



 ColorWorkDesk®

SMART SOLUTIONS  
FOR A COLORFUL WORLD

**ColorWorkDesk** is the URAI product line capable of improving the performance of quality control and color formulation thanks to modular software and innovative tools.

## about us

The company URAI S.p.a has started the distribution in Italy of the proprietary software called ColorWorkDesk®, the brand that distinguishes the new line of products in the field of applied colorimetry.

Developed thanks to a continuous dialogue with our customers, this tool offers advanced solutions for quality control, formulation and color correction.

Urai's decades of experience and all the know-how acquired have made the ColorWorkDesk® software a powerful and intuitive system to guarantee precision and reliability in color management throughout the entire production process that companies can count on.

## ColorWorkDesk's goals

- Redesign the colorimetric software with our experience in the field, offering flexible and customizable solutions.
- Simplify work, reducing routine operations and adapting the software to the specific indications of users.
- Group all operational needs into modules, maintaining direct contact with the software users.
- Create an intuitive user interface, which allows rapid retrieval of information.
- Develop modern, precise and efficient calculation algorithms in all operating conditions.
- Offer multilingual software, with translation tools to satisfy every linguistic need.



# CWD SOFTWARE BY APPLICATION SECTOR

## Color management software

CWD QC

CWD LAB M TOP

CWD LAB F TOP

CWD LAB M

CWD LAB F



## PAINTS

- **CWD QC**  
Software for color quality control, with features for shade matching search, yield calculation, and color indices. Displays differences through clear and simple tables and charts. History management included.
- **CWD LAB M TOP**  
Complete colorimetry software with formulation, correction, and QC. Creation of colorant files and product line management with queued formulation for paints.
- **CWD LAB F TOP**  
Workstation with formulation, correction, and quality control. Product line management with queued formulation for paints. Ideal for QC laboratories and production.
- **CWD LAB M**  
Complete colorimetry software with formulation, correction, and QC. Creation of colorant files and queued formulation for paints. Ideal for R&D laboratories and production.
- **CWD LAB F**  
Workstation with formulation, correction, and quality control with queued formulation for paints. Ideal for QC laboratories and production.



## PLASTICS

- **CWD QC**  
Software for color quality control, featuring similar shade search, yield calculation, and accelerated aging tests for plastic materials.
- **CWD LAB M**  
Complete colorimetry software with formulation, correction, and QC. Creation of colorant files for plastic materials. Ideal for R&D laboratories and production.
- **CWD LAB F**  
Workstation with formulation, correction, and quality control for plastic materials. Ideal for QC laboratories and production.



## TEXTILE

- **CWD QC**  
Software for color quality control for textiles and leather, featuring similar shade search, yield calculation, grey scale and blue scale evaluation. Coverage index and 555 index.

## Point of Sale software

FORMULA COLLECTION

FORMULA COLLECTION SC

FORMULA COLLECTION TOP



## CWD FORMULA COLLECTION with Search Function

The basic version, perfect for those seeking efficient formula management and an advanced search system.

- **“Search” function:** finds the closest matching color in the database using a spectrophotometer. A fast system that optimizes processing time and reduces errors. Ideal for those who need effective support in shade selection directly in-store.

## CWD FORMULA COLLECTION SC with search & correct function

Mid-level version with advanced color correction features.

- **“Search & Correct” function:** allows you to find the closest matching color and reformulate it to create custom sample shades. Advanced correction significantly expands the possibilities for reproducing customized colors, even without a predefined formula.

Perfect for warehouses and large retail stores that require dynamic and flexible management of sample shade formulation.

## CWD FORMULA COLLECTION TOP with Formulation

The complete version, including all the features of the previous versions plus brand-new formulation capabilities.

- **Free formulation function:** create a color from scratch. Formulate and correct in any quantity or using the product line.

The ultimate solution for those who want maximum control and full autonomy in color formulation.

# COLOR MANAGEMENT SOFTWARE

## ColorWorkDesk® The Advanced Colorimetry Software

ColorWorkDesk® is the software developed by URAI S.p.A. for complete color management in the **Textile, Paints, and Plastics industries**. Powerful, intuitive, and modular, it optimizes workflow and enhances communication between laboratory, production, and point of sale.

### Modern and Flexible Interface

Modular structure within a single workspace, without intrusive windows or scattered screens. A modern and smooth interface with fast navigation between color libraries, formulas, and standards, enabling continuous and efficient work.

