BOOKS RECEIVED

Industrial sterilization, international symposium, Amsterdam 1972

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This is an edited report of a symposium sponsored by Messrs Becton, Dickinson & Company. It will be of interest mainly to those working in the field of industrial sterilisation as manufacturers of pharmaceuticals and disposable medical devices or as members of official bodies purchasing or approving such products, but others will also find matters of interest and importance in it. The first section deals with biological control, including details of quality control in the factory, the use of biological indicators, sterility testing (with a useful discussion of its limitations), toxic residues from ethylene-oxide sterilisation, and the biological control of industrial radiation sterilisation. Next follows a review of regulatory procedures in the USA, the UK and Belgium, and a long section on technology, dealing with radiation, ethylene oxide, formaldehyde (with details of a promising new process in which plastic wrapping materials are formulated to give off enough formaldehyde to sterilise the contents), and heat, the latter concerning process design and evaluation. An interesting section describes some of the applications of aerospace research to industrial sterilisation. The reader may ask why, if whole spaceships can be launched in a virtually sterile state, there is still doubt about the sterility of smaller, simpler items used in hospitals. The answer inevitably is that one gets what one is prepared to pay for. The book ends with a section on how to handle sterile products in the hospital and how to dispose of them when used, drawing on experience from these countries.

For manufacturers and controllers this will be a source book for years to come. A wealth of experience and technical data is made available in small compass. There is also much to interest the chemist, the radiobiologist, the applied microbiologist, and the statistician. The hospital microbiologist would probably find much of the technical detail of little relevance to himself, but would learn a lot from a selective perusal of its pages. It is encouraging to read of how much trouble is taken by manufacturers to produce an acceptably safe product. Furthermore, those of us in the UK who are disposed to criticise the Department of Health (and your reviewer is one) should be grateful for the trouble taken to inspect and approve sterile medical devices bought for the health service, so that they may be used with confidence. The Scientific and Technical Branch have pioneered this activity for many years. The account of their methods shows them to be simple, thorough and yet unbureaucratic, a model and a warning at a time when the EEC are considering their own position.

Any hospital microbiologist reading the chapters on ethylene-oxide sterilisation will receive further evidence of the pitfalls when it is used by the unskilled or the unwary. Not only may sterility not be achieved unless carefully designed apparatus is used on scrupulously clean items with meticulous attention to detail, but—unless great care is taken—toxic residues may remain in the items sterilised and reach the patient. The fact that neither toxic levels nor methods of estimation are yet clearly established only emphasises the importance of this. In how many hospitals are PVC materials that have been sterilised by ethylene oxide given a 7-day airing or heated for 16 hours in a special aerating chamber? This method is not for the small hospital without firm and informed microbiological control.

This is a book for industrial and control microbiologists to own. Others would profit from a look through it, and for this reason it should be available in at least major libraries.

J. C. KELSEY