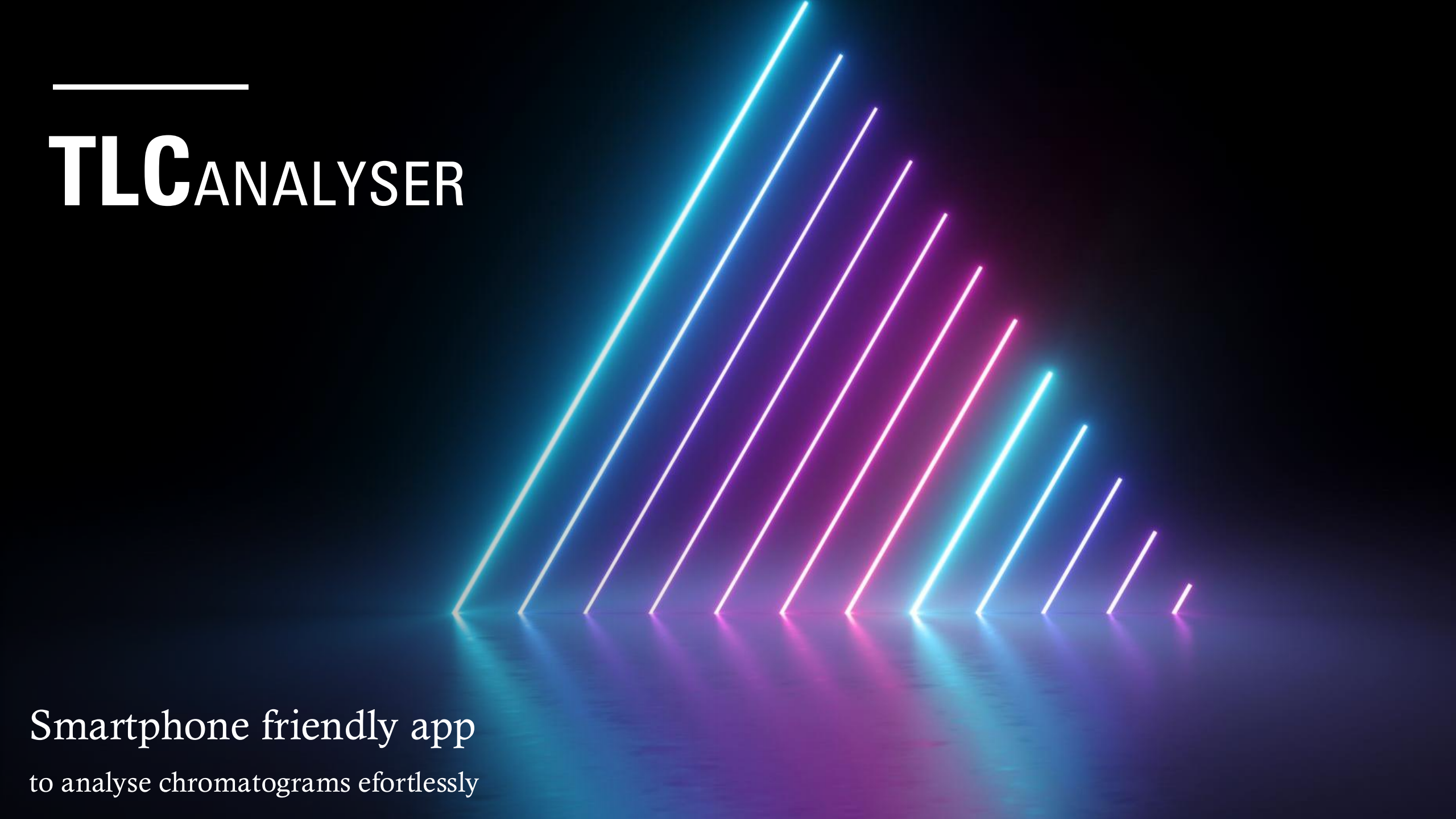

TLCANALYSER
Smartphone friendly app
to analyse chromatograms efortlessly

Ilościowa Analiza TLC

Analizuj swoje płytki Thin Layer Chromatography (TLC) z precyzją.

