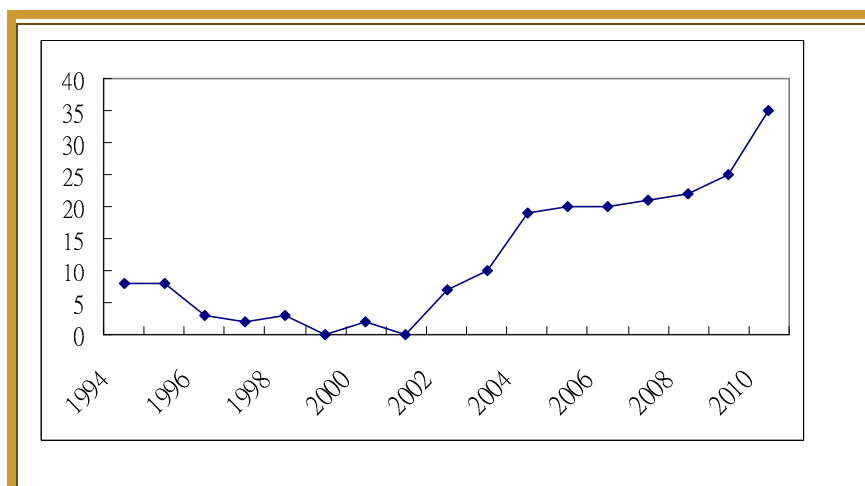


IV. Clandestine Lab Analysis

A. Methamphetamine clandestine lab analysis:

Methamphetamine has been abused seriously for a long time in Taiwan. The price of methamphetamine has soared because the supply fell short of demand, and this led to a large number of the methamphetamine clandestine labs emerging recently in Taiwan.



Distribution of Amount of Methamphetamine Clandestine Labs seized by MJIB, 1994-2011

There are about 10 synthetic methods such as EMDE method, Red Phosphorus method and P2P method for methamphetamine production found in Taiwan. The precursors including ephedrine, pseudoephedrine, phenylacetone, benzaldehyde, phenylacetic acid and phenylacetonitrile are used for methamphetamine production in the clandestine labs in Taiwan.





Methamphetamine Clandestine Lab (EMDE method)



Methamphetamine Clandestine Lab (Red Phosphorus method)

B. (Pseudo)ephedrine clandestine lab analysis:

All of the (pseudo)ephedrine clandestine labs seized in Taiwan are responsible for purification of (pseudo)ephedrine. The precursors including tablet (or capsule) for cold and ephedra are extracted by organic solvents and the purified (pseudo)ephedrine can be used for further methamphetamine production.



Ephedra

Capsules for cold

Tablets for cold

C. Ketamine clandestine labs analysis:

The precursors including 1-hydroxycyclopentyl-(o-chlorophenyl) ketone- N-methyl-imine, bromo-(o-chlorophenyl)-cyclopentyl ketone and (o-chlorophenyl)-cyclopentyl ketone are used for manufactures in the ketamine clandestine labs. A great many ketamine clandestine labs emerged until 1-hydroxycyclopentyl-(o-chlorophenyl) ketone-N-methylimine, and (o-chlorophenyl)-cyclopentyl ketone are controlled in Taiwan. Most of ketamine in Taiwan are smuggled at present from Mainland China, India, and Malaysia.



Ketamine Clandestine Lab

D. MDMA clandestine lab analysis:

The precursors including safrole, isosafrole and piperonal are used for manufactures in MDMA clandestine labs in Taiwan. The number of MDMA clandestine labs is less than that of methamphetamine clandestine labs because of more complicated techniques. Most MDMA in Taiwan are smuggled from Europe.



MDMA Clandestine Lab

E. Instrumental analysis:

GC/MS, Headspace GC/MS, Nuclear Magnetic Resonance (NMR), ICP/MS and Ion Chromatograph (IC) are frequently used for clandestine labs analysis in this laboratory.



GC/MS

Headspace GC/MS



ICP/MS

Ion Chromatograph