**Objectives:** European legislation concerning the placing on the market of biocidal products (Regulation 528/2012/EU) requires that Member States (MSs) report information about poisoning incidents to the Commission. In order to comply with this commitment, the Italian National Institute of Health and the National Poison Control Centre in Milan (NPCCM) implemented the Italian Surveillance System of Biocide-related Hazardous Exposures and Poisonings (SBHEP). The present contribution is aimed at characterizing cases of exposure to biocides observed in Italy in 2007-2010.

**Methods:** Information on cases notified to SBHEP were reviewed and classified according to the Main Group (MG) of use and Product Type (PT) of the involved biocides. Active ingredients were grouped according to chemical class and identified by standard denomination. Each case was reviewed in order to evaluate the association between exposure and clinical effects and classified according to the Poisoning Severity Score (Persson HE et al. J Toxicol Clin Toxicol 1998; 36(3): 205-13).

**Results:** In the period under study 9,234 cases of exposure were identified. Among them, 90% were unintentionally exposed and 6% intentionally exposed. Most of the patients were exposed at home (76%). The main reason for exposure was uncontrolled access (52%) (Figure 1).

Most cases of poisoning were exposed to Disinfectants and algaecides not intended for direct application on humans or animals (PT2) (42% of all poisonings); Pest control – Insecticides and Acaricides (PT18) (36%); Pest control – Repellents and Attractants (PT19) (9%) (Figure 4). Disinfectants related poisonings were mainly exposed to Chlorine and Chlorine inorganic compounds (21% of all poisonings, including 5% of cases exposed in swimming pools), Quaternary ammonium compounds (19%), Peroxides (4%), and Chlorophenols (2%). Poisonings associated with Preservatives exposures were mainly related to Wood preservatives (PT8) based on Pyrethrins/pyrethroids (21% of all poisonings). This chemical class was also involved in most of poisonings associated with Pest control biocides, accounting for 21% of all poisonings. Other chemical classes frequently associated with Pest control related poisonings included Aromatic amines (4%, all cases exposed to N,N-diethyl-m-toluamide), Organophosphates (3%), Pyrethrins/pyrethroids and Organophosphates in combination (3%), and Botanical products (2%, about half of cases exposed to products containing Citronella oil). Four incidents involving more than 10 cases of poisoning occurred at hospital. Two of them implied exposure of healthcare staff in operating theatre. They were related to Formaldehyde in a PT2 product (15 cases of poisoning) and to Mercaptothos, an Organophosphate, in a PT18 product (10 cases of poisoning), respectively. The other two incidents were both related to Chlorpyrifos, an Organophosphate, in PT18 products. They implied 45 and 50 cases of poisoning, respectively.

**Conclusions:** Poison Control Centres represent a main source of data for surveillance of biocides related exposures and poisonings. Standardized rules for data classification and reporting are urgently needed at European level in order to facilitate data comparison and highlight common emerging problems.