TLC Wiki Dane testowe

Start app

Read instruction

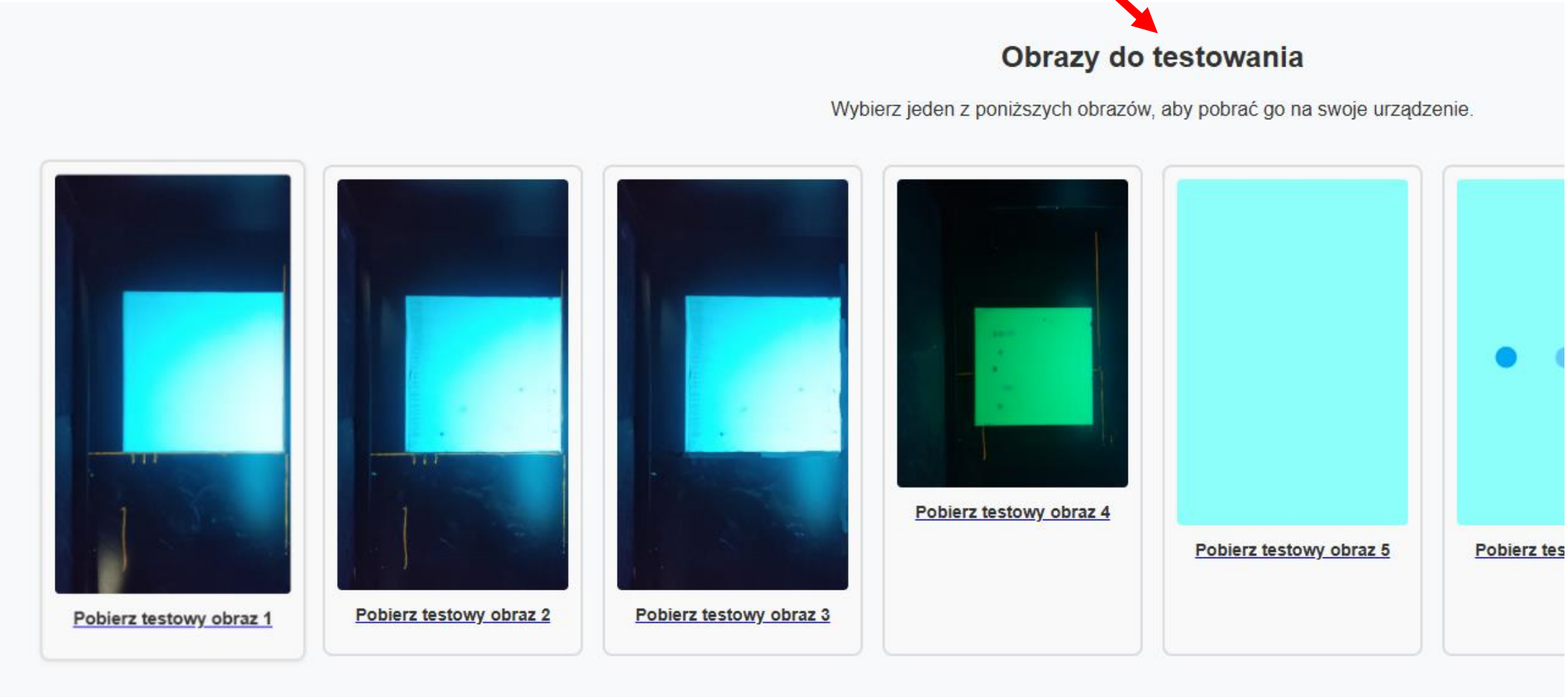
See / download example data

Witamy w aplikacji do analizy TLC

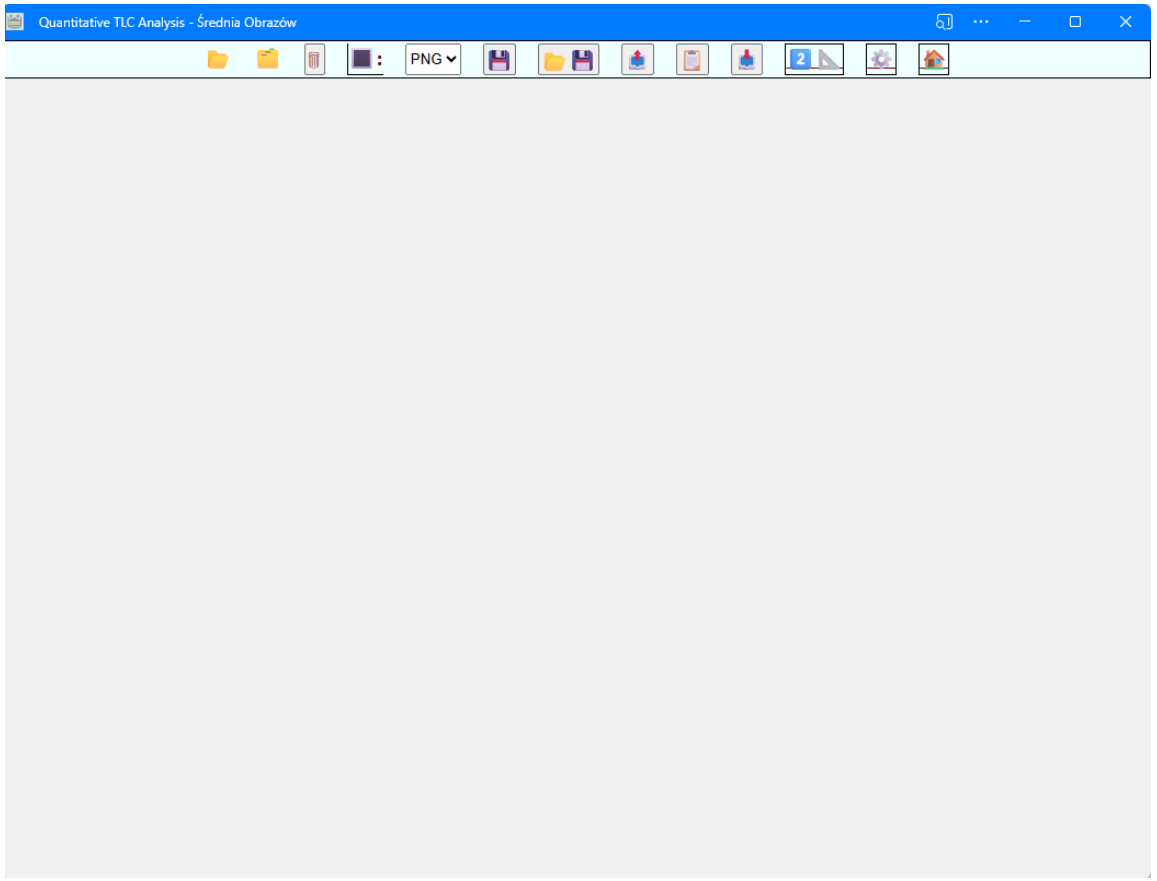
