEYKOLOR Portable Colorimeter is a sophisticated device designed for accurate color measurement across various industries. It features a built-in integrating sphere with an 8mm aperture and utilizes the D/8 measurement structure, which provides highly precise color data by reflecting the true color information of the sample.

This colorimeter supports a wide range of evaluation light sources and measurement parameters, making it a versatile tool for professional color analysis. It also includes built-in electronic color cards and offers extensive data management capabilities through its dedicated mobile application and computer software.

Figure 1.1: The VEYKOLOR Portable Colorimeter alongside its mobile application interface, demonstrating real-time color measurement data and analysis.

2. WHAT'S IN THE BOX

Upon unboxing your VEYKOLOR Portable Colorimeter, please ensure all the following components are present:

- VEYKOLOR Portable Colorimeter Unit
- USB Data Cable (for charging and data transfer)
- Instruction Manual

Figure 2.1: The colorimeter, data cable, and instruction manual as packaged in the product box.

3. SPECIFICATIONS

The VEYKOLOR Portable Colorimeter is engineered with precision and user convenience in mind. Key specifications are detailed below:

Feature	Description
Measurement Structure	D/8 (diffuse illumination, 8-degree viewing)
Aperture Size	8mm
Light Sources Supported	26 types (e.g., A, C, D50, D65)
Measurement Parameters	33 types (e.g., RGB, Lab, XYZ, HSB, HEX)

Feature	Description
Color Difference Formulas	4 types (e.g., dE*ab, dE*cmc, dE*94, dE*00)
Built-in Color Cards	19 electronic color cards (e.g., Pantone, NCS, NIPPON PAINT)
Battery Type	1 Lithium Polymer battery (included)
Dimensions (Approx.)	1.22 inches (diameter) x 4 inches (height) / 31mm (diameter) x 102mm (height)
Weight (Approx.)	10.23 ounces

Figure 3.1: Visual representation of the colorimeter's compact dimensions and its portability, easily fitting into a pocket.

4. SETUP AND INITIAL USE

4.1 Charging the Device

Before first use, fully charge the colorimeter using the provided USB data cable. Connect the cable to the device's charging port and to a standard USB power adapter (not included) or a computer's USB port. The device's indicator light will show charging status.

4.2 Powering On/Off

To power on the device, press and hold the power button located on the top of the colorimeter until the screen illuminates. To power off, press and hold the same button until the screen turns off.

Figure 4.1: Illustration of pressing the power/measurement button on the top of the colorimeter.

4.3 Mobile Application Installation and Registration

The VEYKOLOR Colorimeter integrates with a mobile application named**"ColorMeter"**. For Android users, the app can be downloaded by scanning the QR code provided in the physical instruction manual. For iOS users, search for "ColorMeter" in the App Store.
Registration Process:

