

BOOK REVIEW

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A Review of "Seminal Zinc As a Screening Instrument for the Preliminary Identification of Semen Traces"

REFERENCE: Hooft, Peter J., *Seminal Zinc As a Screening Instrument for the Preliminary Identification of Semen Traces*, Leuven University Press, Louvain, Belgium, 1992.

This is the author's thesis for the degree of doctor of medical knowledge at the Catholic University of Louvain. As such, it displays the virtues and deficiencies of that genre of scientific literature. It is the fifty-fifth in the series *Acta Biomedica Lovaniensia*, all of which are evidently doctoral theses from the University of Louvain.

The author has developed zinc test strips using 1-(2-pyridylazo-2-naphthol (PAN) dye suspended in Tris-buffered Triton-X detergent. The dried strips have a shelf-life of over one year. The sensitivity of these test strips was determined using serial two-fold dilutions of both seminal fluid and extracts of dried semen stains. The test strips were determined to have a detection titer of 1:128 for seminal fluid and 1:64 for dried stains. The specificity of the strips was examined by testing a wide variety of physiological fluids, foods, and cosmetics. Samples of breast milk, feces, nasal mucus, sweat, urine and vaginal discharge gave negative results; some blood samples gave positive results (these also gave positive tests for acid phosphatase). Fruits, vegetables, fish, crustaceans, meats generally gave negative tests for zinc; however, several samples of mutton and pork had detectable zinc levels. Deodorants and anti-dandruff shampoos (many of which contain zinc chloride) not surprisingly also gave positive tests for zinc. The effect of the use of the zinc test strips on subsequent serological tests was also explored. The use of the strips was found to have no significant effect on ABO typing or on DNA profiling.

The value of this research is likely to be limited for forensic serologists in the United States. Increasingly, forensic laboratories in this country are combining an assay for acid phosphatase with a second for p30 (or prostatic antigen). Research has shown that the simultaneous detection of acid phosphatase and p30 virtually assures that the sample is human semen. Unfortunately, the author found detectable levels of acid phosphatase and

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zinc are found together in semen from a number of mammals. The zinc test strips do have the advantage of being cheaper and easier to use than the immunoassays for p30.

Although for several centuries universities have made a fetish of the learned thesis as the *ne plus ultra* of scholarship, it has been clear for some generations that these in themselves make little contribution to fields of knowledge. Scholarly discourse now commonly employs the agency of the journal article. Only rarely is a thesis of such earthshaking import as to be worthy of publication and widespread dissemination. The only example of such a graduate thesis that comes readily to mind is that of Louis de Broglie which laid out the foundations of wave mechanics. Regrettably, the work under review is not of this caliber. Although it was presented as a thesis for a doctoral degree, this is a rather short work (only 133 pages with 203 references) written on the level of a masters dissertation. The quantity and quality of research it represents would also be more appropriate for a masters degree, rather than a doctorate. The author's research would have been better presented as an article in a scientific journal such as the *Journal of Forensic Sciences*.

Although in English, this work was clearly not written by a fluent speaker. It abounds in ungrammatical constructions, incorrect word usages and annoying misspellings. It should have been submitted to the attentions of a competent editor before it was published. Taken as a whole, I can only recommend this work to the zinc-in-seminal-plasma aficionados who simply *must* have every work on this subject. To the average forensic laboratory worker for whom the zinc spot test is merely one in a battery of such tests, it does not offer enough to justify its price.

Erratum

In the July 1993 issue, a misprint occurred. Figure 2 of the paper by Wei-Tun Chang, Chin-Wang Huang, and Yun-Seng Giang should appear as follows.

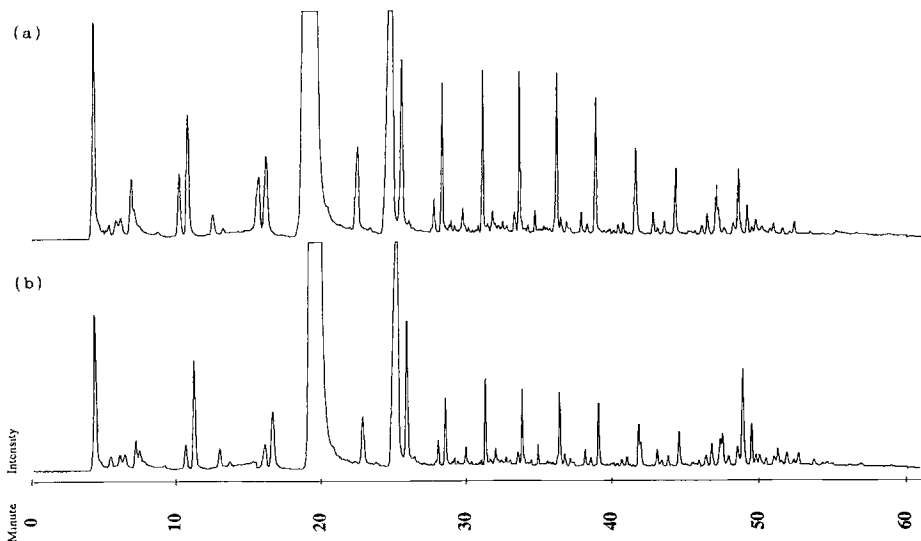


FIG. 2—The pyrogram pattern (shown for SPB-20 column only) from a Xerox 3990 photocopier raw toner powder sample, (a), is nearly the same as that from a corresponding fused toner sample, (b).