Przesyłaj i analizuj obrazy płytek TLC w prosty sposób.

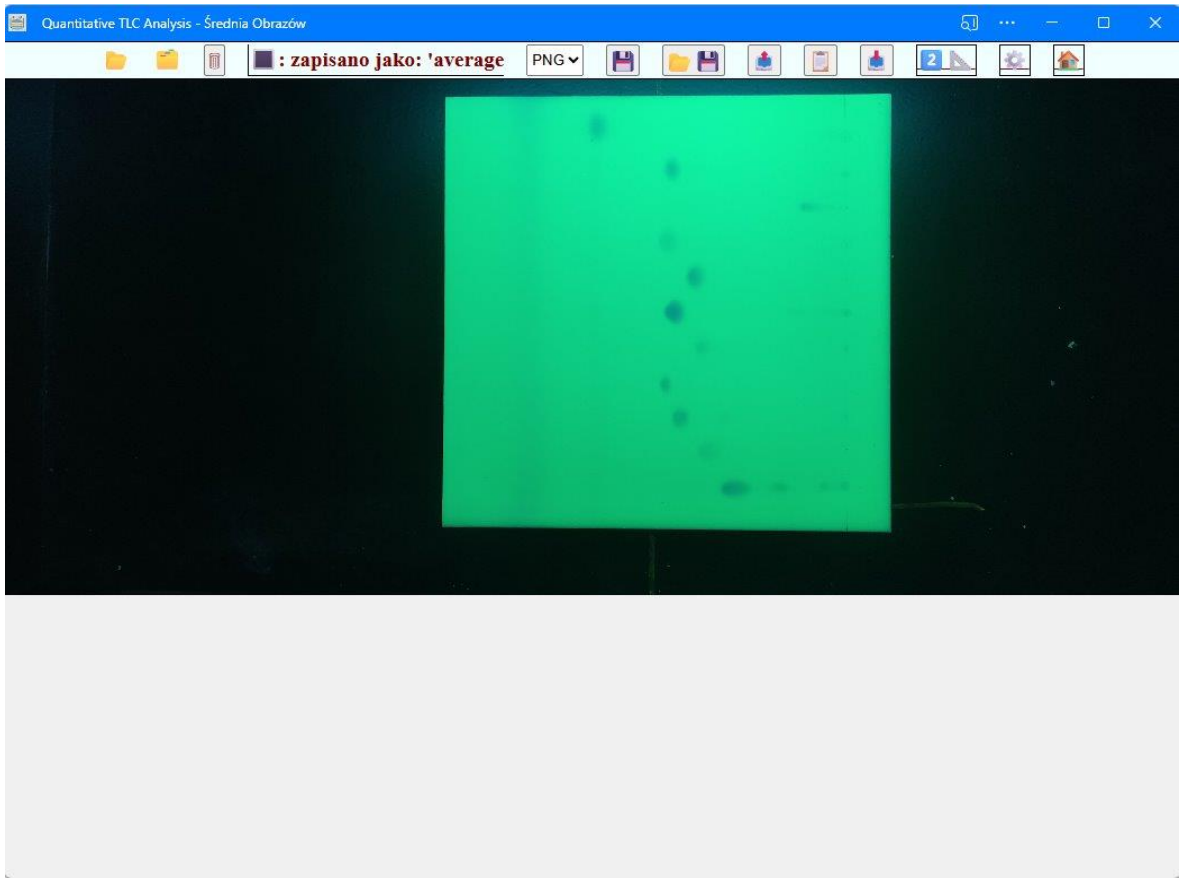
Images for testing

Choose one of the images below to download it to your device.

