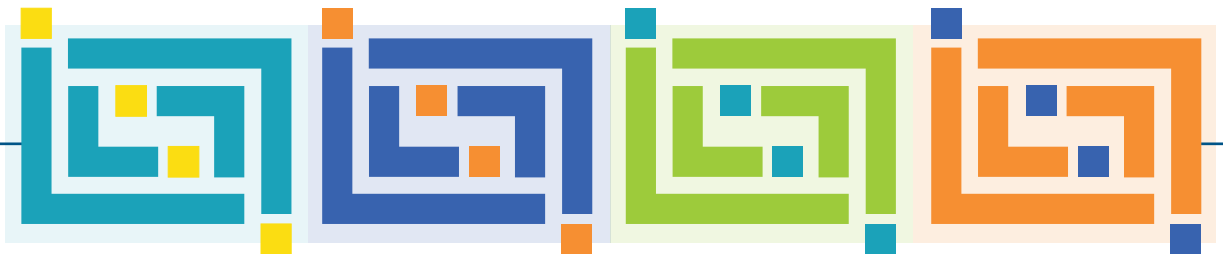


# RECALLS OF PHARMACEUTICAL PRODUCTS

ELIMINATING  
CONTAMINATION AND  
ADULTERATION CAUSES



Tim Sandle

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# **Recalls of Pharmaceutical Products**

**Eliminating Contamination and  
Adulteration Causes**

**Tim Sandle**

**PDA**

**Bethesda, MD, USA**

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## About the Author

Tim Sandle, PhD, CBiol, RSB, FIScT

Dr. Sandle is an experienced pharmaceutical microbiologist and quality assurance professional with over 25 years' experience in the life sciences sector. He is currently the Head of Microbiology and Sterility Assurance at a UK sterile products manufacturer. His previous experience includes working for the NHS Blood Service and in medical research.

A visiting lecturer at the University of Manchester (where he teaches pharmaceutical microbiology), he is also affiliated with University College London (where he teaches aspirant Qualified Persons in sterilization technology). Dr. Sandle has served on various committees, including contributing to the development of the ISO 14644 cleanroom standards and in relation to disinfection controls for the Blood Transfusion Services for England and Wales. Dr. Sandle is also the editor of the publication *GMP Review*.

He has written or edited 27 books, contributed 100 chapters to books edited by others, contributed 160 peer-reviewed papers, and authored around 400 technical articles for a range of publications. His subjects include pharmaceutical microbiology, clinical microbiology, quality assurance, quality control, sterility assurance, general biology, and the history of science. Dr. Sandle also serves on the editorial boards of several science journals, and he has delivered over 160 conference presentations and webinars.

His voluntary work includes serving as a member of the Pharmaceutical Microbiology Interest Group (Pharmig) committee since 2002. He has been a governor for two schools (one position for 16 years), and he was a Labour and Co-operative Party councillor, serving on Hertsmeire Borough Council, where he was chairman of leisure services and parks. Dr. Sandle was also a non-executive

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director of the Hertsmere Homelessness charity and a non-executive director of Elstree Film Studios.

Among Dr. Sandle's qualifications are a PhD from Keele University, UK, and Chartered Status from the Royal Society of Biology. In addition, he is a Fellow of the Institute of Science and Technology. Dr. Sandle has received several awards, including PDA Author of the Year, the Pharmig Excellence in Pharmaceutical Microbiology Award, the George Sykes Award from the Pharmaceutical and Healthcare Sciences Society, and the Kenneth G. Chapman Award for contributions to validation excellence from the Institute of Validation Technology.

The professional bodies which Dr. Sandle is a member of include the Parenteral Drug Association (PDA), Pharmaceutical and Healthcare Science Society (PHSS), Royal Society of Biology, Pharmig, Microbiology Society, and the Institute of Science and Technology (IST).

In his spare time, Dr. Sandle runs a website called Pharmaceutical Microbiology Resources, which provides topical news interspersed with new standards and regulations. He is also a science and technology journalist and is a science editor-at-large for the Canadian-based global news site Digital Journal.

Dr. Sandle's interests include walking, politics, film, jazz and folk music, history, and a splattering of science fiction. He lives just outside the city of St. Albans, which is in the county of Hertfordshire in England.

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