SAS program for testing the difference between two correlated correlation coefficients

Editor,—Lee¹ provided an interesting and easy to use SAS program for testing the difference between two correlated coefficients.²

When using these SAS codes I realised the listing contained an error, which was possibly due to a printer's mistake.

Z value should be computed as:

$$Z = \text{zdiff} * ((\&n-3)/\text{den})^{**} 0.5;$$

and not as

$$Z = \text{zdiff} * ((\&n-3)/\text{den}) * 0.5;$$

I hope this information will be of use to other researchers.

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1 Lee J. SAS program for testing the difference between two correlated coefficients. *Occup Environ Med* 1994;51:141.

2 Meng HL, Rosenthal R, Rubin DB. Comparing correlated correlation coefficients. *Psychol Bull* 1992;111:172-5.

NOTICES

Vth COMTOX Symposium on Toxicology and Clinical Chemistry of Metals, at the University of British Columbia, Vancouver, BC, Canada, 10-13 July 1995.

The symposium is sponsored by the International Commission on Occupational Health (ICOH), the Society of Toxicology (SOT), the Association of Clinical Scientists, the International Union of Pure and Applied Chemistry (IUPAC), the International Union of Toxicology (IUTOX), the International Programme on Chemical Safety (IPCS), the International Federation of Clinical Chemistry (IFCC), and several other organizations.

The four major themes of the symposium are:

- Analysis of Metals in Biological Materials,
- Molecular Biology and Toxicology of Metals,
- Metals in Health and Disease, and
- Occupational and Environmental Exposures to Metals.

The program will include plenary and keynote lectures, platform sessions, analytical workshops, posters with discussion, and commercial exhibits. The deadline for submitted abstracts is 15 January 1995.

Contact Dr F William Sunderman Jr, University of Connecticut Medical School, PO Box 1292, Farmington, CT 06034-1292; Tel: (203) 679-2328; Fax: (203) 679-2154.

Hazard and operability studies (HAZOP), two international three day courses: London, 24-26 October 1994; Amsterdam, 7-9 November 1994.

Organised by IBC Technical Services Ltd, the objective of this course is to give delegates an in depth knowledge of, and

experience in the use of, the guide word approach to hazard and operability studies. The course has been designed to maximise the delegate's training, with much of their time being spent in small groups practising the application of the technique. On completion of the courses they should be able to undertake studies in their own organisations, leading teams to ensure the identification of most, if not all, relevant hazards and likely operability problems with the optimum use of team time.

The use of the technique in a wide range of process and service industries makes it relevant to a spectrum of disciplines such as project engineers with chemical, mechanical or instrument responsibilities, process and engineering managers of existing plants, and those with safety management responsibilities. Many organisations now perceive a period of leading HAZOP studies as an integral part of career progression, and the course is excellent training for such staff.

For further details please contact: Sarah Ashmore, IBC Technical Services Ltd. Tel: 071 637 4383 Fax: 071 631 3214.

American College of Occupational and Environmental Medicine (ACOEM) State-of-the-Art Conference at the Denver Marriott City Center, Denver, Colorado, 24-28 October 1994.

"Prevention in practice: workplace health in the 21st century" is the theme for the 1994 state-of-the-art conference sponsored by ACOEM. The scientific meeting will cover diverse issues of environmental and occupational medicine in 16 postgraduate seminars, four scientific sessions, and 22 focus groups. The programme is open to occupational health professionals.

For information contact ACOEM, 55 W. Seegers Road, Arlington Heights, IL 60005. Tel: 708-228-6850; Fax: 708-228-1856.

Bryan and Tempest Industrial Audiometry Courses, at Wendover Hotel, Eccles, Manchester, 28-30 September and 9-11 November 1994.

Two three day courses offering training in audiometry for industrial medical staff, safety officers and others concerned with hearing conservation in industry. The courses, which comply with the syllabus recommended by the British Society of Audiology have the approval of the Society.

Further details are available from: Dr W Tempest, Kismet, Croyde Rd, St Annes, Lancs FY8 1EX. Tel: (0253) 712550.

BOOK REVIEW

Industrial Chemical Exposure—Guidelines for Biological Monitoring, 2nd edition. By LAUWREYS R R, HOET P. (Pp 318; price £56). 1993. 2000 Corporate

Boulevard NW, Boca Raton, Florida 33431, USA: CRC Press. ISBN 0-873-71-650-7.

Biological monitoring is now gaining widespread acceptance as a technique for assessing absorption of workplace chemicals whatever the route. As the extent of skin absorption is being documented for a range of solvents, pesticides and cross linking aromatic amines, the need for appropriate biological monitoring techniques is becoming apparent. The occupational physician or industrial toxicologist faced with a workforce exposed to an unfamiliar chemical may wonder whether biological monitoring would be useful but be daunted by the extensive scientific literature. Clearly the occupational health practitioner would like to know whether biological monitoring is appropriate, which analyte to measure, the medium (blood, breath, or urine) and the optimum time for sampling. This advice has to be coupled with sensible guidance in interpreting the results. Professor Lauwreys with Dr Hoet has now come to the rescue with the second edition of their book *Industrial Chemical Exposure—Guidelines for Biological Monitoring*.

The book now has two main chapters of 265 pages dealing with over 100 individual workplace inorganic and organic chemicals. Each entry starts with a brief description of the toxicokinetics of the substance including a review of the importance of routes of absorption. The publications on biological monitoring are then reviewed with any international limits that have been proposed—that is, BEIs from ACGIH and BATs from Deutsche Forschungsgemeinschaft. These minireviews are an excellent entry into the scientific literature being well if not exhaustively referenced and give the busy practitioner a good appreciation of the state of biological monitoring for that particular chemical hazard.

Chapter 4 summarises in tabular form for each substance reviewed, the principal biological monitoring methods available, reference values and suggestions for maximum permissible concentrations. These are the best figures available from the information that can be extracted from the scientific literature. The authors sensibly advise the reader to refer back to the sections dealing with individual substances to judge the strength of the evidence on which these figures are based. In the absence of national or international guidelines the reader can do no better than use the experience coming from this group in Louvain.

This small book is to be recommended for all libraries supporting occupational health professionals. It provides easy, cost effective access to a mass of scientific literature and helps to answer the question . . . "does biological monitoring have anything to offer in dealing with this particular chemical hazard?". If the answer is "yes", the enquirer then has to go elsewhere for advice on suitable analytical techniques, sampling methods, and quality assurance procedures but that needs a different sort of book!

D GOMPERTZ