1. Open the "ColorMeter" app.
2. Enter your email address (Gmail or Outlook recommended).
3. Click "Get verification code".
4. Check your email for a 4-digit verification code and enter it into the app.
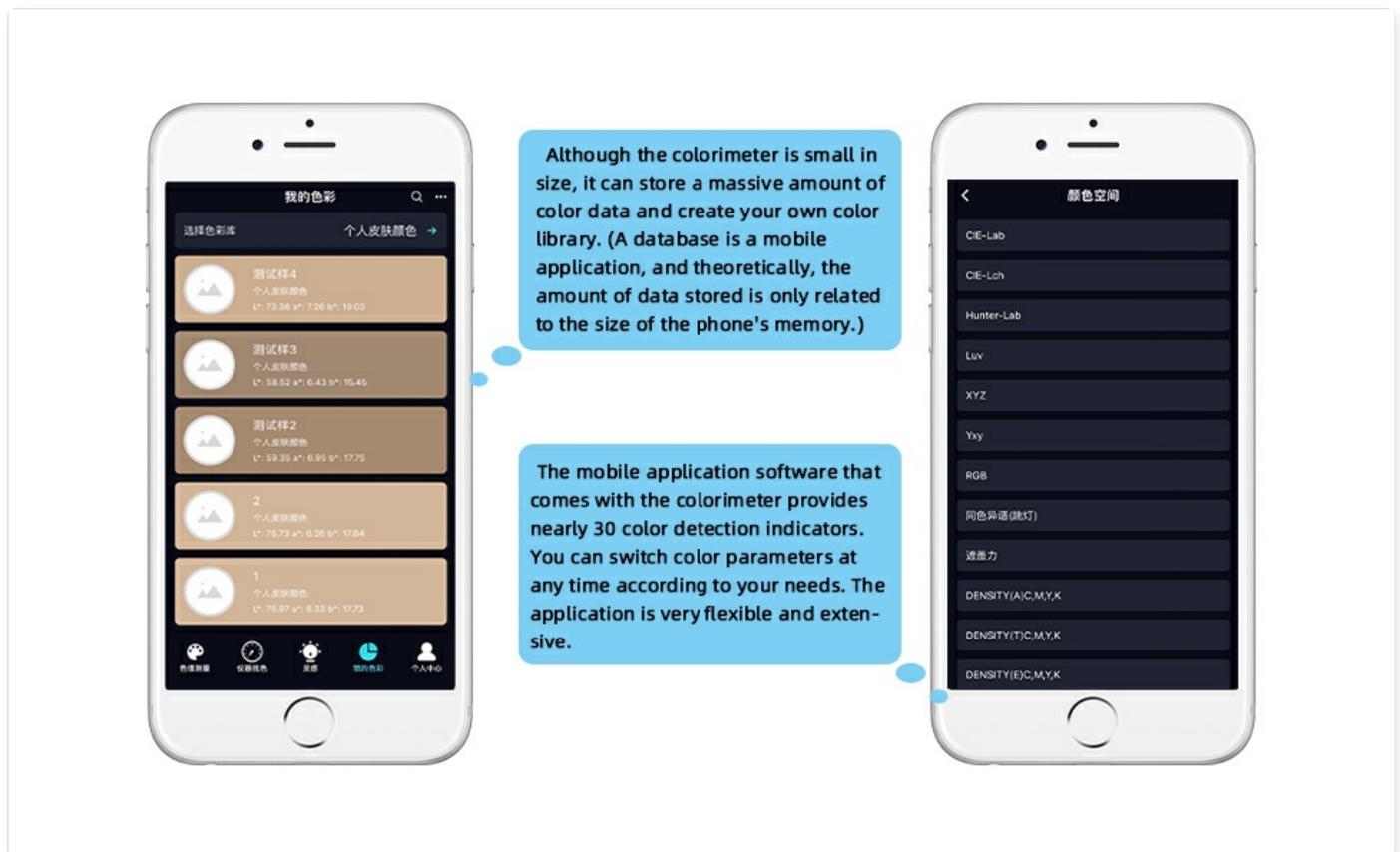5. Set your desired password to complete registration.

Figure 4.2: The mobile application interface, demonstrating its ability to store massive amounts of color data and offering various color space indicators.

4.4 Computer Software Installation

The accompanying computer software, **"ColorExpert"**, can be downloaded directly from the app. Navigate to the "Personal Center" within the mobile app, then click on "Product" to find the download link for the computer software. This

