

“Drugs in Sewage Treatment Plant”

The testing of wastewater for the presence of drug metabolites (that get passed through the body and into urine) reveals levels of drug use and drug preferences across a tested community.

Considerable quantities of cocaine, heroin, cannabis and ecstasy, were scanned in the (ΕΥΔΑΠ) Water Supply Company Of Athens and Piraeus, in their sewage treatment plant located in “Psitalia”.



Liquid Sewage Treatment Reservoir

(Source : cyberbia organization)

Based on a statement made by the president of ΕΥΔΑΠ ,Professor Themistocles Lekkas of the Aegean University ,“The concentrations of the well known substances are substantial”. In cooperation with Dr. K Thomaidis assistant professor at the University of Athens ,a research project was conducted, and their concentrations as “daily substances used were determined” . The waste by-products were referred to as “emerging pollutants”.

Table: Drugs found in liquid sewage

<u>Substance</u>	<u>Test Results- in grams/day</u>
Cocaine	500 – 600
Heroin	1000 (1Kg)
Cannabis	2000 (2 kg)
Ecstasy (pills)	10 - 20

Notes :

- (1) The concentrations of cocaine and ecstasy increased on week ends.
- (2) Now that cannabis use and cultivation of marihuana for self use in Greece has been depenalized , one could expect a substantial daily increase (?)

According to the water company , the target of the subject research was to determine the actual contents of the liquid sewage and to further determine and develop 3rd degree treatment methods to destroy pollutants in order to render the treated water as re-usable . The subject of emerging pollutants interests the world health community especially in the countries that are using treated waste water as human potable water . Subject findings were presented at the 12th International Conference on Environmental Science and Technology in Rhodes Greece , September 2011 .

Currently reliable analytical methods are available to determine drug use by urban populations based on testing of sewage water .Therefore similar measurements of abused narcotic substances have been made in liquid waste products in the USA , Italy ,Germany ,etc . Studies have also shown that in urban sewages , drugs and hormones were detected in concentrations that can affect humans , animal life through improper sludge disposal and aquatic life .

Our comments:

A word of praise is indeed necessary to the people that researched the above project . It would be interesting to repeat the work after ,lets say 1 year , to determine how use was affected after depenalizing soft drugs .

The testing of wastewater at the community level is easy and relatively an inexpensive way to measure drug use in any given community. It is a statistical valuable alert to the authorities that drug use in the tested community could be increasing.

It would be impractical to consider its use as a tool for determining substance abuse on a smaller scale ,i.e. workplace safety based on its sewage contents. Additionally it cannot place individual use responsibility .

There is substantial bibliography in the internet for further information .