### Advanced Calculation Engine

The proprietary URAI mathematical library stands out for its precision, calculation speed, and performance in formula correction. A system designed to deliver reliable results and optimize every phase of the color matching process.

### History and UV Testing

The reading history system allows continuous monitoring of work quality and the colorimetric consistency of each standard over time.

### CWD Ecosystem

ColorWorkDesk is part of a fully integrated ecosystem: laboratory, production, and point-of-sale software solutions are interconnected and exchange color and formulation data in real time, ensuring consistency and operational continuity.

### Flexible Licensing

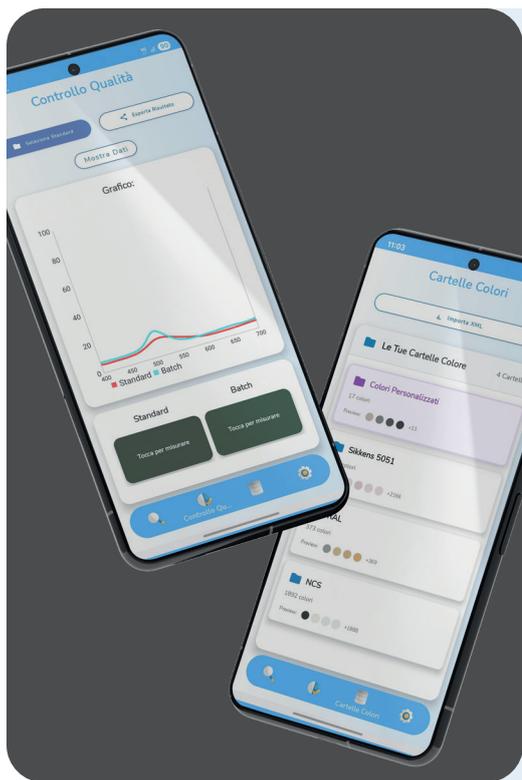
Protection via USB Sentinel Key, with license management also available via web or server, and the possibility to upgrade or downgrade without reinstallation.

### Instrument and Software Integration

URAI's strength lies in its in-house IT team: we develop drivers for third-party instruments and make our instruments compatible with external software. We can also convert databases from other systems (colorant files, color libraries, and standards), ensuring maximum flexibility in the market.



## CWD SOFTWARE BY APPLICATION SECTOR



### CWDSEARCH2

The mobile application for Android and iOS is designed to read colors via spectrophotometer and offer fast and precise quality control (QC).

The app offers the possibility to search and find similar colors, create customized color cards and store sample tints.

The app can interface with the Formula Collection system.



### SERVER

Our server is an advanced API-based solution, designed to ensure secure and dynamic access to information. The interface uses encrypted HTTP calls in JSON format, ensuring maximum data protection during transmission.

Access is regulated via an identification code dynamically generated from the user credentials (username and password), offering an additional level of security.

Key features include:

- **Advanced license management** - Ability to customize permissions based on the industry you belong to..
- **Timed demo** - Activation of temporary licenses for evaluating services.
- **Security and reliability** - Data is always protected thanks to advanced encryption.

A versatile and secure system, ideal for companies that need a robust and flexible infrastructure for information management.

## OUR PRODUCTS

### SPECTROPHOTOMETERS

## BSF series CWD benchtop spectrophotometers

**BSF 100 / BSF 200 / BSF 300**

The CWD BSF series spectrophotometers represent innovation in color measurement.

Thanks to XENON + LED technology and integrated Quality Control software, they deliver precision on every type of material.

Rotatable touchscreen, built-in camera, and maximum long-term reliability!



## HSF series portable CWD spectrophotometers

**HSF 100 / HSF 300**

The CWD HSF series portable spectrophotometers combine XENON + LED technology with integrated software for precise color control.

Compact and ergonomic, they feature a 3.5" touchscreen and USB connectivity.

Perfect for quality testing and color formulation, wherever you are!



## OUR PRODUCTS

### SPECTROPHOTOMETERS

#### Portable spectrophotometers

## CWD MINI MSF 500

MSF-500 is a portable spectrophotometer designed to deliver precise and repeatable color measurements for quality control applications and professional color management. Thanks to its  $d/8^\circ$  diffuse geometry with LED light source, it ensures reliable measurements across a wide range of materials. Multiple measurement apertures allow accurate operation on surfaces with different sizes and textures.

