couraged.

The semi-automated approach, while assuming the presence of a functional system for 'batching" individual isolates per ward per unit time (e.g., month), provides a hospital-wide, yet low labor-intensive method of conducting infection control surveillance. Although not as sensitive as the more traditional "gold standard" techniques of bedside observation, total chart review, etc., it can provide highly valuable trend data in facilities where scarce resources often do not permit such time-consuming data collection.

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More on Glutaraldehyde and Tuberculocidal Activity

To the Editor:

I must rebut several elements of William A. Rutala's, et al. response to Marian Kennedy's letter to the editor, both of which appeared in the July 1990 issue (1990;11:334-336).

The authors state that it was not necessary to indicate which 2% glutaraldehyde was used preceding the outbreak "because there is no evidence in the scientific literature that identifies differences in tuberculocidal activity when the disinfectants are used as recommended by the APIC draft guideline (i.e., 20 minutes at room temperature)."

This statement is at odds with the record. Surgikos scientists did the testing and developed the data for the Environmental Protection Agency-(EPA-approved labels requiring 45 minutes immersion for Cidex and 90 minutes for Cidex 7, both at 77°F, and requiring 86°F immersion temperature for the Cidex Automatic Machine Solution.

The Cidex need for heat to achieve tuberculocidal activity was recognized by Surgikos as far back as 1964. In a paper published in the October 1964 issue of the *Journal of Pharmaceutical Service,* Cidex scientists Borick, et al. stated that 30°C (86°F) was used to achieve tuberculocidal activity in ten minutes for Cidex. Also, the inability of test samples of the Cidexes to achieve tuberculocidal activity in ten or 20 minutes at 20°C was determined and reported by the EPA Microbiology Laboratory in December 1977 (EPA Enforcement Case Reviews, Nos. 136726 and 136727, December 8, 1977).

Furthermore, a number of research scientists have reported significant differences in activity among the 2% glutaraldehydes. In the May 1975 issue of ***Applied Microbiology,*** researchers at the Royal Veterinary and Agricultural University of Copenhagen reported that "the rate of inactivation (of coxsackievirus) was about ten times faster at pH 7.4 than at pH 5." Researchers at the Parkland Memorial Hospital, Dallas, Texas, published a paper in the March 1977 issue of ***Respiratory Care*** on efficacy and compatability differences they found between Cidex (alkaline) and Sonacide (acid), both 2% glutaraldehydes.

In October 1984, Dr. Ascenzi and other Surgikos scientists published a paper "Important Information Concerning the Reuse of Glutaraldehyde-Based Disinfectants and Their Tuberculocidal Activity," in which large differences in surviving organisms were shown among five brands of 2% glutaraldehyde (i.e., Cidex, Sonacide, Glutarex, Omnicide, Steril-Ize). Incidentally, the EPA, in a letter dated May 10, 1985, informed Surgikos that this paper contained misleading and inaccurate information and that it was inappropriate for Surgikos to disseminate these conclusions regarding tuberculocidal claims of others.

The authors also cite the "Draft Guideline for Selection and Use of Disinfectants" to suggest that the testing results in this guideline are more accurate than registered tuberculocidal label claims. These conclusions and data were challenged by the EPA in a letter dated January 24, 1989. The authors should be aware that, as stated on the product labels, "it is a violation of federal law to use this product in a manner inconsistent with its labeling."

The authors give as their reason for citing the draft Guideline the fact that it cited two papers suggesting that 20 minutes at room temperature is the minimum exposure time for tuberculocidal activity by 2% glataraldehyde. One of the papers is authored by Ascenzi and other employees of Surgikos, and is entitled, "A more accurate method for measurement of tuberculocidal activity of disinfectants." This "more accurate method" is a quantitative method that has never been corroborated by independent testing laboratories and, because of lack of corroboration, has never been accepted by the Association of Official Analytical Chemists (AOAC), the organization recognized by the government and industry as the source of validated and corroborated test methods. Furthermore, the paper contradicts the official findings of Surgikos as submitted to the EPA as label support. The other paper, by Collins, also used a quantitative method combined with the use of a filter membrane, which is uncorroborated and not generally accepted.

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