William R. Cullen and Kenneth J. Reimer: Arsenic is Everywhere: Cause for Concern?

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Bibliography

Arsenic is Everywhere: Cause for Concern?
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This is a continuation of a book published by one of the authors in 2008 (*Is Arsenic an Aphrodisiac?* RSC ISBN 978-0-85404-363-7) which together represents two monographs on the properties, preparation and uses of this element and its compounds. An alternative title for these books might be “All you ever wanted to know about arsenic”—well not all but nearly all!

Arsenic has been the recipient of a bad press over the centuries and to the ordinary person the word is almost synonymous with murder. According to this book, there is a word “arsenophobia” to express this sentiment. Hardly surprising when there was a notorious Nineteenth Century case where one, Mary Ann Cotton, managed to poison no less than 21 people with arsenic-laced tea!

After an amusing introduction, the book has seven chapters which deal with topics ranging from the occurrence of arsenic in the earth and hydrosphere, consumption of arsenic by various life forms, toxicity, medicinal uses and alternative medicines with two final two chapters dealing with

various aspects of arsenic in food. To a large extent, each chapter is free-standing and can be read in isolation. There are numerous “boxes” in each chapter highlighting such things as the physical meaning of such terms as parts per billion, a term which might confuse a non-scientist, to “The Styrian Defence”—a method of arguing for the innocence of an accused and explaining the presence of arsenic in a victim—not very successful.

The front of the book has a set of abbreviations, an excellent idea which should be used by more (all) authors since there are those who assume incorrectly that what is common to them is known universally. The title poses the question “Cause for concern” and after reading this my answer would be that if I lived in Bangladesh and ate a lot of rice I would be very concerned but since neither of these things apply to me personally I feel confident that the axiom proposed by Paracelsus will suffice to free me from concern.

Things the book does not tell you—China produces 25,000 tons of As_2O_3 per annum which is 70% of the world’s output and if you want to obtain some arsenical copper you may have to purchase an old steam engine boiler. I can vouch for this latter because the machine shop personnel where I worked were constrained to do just this but at the time, thanks to Dr Beeching, this was not difficult.

This is a book which I can wholeheartedly recommend; it got me interested in things which I either did not know or had forgotten like the sad case of Friedrich Accum who was the first person to draw the attention of the public in the UK to the adulteration of foodstuffs. As a consequence of his work, he made numerous enemies among the establishment and was forced to flee from Britain to Germany on what looks suspiciously like a trumped-up charge of stealing books from the Royal Institution. All chemistry teachers should possess a copy of this book and relay some of its contents to their students so that they might appreciate the importance of chemistry in everyday life.

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