

# TLC: Old friends, new possibilities



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## Overview

Quality assessment of drugs is a valuable tool for both users and harm reduction NGO's. Chemical analysis of the samples is a crucial feature; different techniques are available, but not all are equally adequate. Thin Layer Chromatography (TLC) is a method that allows separation and identification of pure compounds of a mixture. Its characteristics make it very attractive for a drug checking service: TLC is cheap, quick, transportable and gives substantially more information than colorimetric reagents like Marquis.

## Who are we?

Energy Control is a peer-to-peer, harm reduction project targeting alcohol and drug users within their own recreational settings. Since 2005, we have analyzed more than 12.000 samples using TLC, both in stationary and on-site settings. A collaboration with IMIM-Hospital del Mar Research Institute allows methodology validation and constant access to more sophisticated analytical techniques for the specific identification of new adulterants and drugs.

## How does it work?

### A) PREPARATION OF THE SAMPLES:

*Dissolve 1-5mg of the sample in Methanol and agitate.*



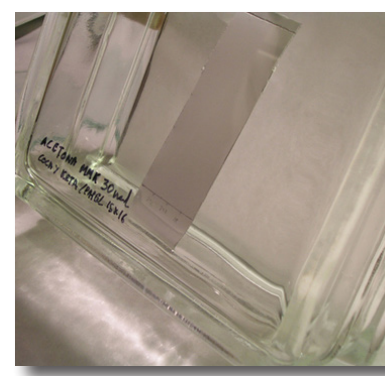
### B) SPOTTING THE SAMPLES AND THE STANDARDS:

*Apply 1-3 µg of both standards and samples to a TLC plate with capillary pipetting.*



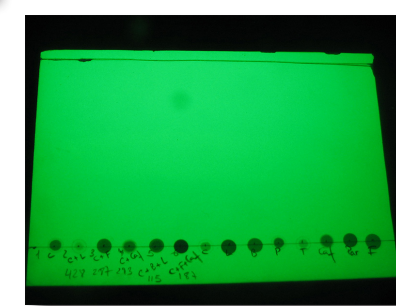
### C) ELUTION:

*Resolve the plate with the desired eluent (MeOH/NH<sub>3</sub>, MeOH or Acetone).*