software enables advanced functions such as calibration, measurement, data storage, data export, and user management.
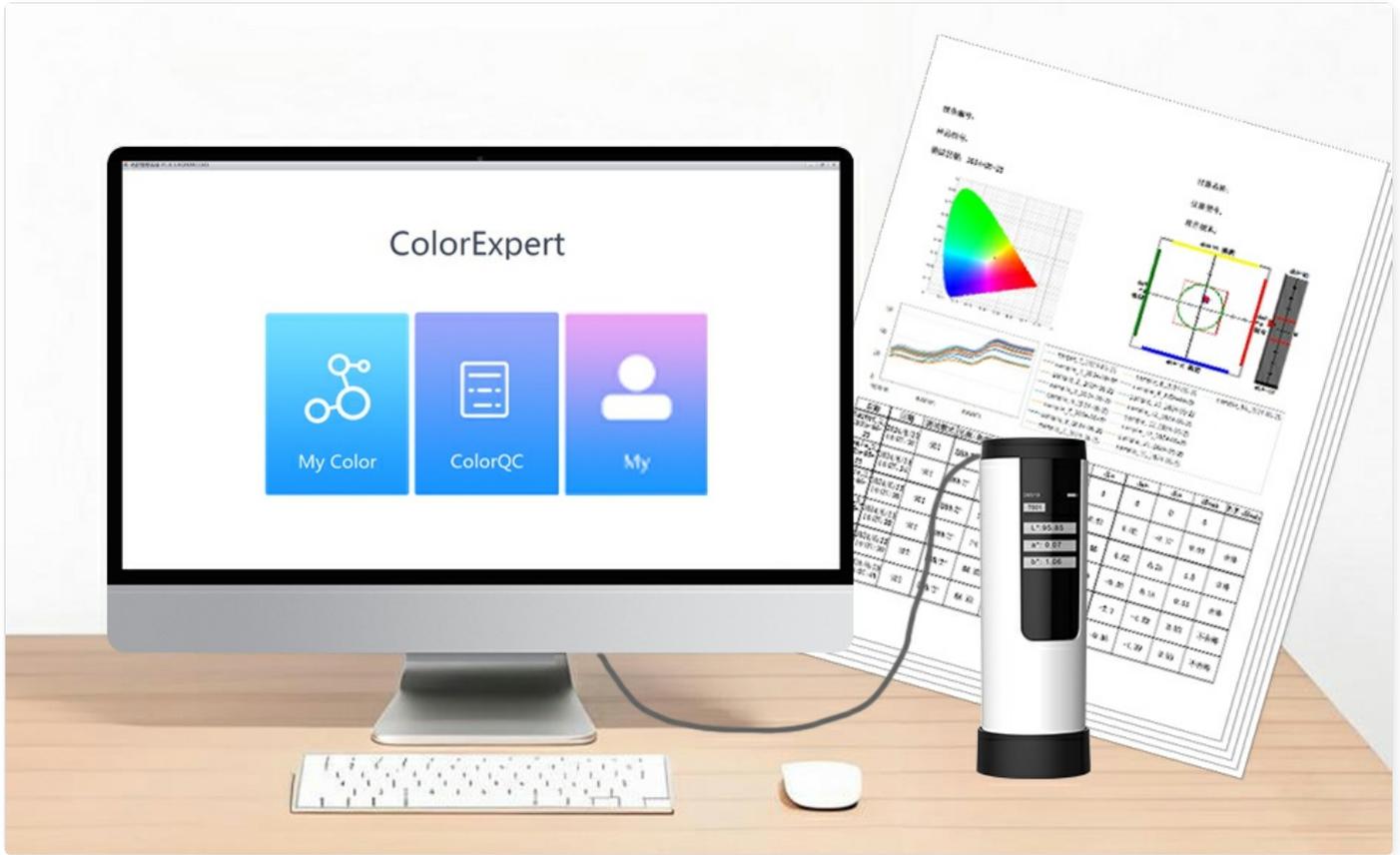

Figure 4.3: The computer software interface, providing comprehensive tools for color analysis and data management.

5. OPERATING INSTRUCTIONS

5.1 Basic Measurement

To perform a basic color measurement:

1. Ensure the colorimeter is powered on.
2. Place the measurement aperture (8mm) firmly and flatly against the surface of the sample you wish to measure.
3. Press the measurement button (usually the same as the power button) once. The device will emit a light and display the measurement results on its screen.


Figure 5.1: Proper technique for holding the colorimeter and placing its aperture on a sample for measurement.
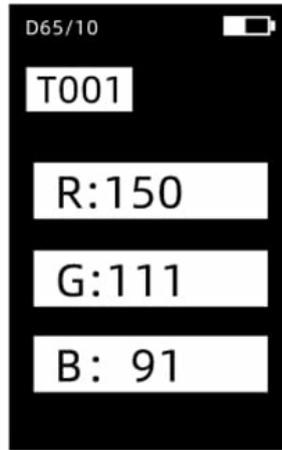
5.2 Interpreting Measurement Results

