Criticized

To the Editor:
The Medical Usefulness Criteria Committee of the Commission on Standards of the College of American Pathologists has attempted to stimulate interest and document the state of the art as it relates to some aspects of patient preparation and specimen collection and handling, including storage stability. Numerous deficiencies in the scientific literature were apparent during the preparation of the published manuscript reviewed in the book-reviews section of Clinical Chemistry, vol. 22, page 1548, 1976. The reviewer did not quite understand the intent of the manuscript. In the process of criticizing the lack of specific literature documentation of each fact presented in the publication, his own comments were not documented by literature references. He thus further emphasizes the state-of-the-art message of the committee. The committee members did see the net worth of assimilating the state-of-the-art information available from numerous references listed in the manuscript. Often the information recorded in the publication was an assimilated judgment derived from the experience of the authors and the information in the references. As the result of this initial experience, the committee has been authorized by the College of American Pathologists to continue the project by updating the review by including specific significant individual references where applicable and by encouraging projects to further the documentation of facts presented and to provide facts where they are evidently missing or diffusely documented.

It is our opinion that the information in the publication is definitely of greater factual significance than the nearest laboratory catalog referred to by the reviewer. These catalogs often do not provide information for all specimen-handling circumstances such as the stability of whole blood specimens. Although we agree with the reviewer that a reference laboratory catalog should be used in handling specimens, the maintenance of a specific laboratory or physician's office will be better served by the additional information provided in the committee's publication. The committee feels that the initial publication name and authorship is a step forward because the information compiled by commercial reference laboratory catalogs in providing useful information toward the provision of better patient care.

The committee will continue to assimilate information on the subject, encourage the generation of additional useful facts, and aid in dispersing the available knowledge to all laboratory workers and users. Future editions will be directed at improving the format of presenting the information to lessen criticism of the publication. Criticism of factual material in the publication, based upon documentation from literature or experience will be greatly appreciated and should be sent to: College of American Pathologists, Medical Usefulness Criteria Committee, 7400 N. Skokie Blvd., Skokie, Ill. 60076. If of value, this material will be properly credited and used in subsequent editions, and/or provided as supplemental information prior to publishing new editions.

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The reviewer responds:

To the Editor:
The publication in question was reviewed from the standpoint of the prospective user who collects and/or stores specimens. I judged it to fall far short of meeting those needs, a judgment in which the authors apparently concur if one is to believe their own assessment of their work. Whether the publication meets the authors' stated objective of "stimulating interest" remains to be seen, but it clearly does not "document the state of the art," because of the authors' failure to use specific literature citations to that information taken from existing publications. (To "document," according to Webster's Third International, is "to equip with exact references to authoritative supporting information.") This process is mandatory in all serious scientific work (as opposed to book reviews), and omission of proper citation renders the publication much less attractive.

I agree that there is need for many additional studies, properly contributed to the refereed scientific literature in this very important area of clinical laboratory medicine, but great need does not justify this publication that bears the name of the Committee on Standards of the College of American Pathologists. One need look no further than the superbly done "Effects of Drugs on Clinical Laboratory Tests" (1, 2) for examples of first and second efforts in publications of this type to emulate in future efforts. I hope this committee's next edition will meet with favorable reviews, an outcome virtually assured by better organization, fewer omissions, and proper indexing.

References

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Ed. note: The new AACC publication Pediatric Clinical Chemistry, has an appendix on specimen stability and handling for various tests.

Tyramine Interference in Assay of Serum Dopamine-β-hydroxylase

To the Editor:
The absorbance of the blank (boiled enzyme) in the photometric assay of human serum dopamine-β-hydroxylase (EC 1.14.2.1) by Nagatsu et al. was about 0.05 (1). In our repeated determinations, more than three-fold larger blank values were observed, caused by the presence of tyramine in the standard incubation mixture.

The absorption spectrum of tyramine showed a peak at 295 nm in 1 mol/liter NH₄OH (the concentration of tyramine is 1/100 that in the standard incubation mixture) (Figure 1). However, if the concentration of tyramine was increased to the same as in the standard incubation mixture, a very large peak would appear, shifted to a longer wavelength (Figure 1). If NaIO₄ and Na₂S₂O₃ were replaced with 0.20 mol of distilled water, the tyramine spectrum was unaffected. Furthermore, the standard substrate mixture together with boiled serum treated according to their assay procedures, showed the same spectrum as in Figure 1, because tyramine, acidic owing to the addition of trichloroacetic acid, would also be adsorbed by the strong cation exchange resin (Dowex-50) and eluted with 4 mol/liter NH₄OH. To confirm this, we bought two batches of tyramine hydrochloride of different lot number from Calbiochem and obtained the same results.

When 20 nmol of octopamine in 1.0 ml of 4 mol/liter NH₄OH was used in the oxidation and reduction procedures, an