Green chemistry: current status and challenges in Zimbabwe

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Abstract

Green chemistry involves designing environmentally benign processes that either reduce or eliminate the use and production of hazardous substances in the production of safe chemical products. It aims at minimising waste; eliminating costly treatments; minimising energy and resource consumption, and yielding safer products. On this background, it becomes imperative to promote and establish Green chemistry worldwide, especially in developing countries by incorporating it into school curricula, thus placing it at its core for sustainable development purposes. While Zimbabwe, a sub-Saharan country, has made positive strides in key research areas such as the design of new chemicals, catalysis, solvents, renewable materials, and feedstocks, it still faces some challenges that inhibit the successful inception of the concept of green chemistry. An overview that includes educational curriculum, grants and awards, research, infrastructure, and facilities established to promote green chemistry research and education; challenges currently being faced in implementing the approaches and principles in selected universities; the role played by government bodies, and the public in influencing the criteria to promote the green chemistry concept is given.

Keywords: green chemistry; current status; Zimbabwe