The colorimeter can display various color parameters directly on its screen. Common parameters include L*a*b*, RGB, Whiteness, Yellowness, Blackness, and Opacity. The device can also indicate Pass/Fail results based on predefined
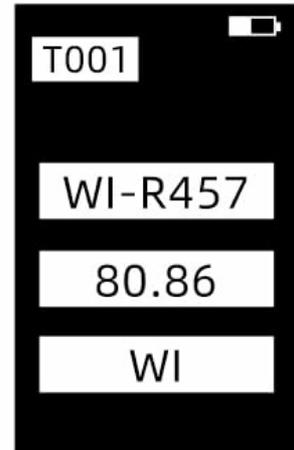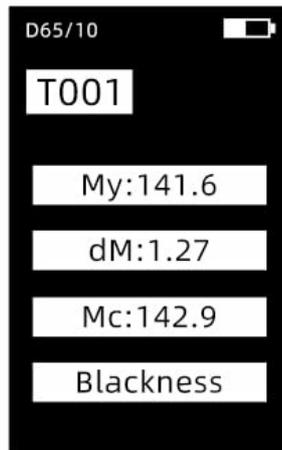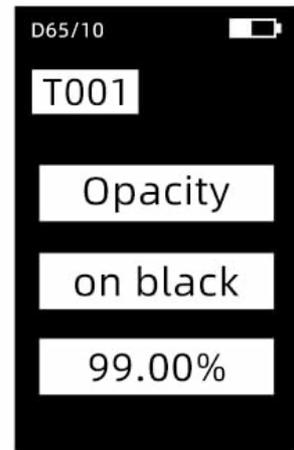
tolerances.
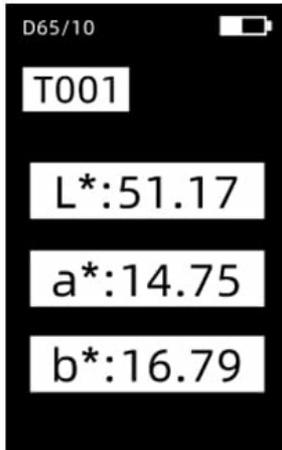
Figure 5.2: Examples of different color parameters (Lab, RGB, Whiteness, Yellowness, Blackness, Opacity) that can be measured and displayed by the colorimeter.
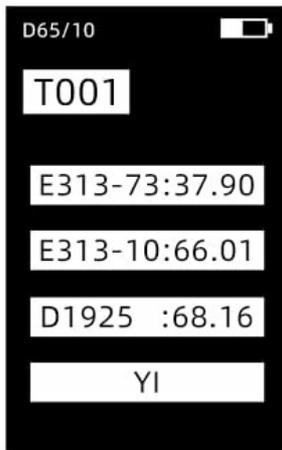
The background color is green
Color difference is judged as "Pass"

dL*:1.90 Pass
da*:-0.56 Pass
db*:-0.04 Pass
dE*ab:1.98 Pass

dL*:2.30 White
da*:0.00 Pass
db*:0.20 Pass
dE*ab:2.31 Fail

White: Compared to the standard sample, the sample has more white color.

The background color is red
Color difference is judged as "Fail"

Pass   Fail

Figure 5.3: The colorimeter's display indicating a 'Pass' result (green background) when the color difference is within tolerance, and a 'Fail' result (red background) when it is outside tolerance.

5.3 Advanced Functions via App/Software

For more detailed analysis, data storage, and management, utilize the mobile application or computer software. These platforms allow you to:

- Select from 26 evaluation light sources and 33 measurement parameters.
- Apply 4 different color difference formulas (dE*ab, dE*cmc, dE*94, dE*00).
- Access 19 built-in electronic color cards for comparison.
- Store massive amounts of measurement data.
- Export data for reporting and further analysis.
- Perform calibration and user management (via computer software).

6. MAINTENANCE

To ensure the longevity and accuracy of your VEYKOLOR Portable Colorimeter, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry, lint-free cloth to clean the exterior of the device. For the measurement aperture, use a lens cleaning cloth or a soft brush to gently remove dust or debris. Do not use abrasive cleaners or solvents.
- **Storage:** Store the colorimeter in a cool, dry place, away from direct sunlight, extreme temperatures, and high humidity. Keep it in its original packaging or a protective case when not in use to prevent damage.
- **Battery Care:** If the device will not be used for an extended period, charge it periodically (e.g., every 3 months) to maintain battery health.
- **Calibration:** Regular calibration is crucial for maintaining measurement accuracy. Refer to the computer software section for calibration procedures.

7. TROUBLESHOOTING

If you encounter issues with your VEYKOLOR Portable Colorimeter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on	Low battery; Device malfunction	Charge the device fully. If problem persists, contact support.
Inaccurate measurements	Dirty aperture; Device needs calibration; Incorrect measurement technique	Clean the aperture. Perform calibration using the computer software. Ensure the aperture is flat against the sample.
App/Software connection issues	Bluetooth not enabled; App not updated; Device not paired	Ensure Bluetooth is enabled on your phone/computer. Update the app/software to the latest version. Follow pairing instructions in the app.
Cannot download APP from Google Play Store	App still under review	Scan the QR code in the manual to download the APK file directly.
Verification code not received during registration	Email in spam/junk folder; Incorrect email address	Check your spam/junk folder. Ensure you entered the correct email address. Try using a different email provider (e.g., Gmail, Outlook).

8. WARRANTY AND SUPPORT

For information regarding product warranty, returns, or technical support, please refer to the official VEYKOLOR website or contact VEYKOLOR customer service directly. Contact details can typically be found on the manufacturer's website or in the product packaging.
Please have your product model and purchase information ready when contacting support.