MERCK

TLC Explorer

Documentation System

Your Thin-Layer Chromatography (TLC) experience more convenient whether in analytical routine, method development, in-process control, or research.

The Life Science business of Merck operates as MilliporeSigma in the U.S. and Canada.

Supelco®
Analytical Products

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TLC Explorer
Documentation System

Thin-layer chromatography (TLC) is an easy, inexpensive, and flexible method for a quick chromatographic analysis.

Our new TLC Explorer Documentation System offers a superior instrumental solution for reliable TLC plate analysis and digitalized documentation system.

Shutter Slider

For flexible manual view

Inspection Window

For quick and safe visual check of chromatogram

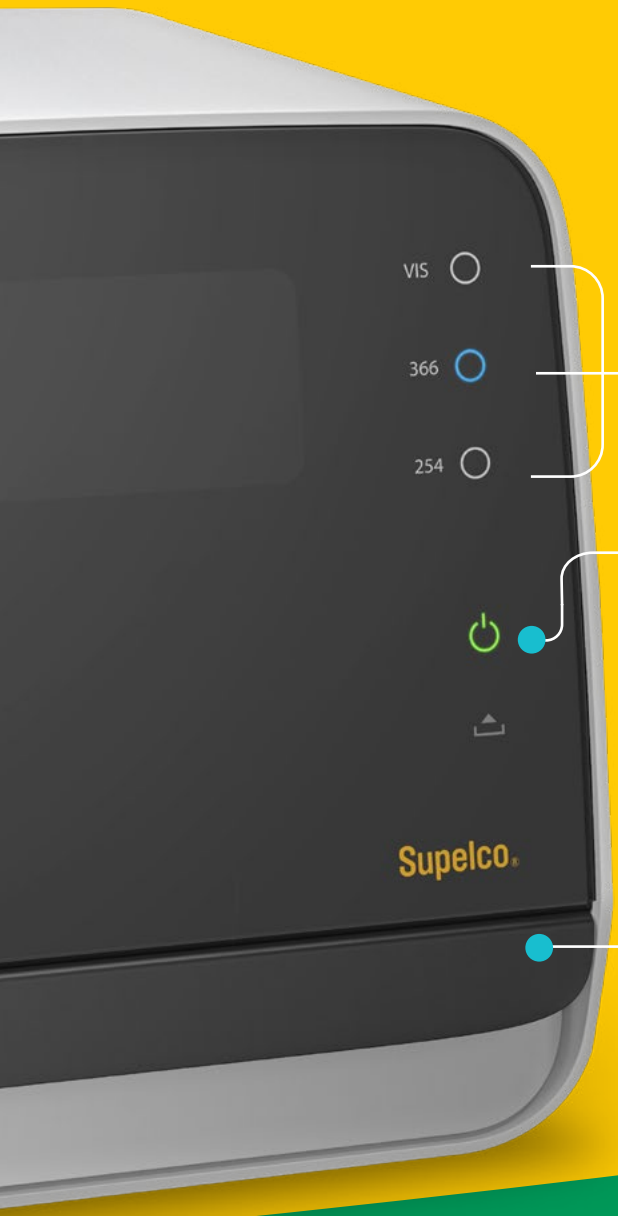
PATENTED DESIGN

Remote Use
Possible with power bank *(ordered separately)*

Compact Portable/Ergonomic

A user-friendly design featuring light-weight (10 kg), a compact footprint, and rounded edges.

Simple, Sophisticated, & Sustainable Design



Plug and Play

No installation service required – easy use of device (PC and WiFi antenna included). USB-C power connection for worldwide usage.

Touch-sensitive buttons for simple operation. Mercury free, long-lasting LED based illumination with three preset settings:

VIS (visible light), 366 nm, and 254 nm

Power on/off button

Safety Feature

No personal exposure to UV light during sample acquisition.

Drawer Unit

Soft-closing drawer with removable baseplate to facilitate ease of loading and cleaning.

Able to accommodate single or multiple TLC plates up to a 20 x 20 cm area.

Open Drawer Unit

Baseplate is placed on Drawer Unit. An alignment pin underneath the plate area helps the user to orient and align the baseplate correctly on the drawer.

