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Tools for Environmental, Health and Safety Assessment of Chemical Hazard

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PURPOSE OF THE ABSTRACT

Without a doubt, chemists have created an amazing variety of molecules and materials to support modern life. Society is heavily dependent upon the products of the chemistry enterprise; however, most people know very little about where the basic chemical building blocks come from, at what social and environmental cost, and if there are elements facing critical supply constraints. Moreover, for a majority of compounds synthesized or extracted from bio-based and renewable sources, we have a surprisingly limited amount of information upon which to make reasonable decisions about their toxicity to humans or to the environment, their degradability (biological or otherwise), or our ability to efficiently recycle or reuse them. While there are many tools available to assess environmental, safety and health impacts, there is not widespread knowledge amongst chemists about these tools, how to use them, or how to integrate them into their research practices. This talk will focus on publicly available tools created by the ACS GCI Pharmaceutical Roundtable and briefly describe their use.

FIGURES

FIGURE 1

FIGURE 2

KEYWORDS

tools | assessment | environment, safety and health | green chemistry

BIBLIOGRAPHY