Analytical Techniques

Scheme 1:

- Positive colour tests (spot tests)
- GC/FID/NPD, GC-MS, GC-IRD (qual)
- HPLC or GC-FID (quant)
- Independent sampling requirement is satisfied as spot test, GC-MS and HPLC all need separate sampling
- MA, amph, MDMA, MDEA, heroin

Scheme 2:

- Negative colour tests (spot tests)
- GC-MS, HPLC-MS, GC-IRD, FT-IR
- GC-FID/NPD
- HPLC or GC-FID (quant)
- PMA, benzodiazepines, cocaine, GHB, steroids and ephedrine.

Scheme 3:

- Identification and Quantitation of Lysergide
- TLC – 2 methods
    - UV irradiated and non-irradiated
- GC-MS
- HPLC (quant)

Scheme 4:

- Identification and Quantification of THC
- TLC – one system only
- GC/FID/MS
- HPLC (quant)

Scheme 5:

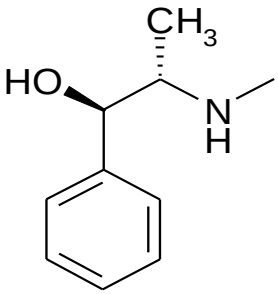
- Analysis of residues or traces
- Solvent extraction and concentration under nitrogen
- 1. GC-FID/NPD or TLC
- 2. GC-MS or GC-IRD

Isomer - each of two or more compounds with the same formula but a different arrangement of atoms in the molecule and different properties.

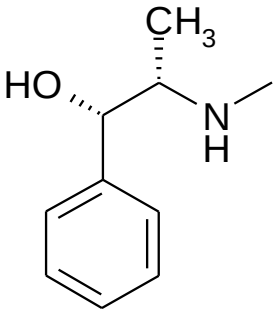
- Stereo isomers of the same structure give the same MS results (Ephedrine and Pseudoephedrine)
- Closely related structures /give very close GC retention times (phentermine and MA)

Isomer example 1:

Ephedrine and

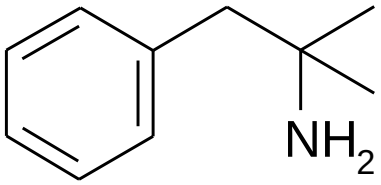


Pseudoephedrine

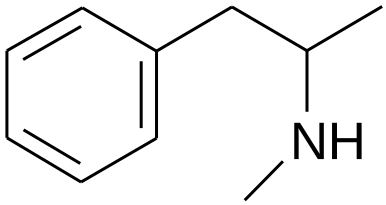


Isomer example 2:

Phentermine and



MA



Clan Labs: a covert illegal process that produces a controlled substance through the modification of raw materials.

Processes: Extraction, conversion, synthesis, and packaging.

1. Extraction- Some pharmaceutical preparations contain a controlled substance. The substance of interest is extracted from the preparation.
2. Conversion - A chemical reaction that adds to, or takes away, a portion of the original compound, leaving the skeleton of the compound unchanged.
3. Synthesis - A chemical reaction or series of chemical reactions in which molecules or parts of molecules are combined to create a new molecule.
4. Packaging – and subsequent distribution.