Baseplate

For convenient insertion of multiple plates

Easy, Intuitive, & Reliable Software

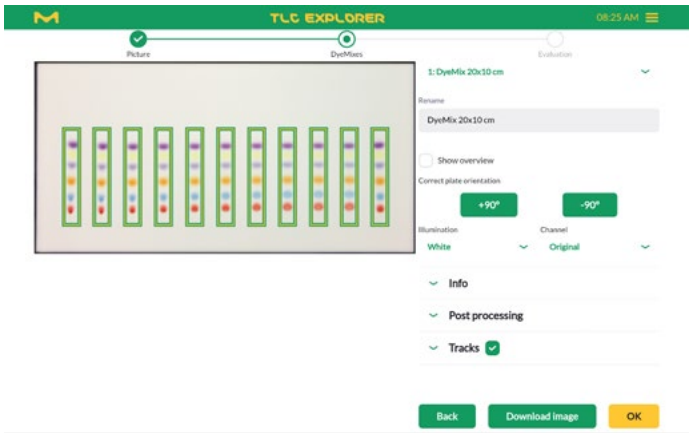
Good-bye taping in TLC plates into your paper notebook. Digitalizing your plate(s) and capturing results became that much easier. Whether it’s imaging, annotations, or quantitative analysis - the TLC Explorer has you covered.

Less is More

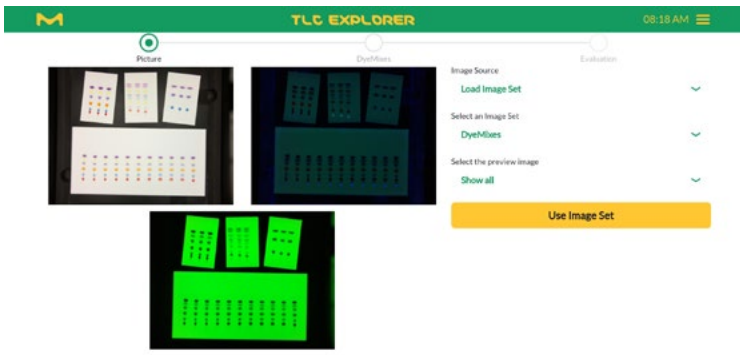
Simple image taking, annotation and evaluation in **3 processing steps**

- Automated track recognition and retention factor (Rf) calculation
- Automated crop and rotate function
- Simultaneous analysis of multiple plates up to 20x20 cm
- Fast measurements of tracks under three possible light settings: 254 nm, 366 nm, and Visible
- Automatic correction of background signals and inhomogeneous illumination
- Special imagining algorithm enabling picture quality comparable to high-end devices
- Quantification tool included
- Easy data export via USB

Automatic track finding



Multiple plate analysis



Comprehensive instruction and help provided in manual.

TLC Explorer
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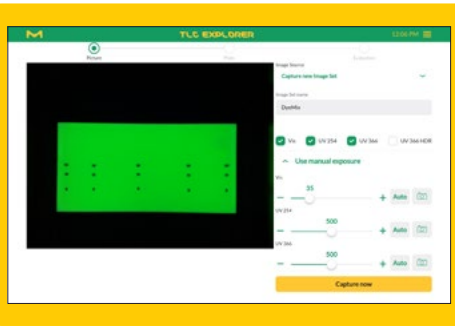
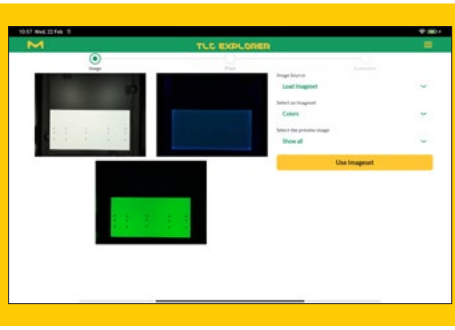
Digitalization is Key