The instrument provides excellent inter-instrument agreement with benchtop spectrophotometers and higher-end devices, facilitating color data alignment between laboratory, production, and quality control. Designed to integrate with ColorWorkDesk software, the MSF-500 represents a reliable solution for companies requiring consistency and continuity in color measurement throughout the entire production chain.



#### Portable spectrocolorimeter

## CWD MINI MSF 300

MSF-300 is a portable spectrocolorimeter designed to provide fast and reliable color measurements within commercial networks and retail points of sale. Compact and easy to use, it is the ideal tool for immediate color verification directly at the customer's site. Equipped with  $d/8^\circ$  integrating sphere geometry and an LED light source, it enables precise measurements across a wide range of materials. The instrument features three interchangeable measurement apertures ( $\Phi 11$  mm /  $\Phi 6$  mm /  $\Phi 3$  mm) to adapt to different surfaces and applications.

The system captures 8 spectral data points and interpolates 31 reflectance points, ensuring good chromatic accuracy. It also includes built-in Quality Control (QC) functions, allowing immediate verification without the need for external software. MSF-300 supports Bluetooth and USB connectivity and can be used with the CWDSearch 2 app, making color data management and sharing simple and fast.



## COURSES

URAI offers a complete program of colorimetry courses for laboratory technicians and operators in the sector, with different levels of difficulty. The courses combine theory and practice, using advanced electronic and optical instruments, to ensure in-depth and concrete training. The courses are held at our headquarters twice a year and are aimed at everyone. In addition, we organize individual or group courses, also at the operational headquarters of our partners, to meet the specific needs of each participant. If you are an experienced operator, our internal theoretical courses offer a unique opportunity to further delve into colorimetry.

The courses are also an opportunity to interact with professionals from different realities, share ideas and exchange experiences. An ideal opportunity to enrich your knowledge in a stimulating environment. Upon request, we organize customized courses to meet the specific needs of each customer.

### A complete training program

#### BASIC COURSE

##### COLOR MEASUREMENT

This day is dedicated to the in-depth study of **color theory**, an essential foundation for those starting the path of approaching **colorimetry**.

#### INTERMEDIATE COURSE

##### QUALITY CONTROL AND COLOR CORRECTION

A day that combines theory and practice, focusing on **Quality Control** in colorimetry and **color correction methods** to optimize results and daily applications.

#### ADVANCED COURSE

##### INSTRUMENTAL COLOR CONSTRUCTION

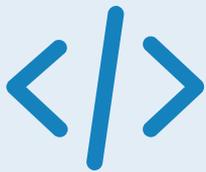
This course is designed for those who already have good experience in the sector and want to update themselves on the **management of color formulation** through the advanced use of **Color Matching** software. Intended for professionals in the Plastics, Paints and Textile/leather sectors.

## SERVICE AND APPLICATION SUPPORT

Consulting, assistance and training:

URAI guarantees a range of services useful for simplifying your everyday work.

The installation and support of ColorWorkDesk® are taken care of by URAI S.p.a technicians/salespeople who offer their skills for the start-up and training of the colorimetric system in companies.



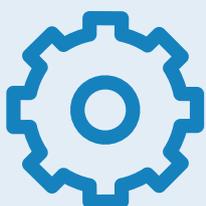
### SOFTWARE ASSISTANCE

Subsequently, you will be accompanied in the discovery of the software with a personalized training in terms of days and technical level. Customer care and support are the prerogative of the ColorWorkDesk team, constant assistance and availability are the key words.



### COMMERCIAL AND APPLICATION CONSULTING

The valuable advice of our experts will help you choose the work modules necessary for the needs of your company. CWD software and hardware are designed to satisfy all production areas by offering you the best solution on the market and are all customizable.



### HARDWARE ASSISTANCE

You can also take advantage of URAI support for the repair and maintenance of your spectrophotometers. We offer two maintenance packages to guarantee you tested and high-performance instruments. Your spectrum is in excellent hands and will be checked in our service department without leaving Italy.

