J Clin Toxicol 2017, 7:3(Suppl)
DOI: 10.4172/2161-0495-C1-025

Probabilistic ecotoxicological risk assessment of ionic liquids

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Current ecotoxicological information on ionic liquids (ILs) is limited because of unavailability of exposure data which is one of the major issues in the assessment of ecotoxicological risks of ILs. Conventionally, only hazard assessment of ILs is practiced by conducting toxicity tests. There is a need to figure out some statistical techniques to obtain safe environmental concentrations of ILs. In current research, probabilistic ecotoxicological risk assessment was conducted using chemical species sensitivity distributions (CTDs) and chemical toxicity distributions (SSDs). Probabilistic ecotoxicological risk assessment (PETRA) method was adopted due to unavailability of exposure data and thus, effect data was used from acute toxicity literature. Subsequently, experimental toxicity data of ILs for different species from literature was also used. SSD method was applied to estimate guideline values and confidence limits for selected ILs. Meanwhile, toxicity distributions were calculated for each of the species to obtain the 1st and 5th percentiles, to provide an estimate of the probability of finding ILs that will be hazardous to bacteria at or below a given concentration (screening point values). Screening-predicted no-effect concentrations (sPNECs) were calculated from SPVs. In current work 95% of *L. monocytogenes* has been protected at a concentration of 3.55 mmol/L of studied ILs. This methodology is useful in the assessment of the potential risks of ILs where exposure data is not available. Thus, it has been concluded that the application of CTDs improved the assessment when a group of ILs with same toxic behavior exposed to single species of the ecosystem. Meanwhile, it also has been observed that the guideline values (GVs) from SSD of each single ionic liquid are showing its effect on the range of species. Moreover, this methodology will enhance the safety of environment containing different species.

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Standardization of administrative practices biotherapy

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With the development of targeted therapies and specific preparation or administration increasingly diversified, we undertook the census biotherapy prepared in pharmaceutical technology unit (UP) and their delivery systems in service. The objective is to make recommendations and to standardize practices for the preparation and administration of preparations within the services. The criteria studied regarding preparations are proprietary name, laboratory fields of application and indications and protocols in oncology, the nature of reconstituting solvent, the nature and volume of dilution solvent, the shelf life after dilution, and storage conditions after reconstitution. The criteria studied regarding the administration are infusion duration, presence of joint administration of cytotoxic drugs, presence of filter in supply, inconsistency of the preparation with PVC and phthalates. Data collection is performed using the summaries of product characteristics. The results are presented in a summary table for an appropriation by the teams of the UP and care services. As regards the antibodies, 12 do not require coupling administration 6 of which require the presence of a 0.2 µm filter in supply administration. Adding a connection of Directors is aimed primarily at protecting nursing during administration. Also the decision to include a connection is correlated directly to the protocol type and the cytotoxicity of co-administered substances. This table shows the diversity of arrangements for preparation and administration of biotherapy. It will standardize administrative practices within our institution and optimize them by helping to reduce errors and inconsistencies related to preparations and mounting.

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