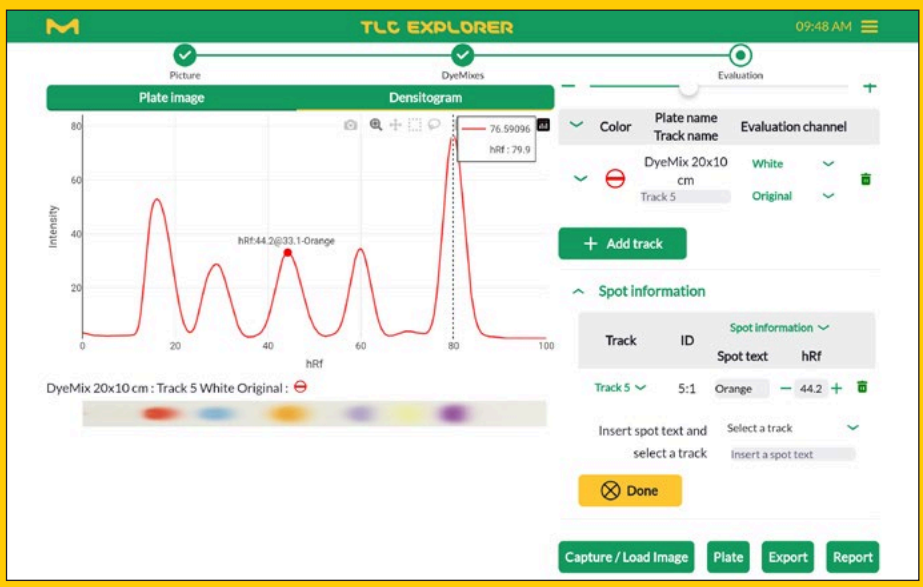
Easy and flexible connection to software can be used with most common devices such as a smartphone, laptop, or PC.





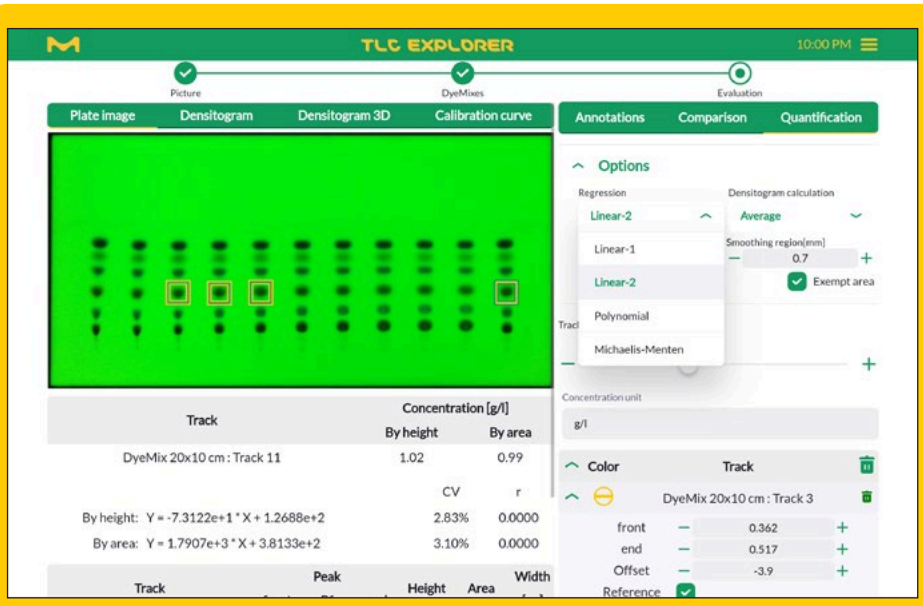
Capture images

Automatically or manually set exposure conditions for selected illumination types.



Plot and edit densitogram calculation and display

Evaluation process is based on video densitometric measurement performed on electronic images.

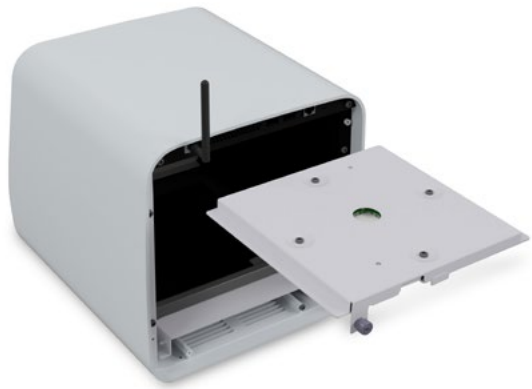


Quantitative analysis

To estimate the concentration of a substance, the spot it builds on a track is compared with the corresponding spots of one or more reference tracks.