## TECHNICAL TABLES

### BENCHTOP SPECTROPHOTOMETER COMPARISON

	BASIC	MEDIUM	HIGH
Model	BSF100	BSF200	BSF300
Reflectance	d/8, SCI+SCE	d/8, SCI+SCE	d/8, SCI+SCE
Transmittance	D/0	D/0	D/0
Inter-instrument Agreement (standard deviation measurement of CHNSpec BCRA ceramic tiles with XLAV UV400 - 23°C - SCI)	XLAV $\Delta E^*ab$ 0.15	XLAV $\Delta E^*ab$ 0.12	XLAV $\Delta E^*ab$ 0.08
Repeatability (measurement of white tiles 30 times at 5-second intervals with XLAV UV400 in SCI mode)	$\Delta E^*ab \leq 0.01$	$\Delta E^*ab \leq 0.005$	$\Delta E^*ab \leq 0.005$
Light Source	LED+Xenon	LED+Xenon	LED+Xenon
Measurement Area	XLAV $\Phi 25.4\text{mm}/30\text{mm}$ LAV $\Phi 15\text{mm}/\Phi 18\text{mm}$ MAV $\Phi 8\text{mm}/\Phi 11\text{mm}$ SAV $\Phi 3\text{mm}/\Phi 6\text{mm}$	XLAV $\Phi 25.4\text{mm}/\Phi 30\text{mm}$ LAV $\Phi 15\text{mm}/\Phi 18\text{mm}$ MAV $\Phi 8\text{mm}/\Phi 11\text{mm}$ SAV $\Phi 3\text{mm}/\Phi 6\text{mm}$	XLAV $\Phi 25.4\text{mm}/\Phi 30\text{mm}$ LAV $\Phi 15\text{mm}/\Phi 18\text{mm}$ MAV $\Phi 8\text{mm}/\Phi 11\text{mm}$ SAV $\Phi 3\text{mm}/\Phi 6\text{mm}$
Fluorescence Calibration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Automatic Calibration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Camera	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Wavelength Range	360-780nm	360-780nm	360-780nm

### PORTABLE SPECTROPHOTOMETER COMPARISON

	MSF500	HSF100	HSF300
Repeatability (measurement of white tiles 30 times at 5-second intervals with 11 mm aperture, UV400 SCI mode)	$\Delta E^*ab \leq 0.025$	$\Delta E^*ab \leq 0.02$	$\Delta E^*ab \leq 0.01$
Light Source	LED+UV	LED+Xenon	LED+Xenon
Measurement Area	$\Phi 11\text{mm}$ , $\Phi 6\text{mm}$ , $\Phi 3\text{mm}$	$\Phi 11\text{mm}$ , $\Phi 6\text{mm}$	$\Phi 11\text{mm}$ , $\Phi 10\text{mm}$ , $\Phi 6\text{mm}$ , $\Phi 5\text{mm}$ , $\Phi 3\text{mm}$ , 1mm*3mm
Camera	No	No	No
Geometry	D/8, SCI+SCE	D/8, SCI+SCE	D/8, SCI+SCE
Wavelength Range	400-700 nm	360-740nm	360-780nm
Illuminant Lifetime	2 million readings	6 million readings	10 million readings

# TECHNICAL TABLES

## SOFTWARE COMPARISON

	CWD QC	CWD LAB M TOP	CWD LAB F TOP	CWD LAB M	CWD LAB F
Color Scales: CIELab, CIELCh, XYZ, CIE <sub>x</sub> , CIE <sub>y</sub> , with absolute values and differences.	✓	✓	✓	✓	✓
Fast storage of color libraries in the database.	✓	✓	✓	✓	✓
Management of gravimetric and volumetric measurement units.	✗	✓	✓	✓	✓
Guided creation of colorant files.	✗	✓	✗	✓	✗
Product line management and maintenance.	✗	✓	✗	✗	✗
Creation of package sizes for the product line.	✗	✓	✗	✗	✗
Creation of custom setups and templates for formulation and correction.	✗	✓	✓	✓	✓
Color formulation in full opacity, semi-opacity, transparency, and with Search & Correct technology.	✗	✓	✓	✓	✓
Color formulation using the product line.	✗	✓	✓	✗	✗
SMART automatic and manual formula correction for the industrial line.	✗	✓	✓	✓	✓
SMART automatic and manual formula correction for the product line.	✗	✓	✓	✗	✗
Formula dispensing with creation of the output file to interface with any dispenser.	✗	✓	✓	✓	✓
Storage of working and final formulas.	✗	✓	✓	✓	✓
Similar shade search available directly in the formulation and correction module.	✗	✓	✓	✓	✓
Queued formulation module with "background" working mode.	✗	✓	✓	✓	✓
Export of results in txt and Excel format.	✓	✓	✓	✓	✓



ColorWorkDesk is a project

**URAI**®

Innovative products for the color industry since **1948**