

ABSTRACT

Analysis and Epidemiology of Drugs of Abuse

in Trinidad

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Methods for the preliminary screening of blood and urine specimens for evidence of cocaine and cannabis abuse are presented. A modification of the Diagnostic Products Corporation's Coat-A-Count Cocaine/Metabolite radioimmunoassay method was developed. This resulted in improved specificity and sensitivity in the screening of blood samples for the presence of cocaine and benzoylecgonine, with minimum matrix interferences. The method was found to be more accurate for those blood samples that had been diluted five-fold, prior to the precipitation of the plasma proteins by 10% (w/v) trichloroacetic acid.

The presence of either cannabis or cocaine, or their metabolites, was confirmed by HPLC. A variable wavelength ultraviolet detector was used for cocaine and benzoylecgonine determination. A novel HPLC system

with Diode Array Detection was used for the confirmation of the cannabinoids. Adequate sensitivities were achieved with each system.

Alcohol in blood was determined by gas chromatography. The diluted blood samples were initially analysed by a liquid injection system. The presence of alcohol in those specimens testing positive, was confirmed on a gas chromatograph fitted with a headspace injection unit.

These highly specific and sensitive analytical methods were utilised, for the first time in Trinidad and Tobago, to validate the incidence of substance abuse in some sections of the population. These included road traffic fatalities, motor vehicle drivers, psychiatric patients, some military personnel and recruits into the protective services and several homicide victims.

An extensive survey of the population's knowledge of and attitude towards drug abuse was also undertaken. The socio-economics of the local "drug trade" and regional "drug trafficking" were also reviewed. This study revealed that the increases in the local and regional drug trade were related to

socio-economic factors. The impact of official anti-narcotics measures were also evaluated.

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