

SGM BASIC PRACTICAL MICROBIOLOGY

Safety Resources

No definitive specialist published guide to safety in practical microbiology in schools exists; this factsheet lists some relevant resources, together with the contact details of organisations which can be approached for advice.

Publications

This book is recommended as containing the most up-to-date and detailed information on the safe use of micro-organisms in schools:

Topics in Safety, ASE*, 3rd ed., 2001, ISBN 0 86357 316 9, 142pp, £16.20 - Basic health and safety management in schools. Chapter 15 – microbiology & biotechnology contains detailed information, includes risks associated with each procedure; levels of work, list of suitable and unsuitable micro-organisms. Steam sterilisation. Sub-culturing and transfer work at level 3.

Other titles

Be Safe!, BORROWS, P. *et al.*, ASE*, 2nd ed. (Scottish ed. available), 1990, ISBN 0 863 57081 X, 28pp, £4.95 - Key Stages 1 & 2. General safety guidance. Microbiology section covers risks, examples of suitable material, safety code and disposal.

Living Biology in Schools, REISS, M. *et al.*, Institute of Biology*, 1996, ISBN 0 900 04903 2, 120pp, £12.50 - Practical biology. Extensive chapter on practical microbiology in schools includes safety, GLP, use of cultures, techniques, sterilisation. Key Stages 1-4 & 16+.

Safeguards in the School Laboratory, ASE*, 10th ed., 1996, ISBN 0 86357 250 2, 123pp, £9.00 - General safety guidance. Health & Safety legislation, managing safety, Good Laboratory Practice, use of pressure vessels, section on biological hazards includes microbiology/biotechnology.

Safety in Science Education, DfEE, HMSO*, 1996, ISBN 0 112 70915 X, 174pp, £14.95 - Comprehensive guide to safety. Includes legislation, safety management in the science department, risk assessments, emergency procedures, first aid, resources, laboratory design, GLP, use of chemicals, use of electricity. **Section 17.4 on microbiology is inaccurate and has been superseded by Ch.15 in the new edition (2001) of *Topics in Safety* – see above.**

Studying Micro-organisms in Primary Schools, CLEAPSS*, rev. ed., 1997, 20pp, n.p. - Ideas for investigations. Includes suitable cultures, risk, safe growth of microbes, safe disposal. (N.B. available only to members & associates of CLEAPSS)

Factsheet

Micro-organisms for Investigations in Schools & Colleges, MISAC†, 2001, 6pp, free - list of suitable and unsuitable bacteria, fungi, viruses etc. for use in practical microbiology investigations, with suggestions for use and information about culture and maintenance (also included in *Topics in Safety* – see above).

* Addresses

ASE Bookshop, College Lane, Hatfield, Herts AL10 9AA

Institute of Biology, 20-22 Queensberry Place, London SW7 2DZ

HMSO Publications Centre, Tel. orders: 0171 873 9090

Videos

Introduction to Practical Microbiology, Manchester Metropolitan University, N.D., 30 minutes, £28.50 - Suitable for 16+, technicians, teachers. Basic microbiological techniques, GLP. Available from: Dr J. Verran, Dept of Biological Sciences, MMU, Chester St, Manchester M1 5GD.

Microbiology Laboratory Procedure, University of Leicester, 1995, 30 minutes, £30 (inc VAT, p&p) - Suitable for 16+, technicians, teachers. Aseptic techniques, safety, use of microscopes. Available from: A. Vilkins, AVS, Medical Sciences Building, University of Leicester, University Road, Leicester LE1 9HN.

Sources of Advice

MI SAC, c/o Marlborough House, Basingstoke Road, Spencers Wood, Reading RG7 1AG (Fax 0118 988 5656; email: education@sgm.ac.uk; www.biosci.org.uk/misac)

CLEAPSS School Science Service, Brunel University, Uxbridge UB8 3PH (Tel. 01895 251496) - available only to members and associates of CLEAPSS.

National Centre for Biotechnology Education, University of Reading, Whiteknights, PO Box 228, Reading RG6 6AJ (Tel. 0118 987 3743) – www.ncbe.rdg.ac.uk.