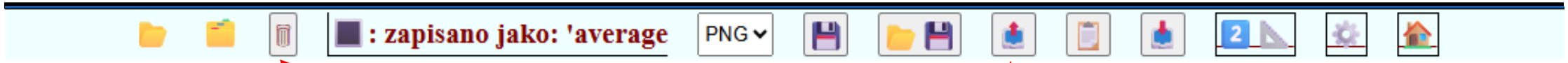


BEFORE (LEFT) & AFTER (RIGHT) LOADING & AVERAGING IMAGES





STEP 1 – load & average images



Load all files from chosen directory

Load manually selected files

Loades all images and do per pixel averaging

Deletes all images from choosen directory

Console showing processing info

Choose file format when saving

download image

save image to local space

Copy image to clipboard

paste image from clipboard

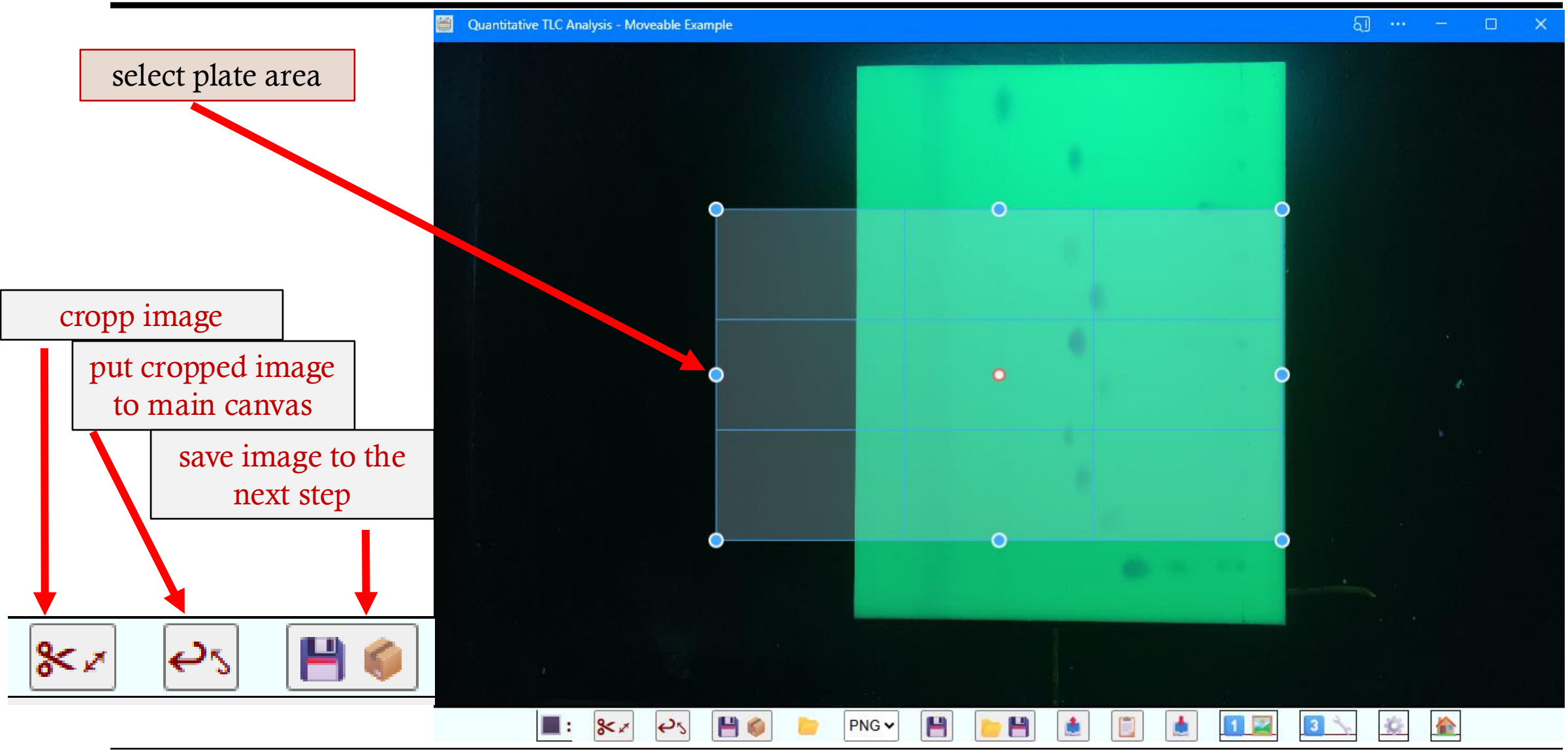
Share image via other apps

go to next step "image cropping"