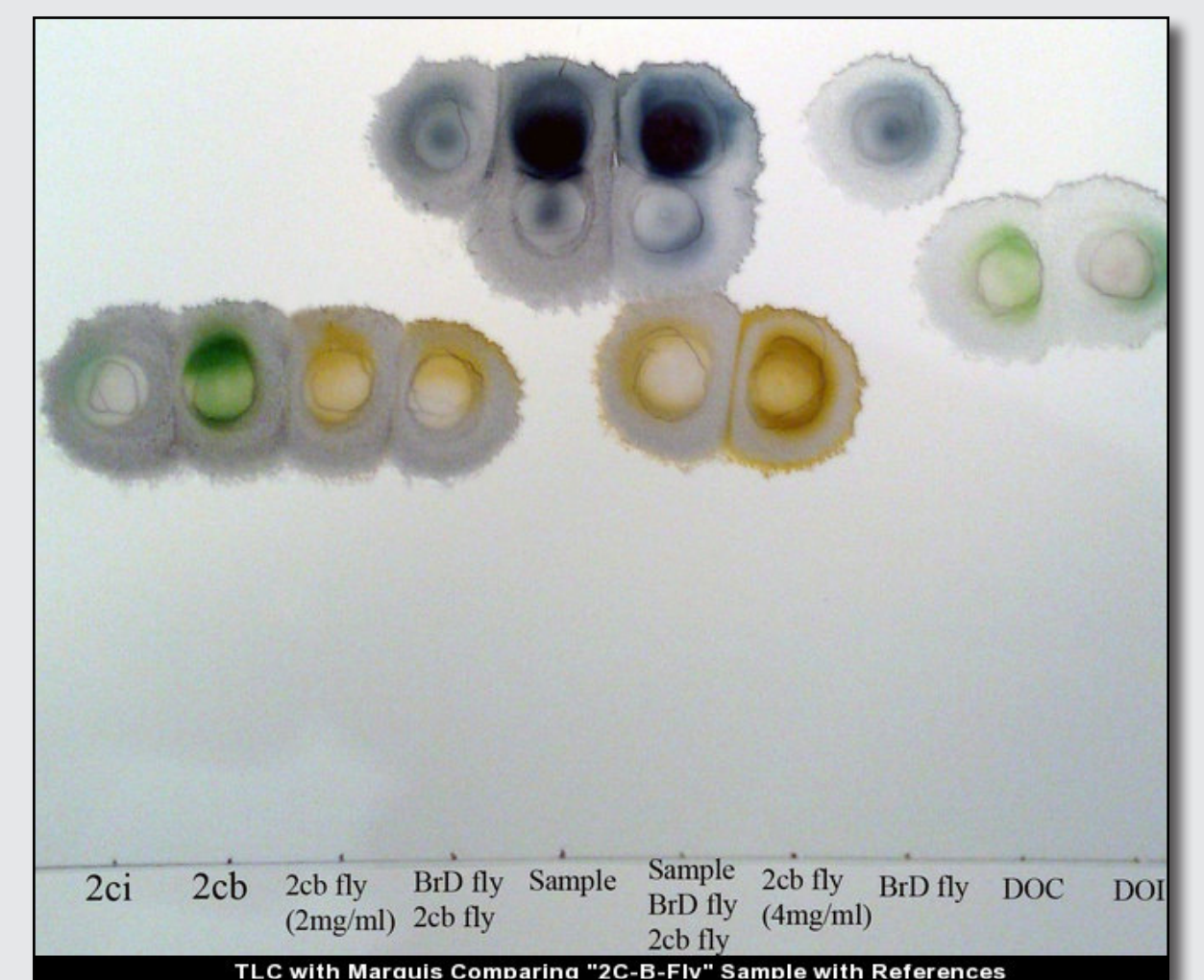
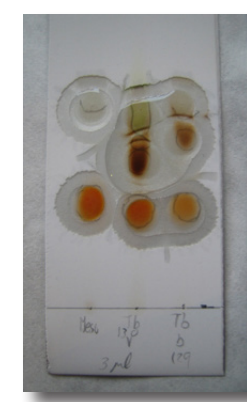
### D) INTERPRETATION OF RESULTS

