The objective of this research was to document the acute toxicity symptoms of psychotropic substances. Between June 2008 and May 2011, 145 substance abusers were recruited into the research project. Sixty-three participants visited the Accident and Emergency Department between June 2001 and May 2011, with 115 attendances in total. Drug overdose was the most common provisional diagnosis, followed by substance abuse. Urine drug tests were conducted on 44.3% of the participants and the most commonly detected substances were ketamine, methamphetamine, promethazine and zopiclone. The mean age of onset for psychotropic substance misuse was 21.6 years with a duration of 9 years. Acute physical and psychiatric intoxication symptoms were observed in 62.6% and 36.5% of participants, respectively. Neurological features such as collapse and loss of consciousness (41.7%), and urinary symptoms such as dysuria (13.0%) were the most common physical symptoms. Suicidal ideation (12.2%) and auditory hallucinations (11.3%) were the most common psychiatric symptoms.