go to the settings tab

go to the home tab

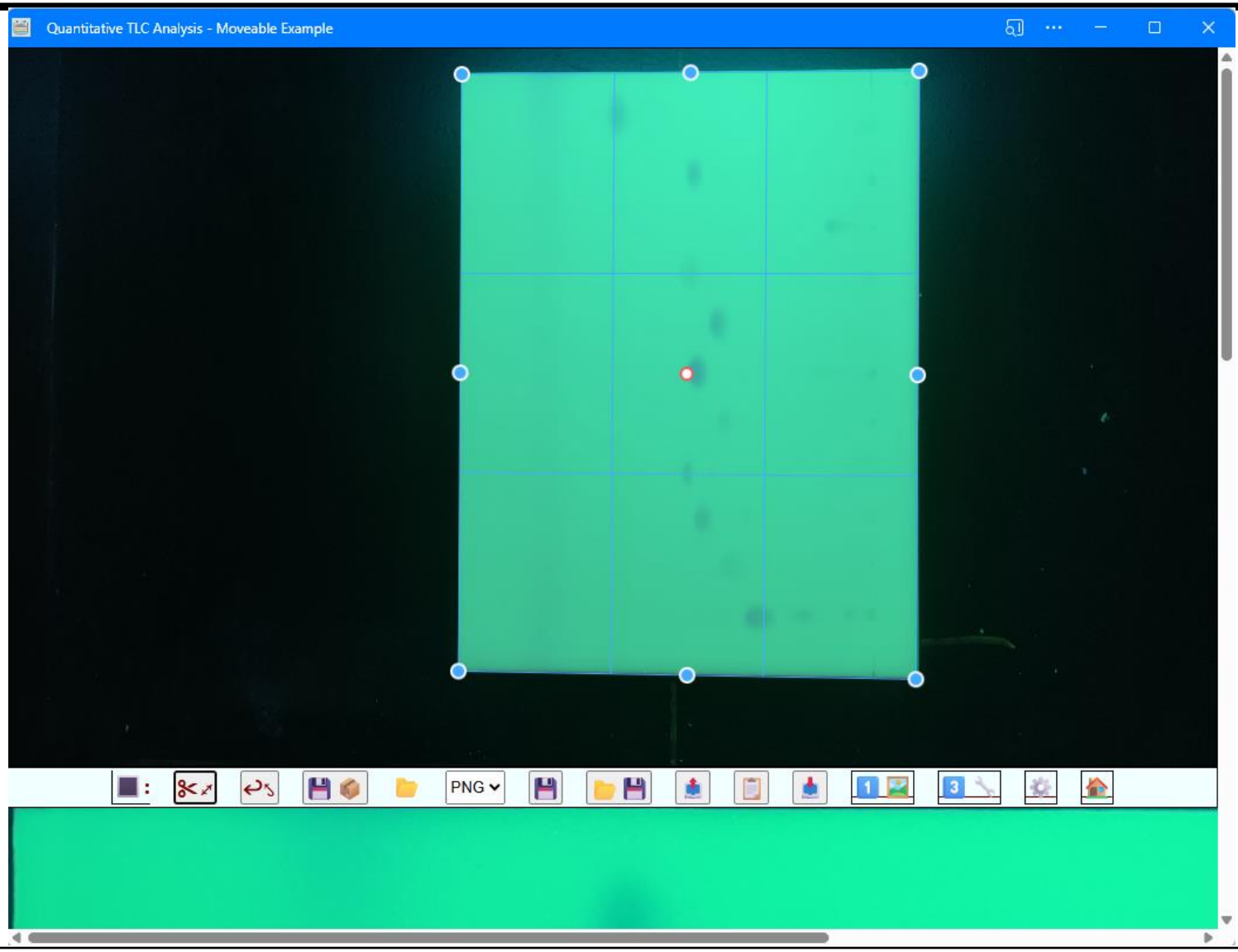
STEP 2 – cropp & warp image



STEP 2 – cropp & warp image