*Dry and interpret the plate through UV light.*

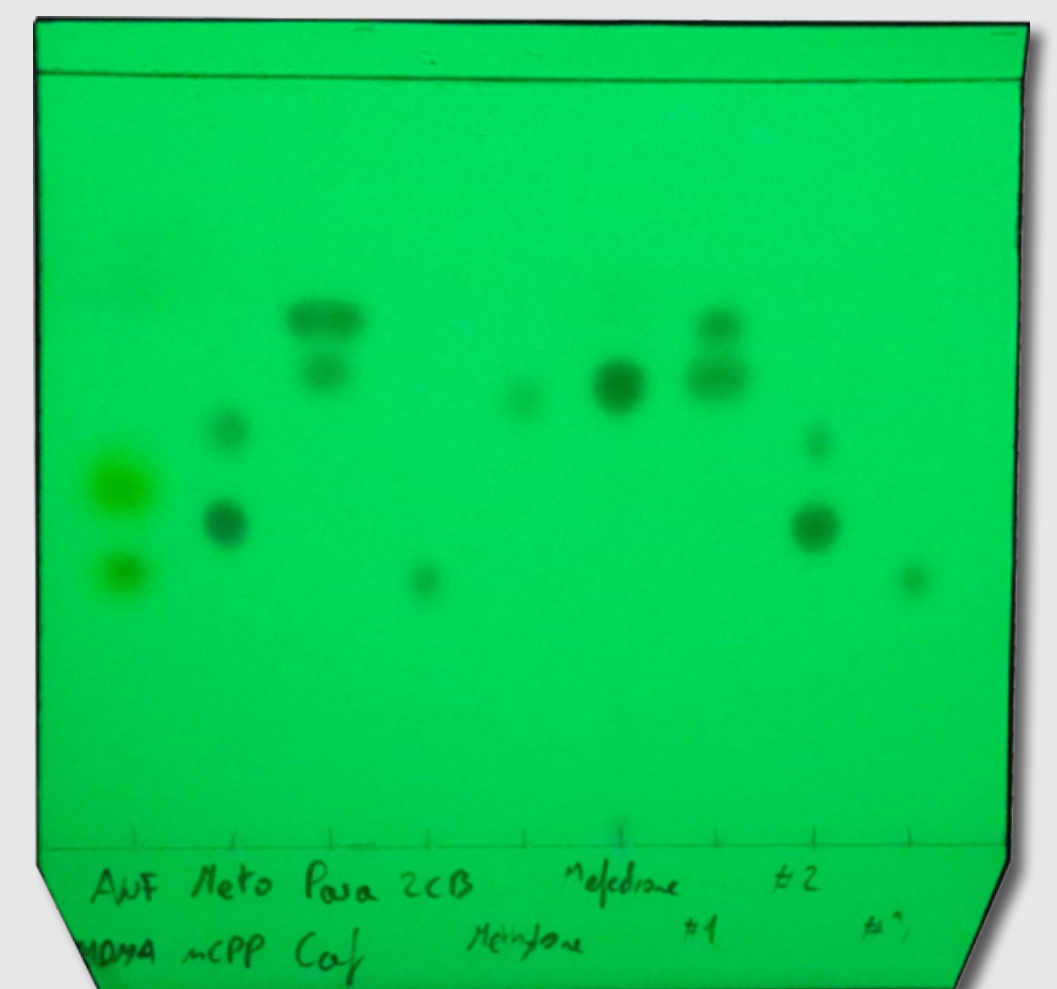


### E) CROSS-TESTING

*Cross-test with colorimetric tests.*

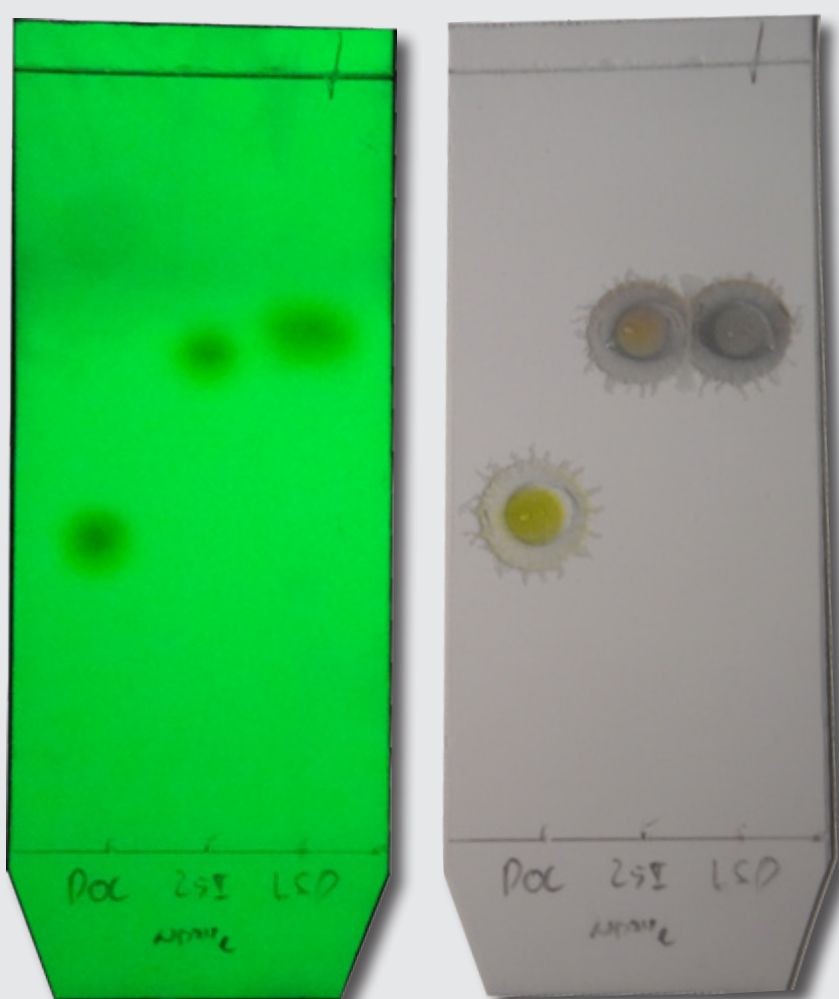


TLC with Marquis Comparing "2C-B-Fly" Sample with References  
Bromodragonfly vs 2CB-fly

