

BOOK REVIEW

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A Review of Identifying Plant Food Cells in Gastric Contents for Use in Forensic Investigations—A Laboratory Manual

REFERENCE: Bock, J. H., Lane, M., and Norris, D., *Identifying Plant Food Cells in Gastric Contents for Use in Forensic Investigations—A Laboratory Manual*, U.S. Department of Justice, National Institute of Justice, 633 Indiana Ave., Washington, DC 20531, January 1988, 130 pp.

This laboratory manual was developed to assist death investigators in determining what food, if any, was eaten prior to death by analysis of the gastric contents. It is intended for use by investigators not previously trained in histologic techniques. It is a step-by-step guide for the actual preparation of microscopic slides and identification of gastric materials.

This work begins with four case studies that demonstrate how the study of plant cells can assist investigators by establishing the following data: (1) whether a meal was eaten prior to death, (2) what type of meal was last eaten, (3) at what time prior to death it was ingested, and, possibly, (4) what type of restaurant prepared the food. This information may be helpful to investigators as a check on the validity of statements made by witnesses or other involved individuals.

The manual provides the reader an elementary cellular biology education. Although the 22 cell structure illustrations are black-and-white photographs, the detail is clear and the descriptions easy to follow. In the chapter on Slide Preparation, simple instructions are used for the seven-step process. The techniques are stated in a narrative form in layman's terms, thus increasing the likelihood of a product of good quality being produced by the novice slide preparer.

An introduction to microscopic slide examination then precedes a dichotomous key, which assists the neophyte in identifying gastric content items, including fruits, vegetables, and herbs, and photographs with corresponding easy-to-understand narrative text. The authors have carefully chosen commonly eaten foods to identify, thus making this a most useful section. The advantages of the scanning electron microscope are noted in a subsequent chapter with 56 illustrations and accompanying description. Again, the authors have chosen commonly ingested foods and the photographs are quite impressive.

The Appendix contains useful information regarding the purchase of materials needed

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to prepare the slides. This easy-to-understand, well-organized laboratory manual provides the death investigator with an inexpensive, useful tool that may assist him in recreating the events and activities of the decedent prior to death.

There has been very little published in this area of interest. In 1976, Gantner et al. produced a 119-page manual entitled *The Identification of Food Materials in Gastric Contents (Emphasizing Microscopic Morphology)*. This work noted the forensic science usefulness of gastric content analysis and narratively described 45 items from almond seed to zucchini. This manual was not nationally circulated and is not presently available.

The authors have attempted to develop a gastric content identification handbook for the lay death investigator. I believe that they have accomplished their objective.