: zapisano jako: 'warped

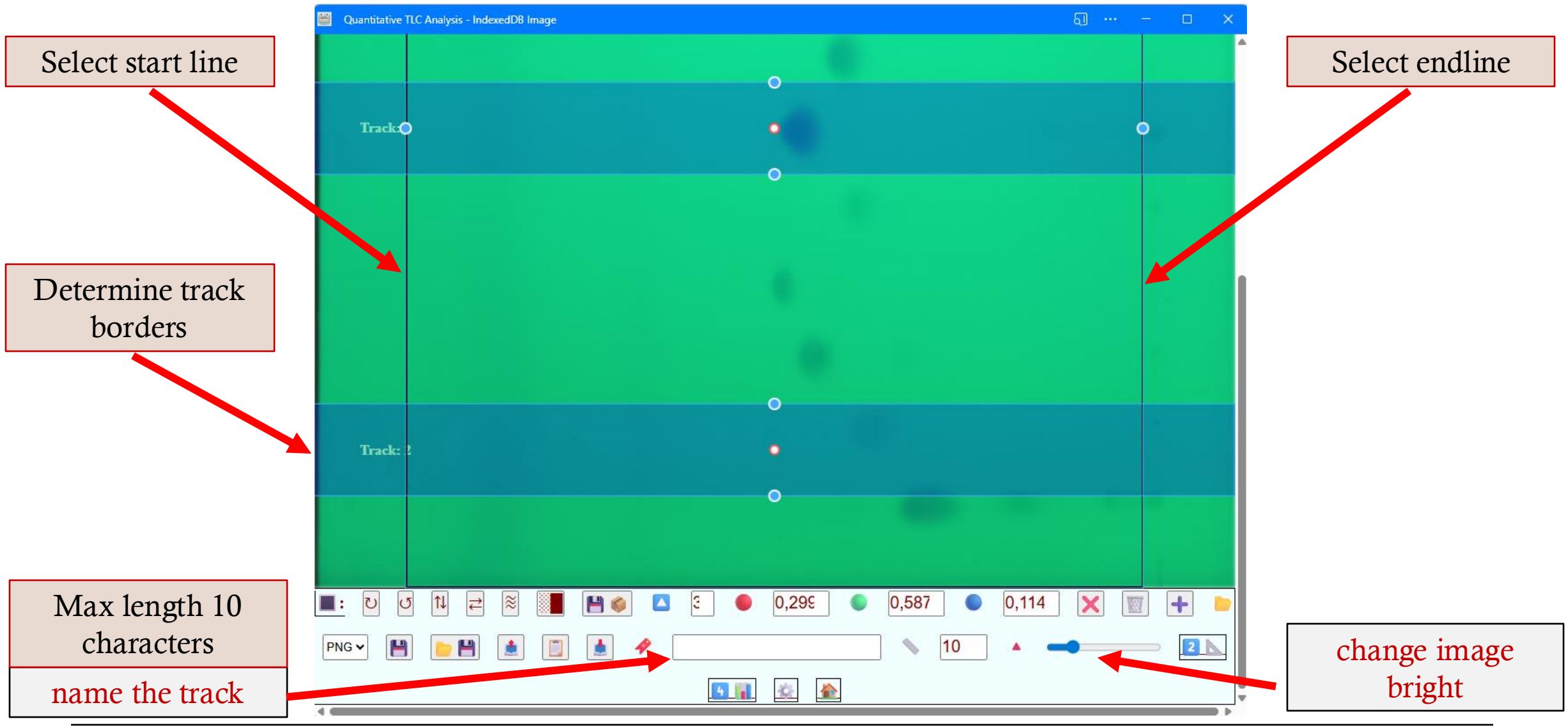
image is succesfully saved to the next step if console shows this



