

spect to ...  
C&EN May 3, 1976  
**Heart disease, cancer linked to trace metals**  
The possibility that variations in dietary and environmental levels of selenium, copper, zinc, and perhaps other metals influence the rate of heart disease in various parts of the world has been raised in a series of studies.

The rapid nondestructive ability to analyze many trace elements simultaneously is what X-ray energy spectrometry is all about. Now, new developments by KEVEX provide medical researchers, the pharmaceutical industry and process control people with analytical capabilities that offer far more potential than traditional techniques such as AA.

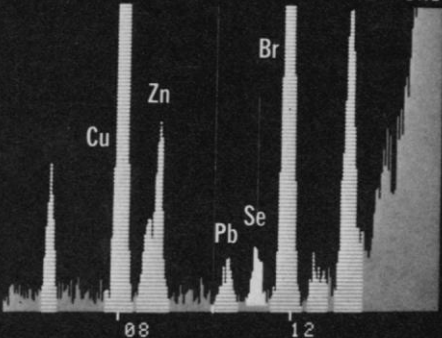
In this instance, the Kevex X-ray energy spectrometer measured the zinc-to-copper ratio and selenium concentration in two microliters of human breast fluid. A recent study shows a positive correlation between coronary mortality in 47 U.S. cities and the ratio of zinc-to-copper in cow milk of those areas. The connection between low cancer rate and high selenium diet was also reported for both cancer of the colon and breast cancer. (C & E News May 3, 1976.)

The new Kevex ULTRA-TRACE™ X-ray energy spectrometer can analyze a fraction of a billionth of a gram of selenium in human breast fluid—total analysis time per determination—5 minutes! Are you interested in multi-element trace analysis? For more information contact Kevex at:



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Spectrum for copper, zinc and selenium obtained from two microliters of human breast fluid.

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## ASM on Recombinant DNA

Although recombinant DNA research has been extensively reported in the scientific and lay press, there has been surprisingly little input from individuals or organizations accustomed to dealing with hazardous microorganisms. Consequently, at the request of the National Institutes of Health, a special American Society for Microbiology (ASM) ad hoc committee under the chairmanship of Harold Ginsberg carried out an independent review of the NIH guidelines. Their report that the guidelines provided proper and adequate procedures for handling hazardous bacteria was accepted by the ASM Council Policy Committee last November. There is at present no demonstrated evidence that microorganisms containing recombinant DNA molecules are hazardous. However, because federal legislation concerning the production and use of recombinant DNA molecules is under active consideration, and in the event that such legislation is passed, the ASM Council unanimously approved the following at its annual meeting in New Orleans on 8 May 1977.

1) All responsibility for regulating actions relative to the production or use of recombinant DNA molecules should be vested in HEW.

2) To advise and assist the Secretary of HEW, an advisory committee should be established whose membership, in addition to lay people, should include representatives with appropriate technical expertise in this field.

3) Institutions and not individuals should be licensed.

4) At each institution engaged in recombinant DNA activities, to the maximum extent possible, direct regulatory responsibility should be delegated to the local biohazard committee. These committees should include both members with expertise appropriate to the activities conducted at that institution and representatives of the public.

5) Experiments requiring PI containment should be exempt from these regulations.

6) License removal is an effective and sufficient deterrent to obtain compliance. Further ASM is opposed to the bonding of scientists or the establishing of individual strict liability clauses in the conduct of recombinant DNA activities.

7) ASM goes on record as favoring uniform national standards governing recombinant DNA activities.

8) The Secretary of HEW should have the flexibility to modify the regulations as further information becomes available. Further, we support the inclusion of a sunset clause in the legislation—that

is, that legislation will be reevaluated after a fixed period of time.

9) Such important legislation governing research should proceed only after due and careful deliberation.

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## Long-Sentence Obscurantism?

*Science's* news writers are becoming long-sentence obscurantists. I sampled the first 32 sentences of each staff writer in the 1 April 1977 issue, skipping footnotes and wholly quotation sentences. Results follow.

Writer	Page	Words per sentence	
		Mean	Range
Abelson	13	21.6	6-41
Boffey	35	28.0	5-62
Culliton	37	22.2	7-58
Metz	43	34.8	15-64
Wade	39	33.5	10-121
Walsh	40	28.5	13-61

Interpretation of these results is difficult and their cause remains veiled. The sentence-lengthening trend is not particular to *Science* but seems ubiquitous (unpublished observations). The editor of *Science* himself once had a lower mean (not shown). It is not clear why his good example has not been followed. As indicated by the data, some staffers are more prone than others to the insidious phenomenon. This trend may reflect our overall cultural drift to irrelevancy and complexity, discussed elsewhere (1).

I admit that this is a small, arbitrary sample based on a simplistic method. More revealing and perhaps more related to hedonic tone and comprehension in readers is a long-windedness profile (LP), that is, a frequency diagram of sentence length. One simply plots the number of sentences in each length class (the classes having increments of, say, five words).

It is recommended that periodic LP determinations be instituted on each writer to help control the phenomenon. The LP is an efficient corrective measure when self-administered.

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## References

1. R. Grantham, *Trends Biochem. Sci.* 2, N105 (May 1977).