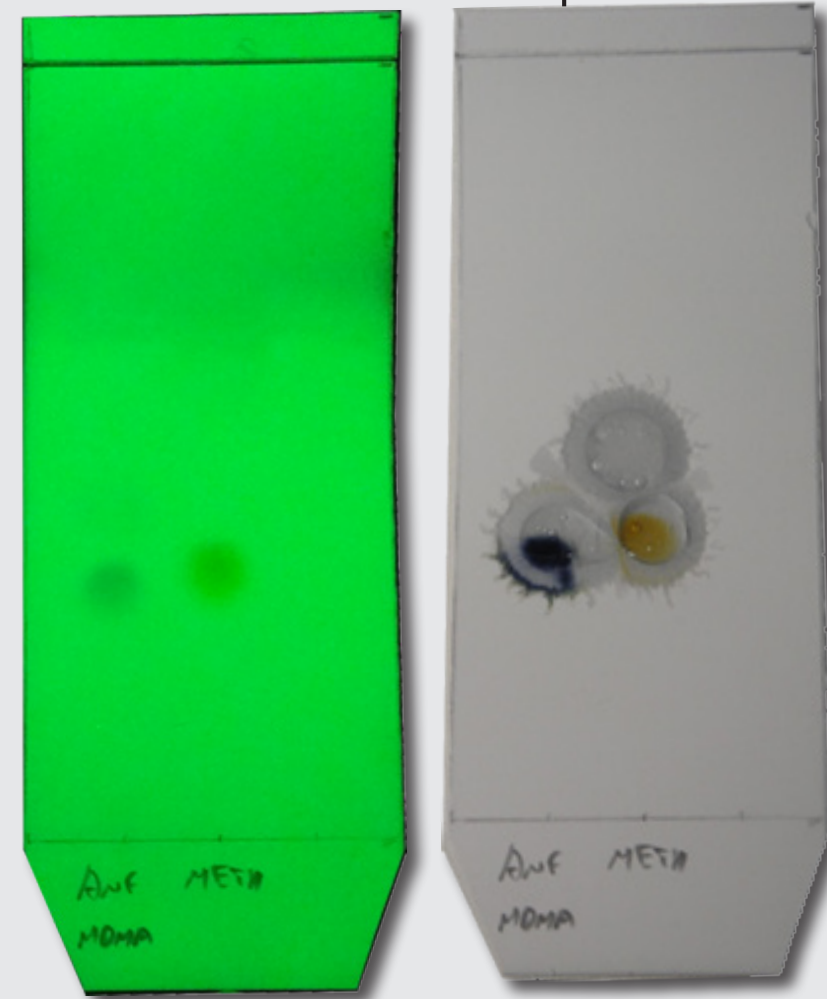


Common PEA's and their most habitual adulterants in MeOH/NH<sub>3</sub>

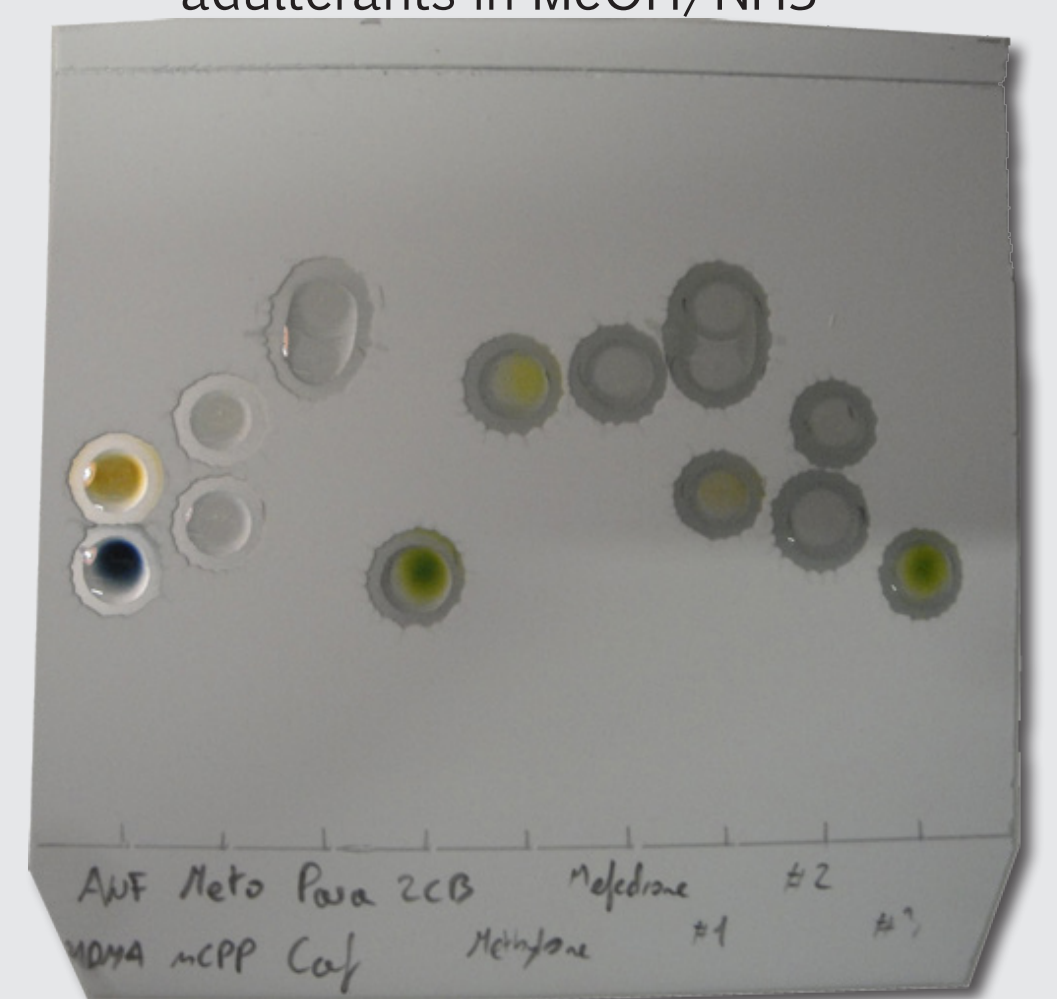
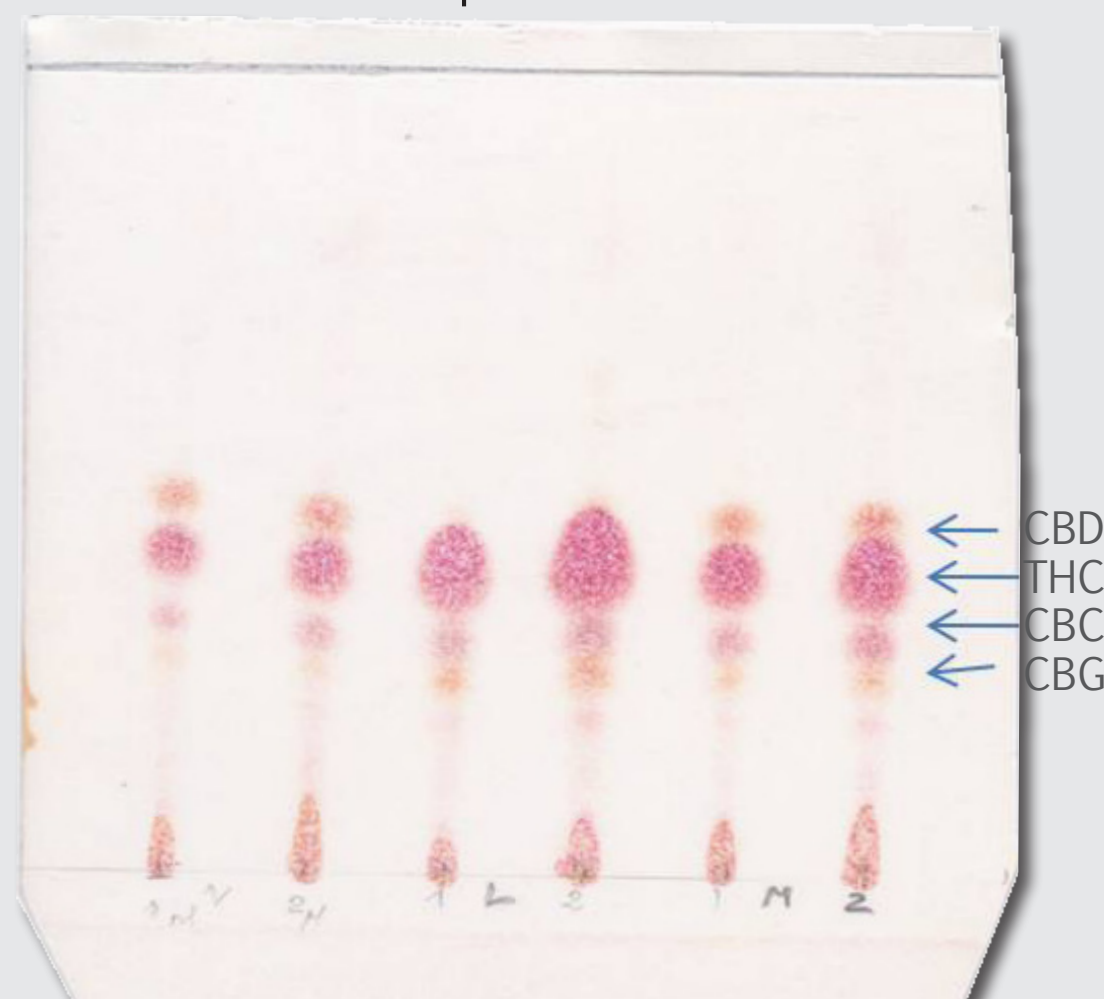
NBOME series, DOx and LSD



Diferentiating MDMA from meth with marquis



Cannabis identification and semiquantification



## What about money?

### IMPLEMENTATION:

3.000 - 4.000 €

### MAINTENANCE:

500 - 2.000 €/YEAR (1-3 € PER SAMPLE).\*

\* WORKFORCE COSTS NOT INCLUDED.

## Why TLC?

- CHEAP.
- TRANSPORTABLE AND QUICK.
- ALLOWS PARALLEL ANALYSIS AND MIXTURES SEPARATION.
- NO NEED FOR TECHNICAL HARDWARE.
- FAIR SPECIFICITY FOR COMMON SUBSTANCES AND ADULTERANTS.
- STANDARDS ARE NEEDED FOR CALIBRATION.
- NEED FOR COMPLEMENTATION WITH HIGHLY RELIABLE TECHNIQUES.
- ONLY ALLOWS SEMI-QUANTIFICATION.
- NEED FOR EXPERIENCED STAFF.
- NOT SUITABLE FOR RELIABLE IDENTIFICATION OF NPS.

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