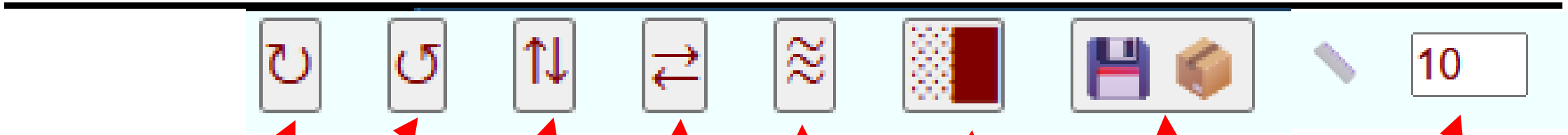
Non accurately Cropped border

1:1 scale cropped image

STEP 3 – select tracks & recreate background



STEP 3 – select tracks & recreate background



Rotate image clockwise

Rotate image counter clockwise

flip image vertically

Flip image horizontally

Reconstruct background

Image to grayscale

Save image to internal storage

plate length in centimeters

STEP 3 – select tracks & recreate background

degree of polynomial reggression

< 3 – fast but less accurate

3-4 – balanced

>4 – accurate but slow

red channel

green channel

blue channel

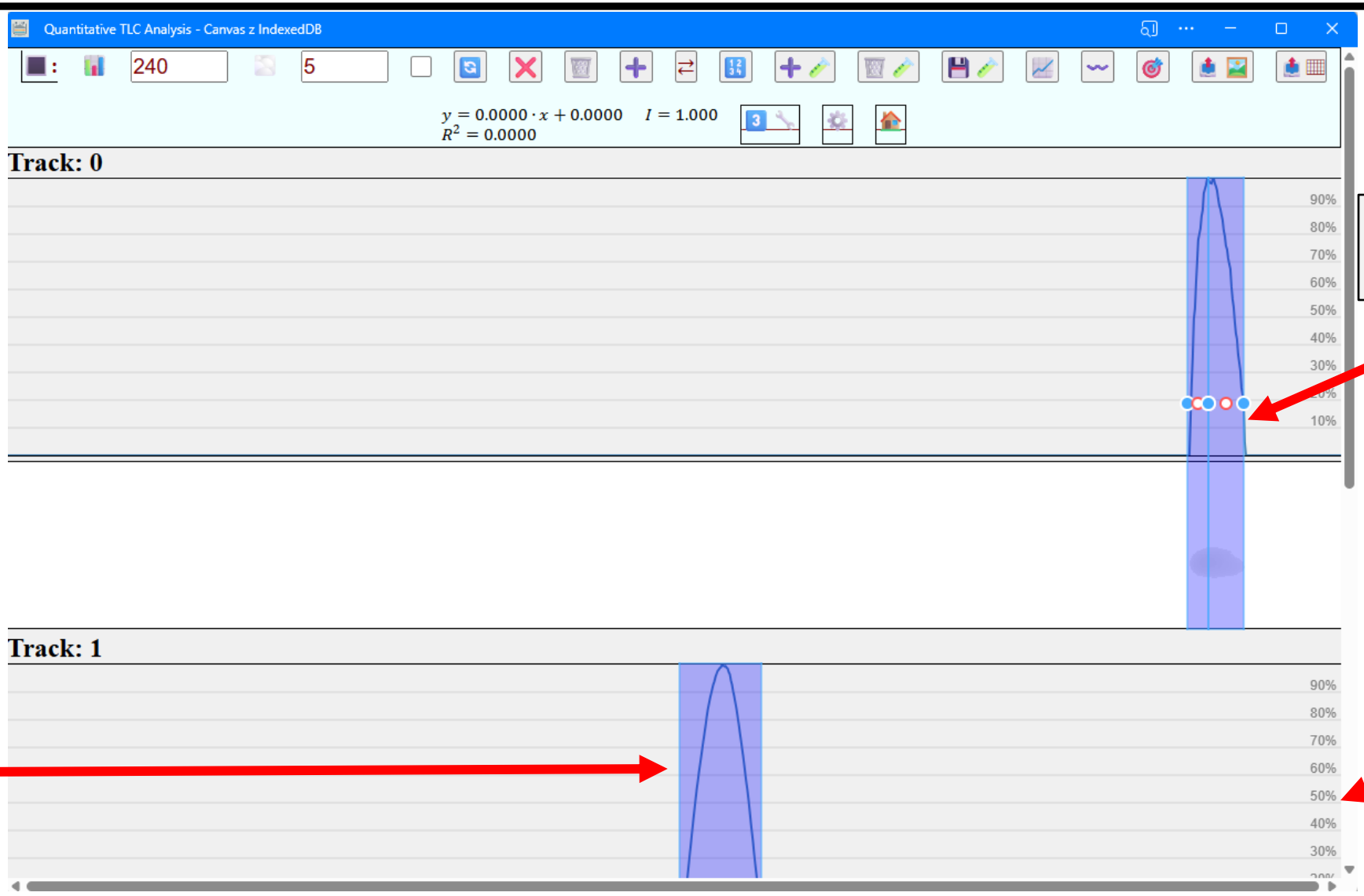
color channel weight

Unselect track

Delete

Add new track

STEP 4 – final results



track name

chart

image of track

click on peak to see calculated parameters

Determine peak borders

% of maximal peak on this track

STEP 4 – final results

Concentration curve coefficients

$$y = 0.0000 \cdot x + 0.0000$$

$$R^2 = 0.0000$$

$$I = 1.000$$

Index of linearity
1 – perfect linearity
0 – no linearity

Point of reference
Concentration weight Used to normalise different photography conditions

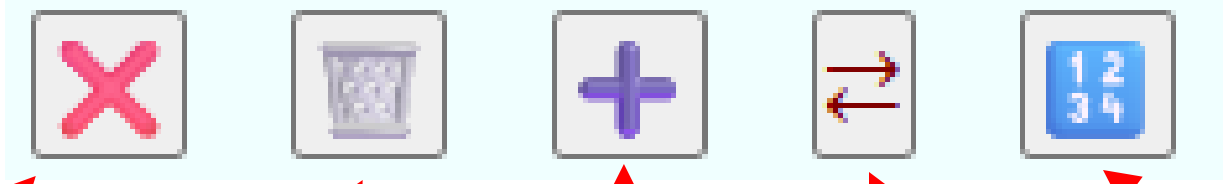
STEP 4 – final results

Exclude pixels brighter than
240 is optimal in most cases
Lower values are not taking into account low intensity spots
Upper values includes noise