Easy Maintenance and Simple Lamp Change

Single illumination unit containing the LEDs with an easy to replace plug-in design.



For safety reasons, the illumination unit (LEDs housing) if needing replaced requires a full replacement. To exchange, remove the back cover by unscrewing the four screws. The illumination unit is mounted on the rail above the measurement chamber.

Device measurements and specifications

Weight	Approx. 10.4 kg
Dimensions	374 x 312 x 290 mm length x width x height
(External) Power supply	USB-C Power Supply Unit / 65 W
Power supply	external power supply unit (HA65NM170) is provided with separate power supply cord(s) (1.8 m long) fitting type B, G, N, I, D, E/F plugs (the plug must comply with local regulations)
Power requirements	100 V – 240 V, 50 – 60 Hz for the External Power Supply Unit
Power consumption	Standard working condition: 18.8 W; standby mode: 0.83 W
Wavelength range	The TLC Explorer provides the standard illumination for detecting TLC plates • Visible light (VIS) • UV-C - WL: 254 nm • UV-A – WL: 366 nm
Camera	RGB sensor with 3280 × 2464 active pixel one pixel captures an area of aprox. 85 × 85 µm on TLC plate.
Measuring technology	Documentation system for TLC plates by using video densitometric measurement
TLC/HPTLC plates sizes	Usage of TLC plates with a size of 20 cm x 20 cm and smaller
Communication interfaces	• USB: 2 × USB-A (for directly connecting of an USB Stick) • Ethernet: LAN • WLAN IEEE 802.11 b/g/n (2.4 GHz)
Protection (IP) class	IP2X (for the main enclosure)
Ambient Condition: Temperature	• The device operates in a temperature range of 15°C to 40°C • The temperature for storage and transportation should be between 5°C and 40°C.
Ambient Condition: Relative Humidity	• The device operates in a humidity range from 20%RH to 80%RH, non-condensing conditions shall be ensured • The humidity for storage and transportation should be in a range from 15%RH to 95%RH, non-condensing conditions shall be ensured
Ambient Condition: Altitude	< 2000 m

Your Benefits

Fast
Safe
Reliable
Convenient

Application Fields

Screening, Day-to-day analysis, Matrix-rich samples, Method development for HPLC or Flash Chromatography, In-process control, Basic Research

Pharma, Biopharma & Phytopharma
API stability testing;
API candidate screening;
Herbal medicine screening;
Impurity analysis

Clinical Research and Diagnostic Labs
Metabolite testing;
Biomarker analysis

Chemical Industry (e.g. Cosmetics)
In-process control;
Screening of cosmetic compounds;
Impurity cosmetic analysis

Academia
Basic research;
Compound development

Food & Beverage
Quality control;
Stability testing;
Food additive analysis;
Food contaminant analysis

Forensic
Screening for drugs and toxic compounds;
Detection of explosives

Environmental
Water, soil, waste water analysis;
Contaminant analysis (e.g. pesticides, hormones)

Ordering Accessories and Replacement Parts

Article No.	Name	Description
1.52610.0001	TLC Explorer	TLC Documentation System
1.52613.0001	Illumination unit	Replacement part which is only needed in case a light source in your TLC Explorer has broken. The unit houses LEDs and optics for all illumination types, i.e. visible light as well as UV light, and can only be exchanged as a whole.
1.52612.0001	Baseplate	An additional Baseplate can simplify and speed up the workflow, since one Baseplate can be prepared while a second one is recorded in the TLC Explorer.
1.52611.0001	Power bank	Powers the TLC Explorer independent of a power grid – e.g. remote use
1.52618.0001	Dust cover	Replacement cover to protect your TLC Explorer against dust.

Supelco®
Analytical Products

We have built a unique collection of life science brands with unrivalled experience in supporting your scientific advancements.

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55453 04/2024

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