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/NH3, MeOH or Acetone).

D) INTERPRETATION OF RESULTS
Dry and interpret the plate through UV light.

E) CROSS-TESTING
Cross-test with colorimetric tests.

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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