Blurr kernel size
WARNING
Blurr is only used to set the boundaries of peaks
and only applied to non 0 values
for calculations raw (not blurred) data are used

Show/hide blurr on chart

STEP 4 – final results



Unselect track

delete selected track

add new track

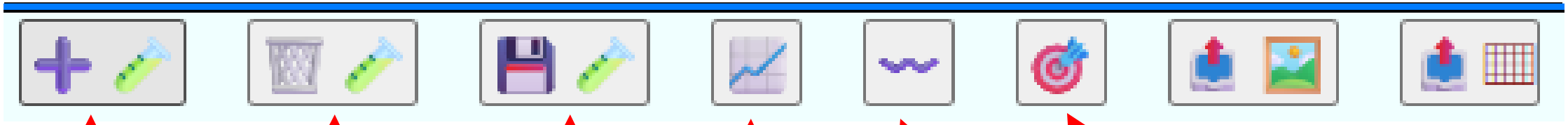
show / hide preprocessing preview

See :
- Grayscaled image
- Reconstructed background
- Normalised image

Recalculate peaks data

Use when manually changed peak's borders

STEP 4 – final results



delete all concentraions from curve data

Create concentration curve

concentration reference

Add concentration to form concentration curve from selected peak

manually saves peaks parameters

creates normalisation curve

EXPERIMENTAL

Put on tlc plate solid flat thing and capture photo

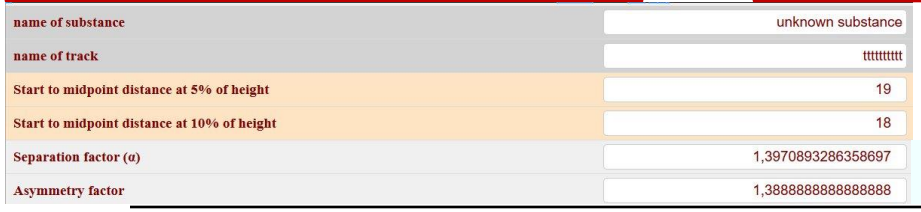
it will serve as reference when different phones and photograph chambers used

EXPERIMENTAL

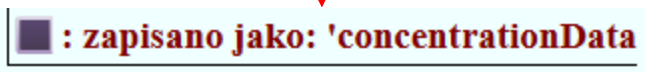
used when after light equalisation there are still lightening intensity differences

Type knowned concentration first in peak parameters

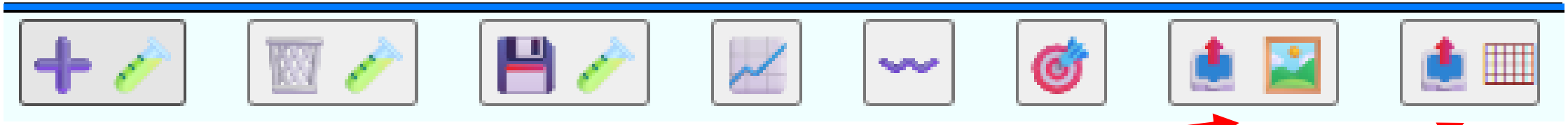
When ready this text shows in console



name of substance	unknown substance
name of track	ttttttttt
Start to midpoint distance at 5% of height	19
Start to midpoint distance at 10% of height	18
Separation factor (α)	1,3970893286358697
Asymmetry factor	1,3888888888888888



STEP 4 – final results



Copy to clipboard screenshot of all charts

Unselect before all peaks

opens new window with tables with parameters

Only parameters choosen in settings will be included

from new window select content manually and copy

You can paste it to all office software easilly

name of substance	unknown substance
name of track	ttttttttt
Start to midpoint distance at 5% of height	19
Start to midpoint distance at 10% of height	18
Separation factor (α)	1,3970893286358697
Asymmetry factor	1,3888888888888888

Edit param value

STEP 4 – final results

data for concentration curve	Surface: 209975 **Concentration: 12**
data for normalisation curve	Y: 0.5 X: 0.5278514588859416 Surface: 21699 **Concentration: 13** Y: 0.8501997336884154 X: 0.5994694960212201

STEP 5 – SETTINGS

Refresh app cache

select params included in report

Unselect all params

Number of parameters decimals

RF factor treshold for substances recognition

List of substances to automatic recognition basing on RF