FDC CONTROL

FOOD, DRUG, AND COSMETIC DIVISION

NEWSLETTER

No. 73 FEBRUARY 1985

Chairman's Message

William J. Galle

Happy New Year to each of you! May 1985 prove to be a year of progress and fulfillment for you. This is an opportunity to review the past and to look to the future.

During 1984 there was a continued strong interest in industry in learning more about using concepts of quality control as a means of improving quality and productivity. Numerous companies in the Fortune 500 have been holding in-house educational programs in modern concepts of Quality Assurance. These were usually presented by outsiders and were both "top down" and lateral (across departmental lines). Emphasis has been on both technical (SPC) and managerial aspects needed. "Quality — The Result of Teamwork" is growing in application as well as theory. I recently saw a paper titled, "Individuals Excel, But Teams Win Games". It was a success story about an inter-departmental team made up of personnel from research, manufacturing, engineering, marketing and quality control.

What does all this mean? First -- times are changing. No longer is quality the sole province of a few "professionals". In successful companies, and those getting there, everyone is becoming involved. if you don't believe it read the article by the president of Omark in the January issue of Quality Progress. Secondly -- what should we be doing in the Food, Drug and Cosmetic Division to help these industries understand and implement these concepts? What kind of seminars and educational programs should we be promoting to get the message to all levels in the company and to other disciplines? How can we help them help themselves? A basic message that is coming through today is that every industry is going to find itself competeing on a global basis. To be successful they ar going to have to change their way of doing business if they haven't already. let's hear from you how we can get to those who need the message.

As to what is happening in the division --we now have an active awards chairman. Senior Past FDC Chairman, Harold Cohen, has started work (together with the council) on possible division awards. The Northeast FDA/FDC conference has been scheduled for March 25 in New Brunswick, NJ. The topic is "Irradiation Technology". The SPC educational program will be repeated in Toronto, Ontario on April 8 and 9. ■

THE AMERICAN SOCIETY FOR QUALITY CONTROL

The Society of Professionals Dedicated to the Advancement of Quality

Regulatory aspects of aseptic processing

RONALD F. TETZLAFF

MANAGERS OF FIRMS that manufacture drugs using aseptic processes are well aware of the potential for product contamination at virtually all stages of production. Unlike terminally sterilized products, the products of aseptic processing may not have complete assurance of sterility because of the limits of currently available aseptic validation methods. These limits, together with the wide array of environmental factors and employee practices that can affect sterility, severely restrict the sterility assurance level (SAL) that is attainable and create special burdens and responsibilities for personnel in production and in quality control/quality assurance (QC/QA). Although most knowledgeable personnel are aware of the importance of maintaining appropriate aseptic conditions and of the need for proper validation, a consensus has not yet been reached on the acceptable or preferable methods and techniques for validating aseptic processes. Because of this fact and because new technologies are emerging so rapidly, many issues remain unresolved and open to question. It is therefore essential that all responsible personnel keep informed of both technological developments and regulatory requirements to maintain conformance to current good manufacturing practice (CGMP).

This article offers an FDA investigator's perspective on some of the unacceptable conditions and practices observed most frequently during inspections. Areas in which firms commonly have difficulty satisfying FDA requirements for aseptic process validation will be emphasized, particularly those areas in which noncompliance can result in the need for administrative sanctions (such as recalls or NDA nonapprovals) or regulatory actions (such as regulatory letters, seizures, or injunctions).

Background

Guidelines for validating aseptic assembly. Despite their importance, methods for validating aseptic assembly are among the least well defined of all validation methods. Surprisingly few publications specifically address this issue, and even fewer publications provide in-depth details on validation methods, techniques, and criteria for acceptance.[1-5] The paucity of technical literature, the absence of official guidelines, and the diversity of manufacturing methods and dosage forms undoubtedly contribute to the many misunderstandings and problems that have occurred in this area.

One widely recognized publication that has helped to clarify significantly some of those controversial areas and that has been instrumental in improving aseptic validation practices is the Parenteral Drug Association's *Technical Monograph No. 2*.[1] Nevertheless, controversial issues still exist — especially in areas not covered by the monograph, which is limited to drug solutions produced by aseptic processing. For example, many aseptic assembly processes — such as those used for lyophilized or triturated powders, ointments, and medical devices — do not produce solutions and therefore are not specifically addressed in this monograph. The publication also fails to define physical validation and monitoring requirements for equipment and facilities within an aseptic area.

The CGMPs address some of the minimum acceptable aseptic practices,[6] but they fail to identify or to clarify specifically many of the important fundamental validation issues. FDA recognizes the need for formal guidelines to define more clearly the practices and procedures the agency considers acceptable for validating aseptic assembly. Further guidance in these controversial areas is a priority for the agency, and a draft guideline is currently under review. The guideline cites many of the practices and procedures that constitute acceptable means of complying with certain sections of the CGMPs but that are not legal requirements. It is impossible to predict when or if the guideline will be published, but some of the issues addressed in that document will be discussed in this article.

Validation of related systems. Personnel, components, and manufacturing systems all affect a manufacturer's ability to maintain aseptic conditions during filling operations. Before the aseptic assembly process itself can be validated, it must be established that each of these elements is performing in a suitable and reproducible manner. For example, all components (including containers, closures, sterilizing filters, filling equipment parts, and so on) must be sterilized using equipment that has been properly validated to show a uniform and reproducible sterilizing environment, and sterilization cycles must be shown to be effective for the loading patterns used in production. Because these components are routinely sterilized using any of a variety of methods — including steam, dry heat, ethylene oxide, radiation, and chemicals — it is beyond the scope of the present article to address the elements of sterilization validation, which have been thoroughly reviewed in the literature.[7-10] In general, however, initial validation of equipment and processes should

challenge the systems while they are performing under extreme or *worst case* conditions, to the extent practical. After the initial validation, these systems can be shown to be continuing to perform suitably by using routine physical and/or microbiological testing and revalidation as appropriate.

The ways in which personnel and manufacturing systems can affect aseptic conditions are far too many to discuss here; nevertheless, certain areas deserve special mention because many firms continue to have difficulty conforming to the requirements in these areas. One such area is training of personnel. Because employees are a major source of microbial contamination, thorough and continuous training in aseptic techniques is necessary and should be systematically documented as well.[11,12,15]

Manufacturing systems that are directly related to aseptic filling should be validated separately at the time of installation or after significant changes and should be shown through revalidation and routine physical and/or microbiological testing not to affect aseptic conditions adversely. For example, HEPA air systems should be tested for integrity — using, for example, the dioctyl-phthalate (DOP) test method — to ensure an absence of leaks. Particle counts, pressure differentials, relative humidity, temperature, and airflow patterns should be determined at representative sites with sufficient frequency to demonstrate continuing environmental control. Utility systems in contact with or in close proximity to the aseptic environment, including systems for compressed gases (air, carbon dioxide, nitrogen, argon), water, and so forth, should be initially validated and tested regularly thereafter to ensure continued satisfactory performance.

Inspections. Inspections of aseptic processes are difficult because of the diverse manufacturing methods used throughout the industry and because of the large number of interrelated variables within a given firm that can affect sterility. Determining whether particular practices deviate from CGMPs or whether certain conditions have the potential to render a product adulterated is a challenging endeavor — especially in areas in which there is no universal consensus on how validation should be accomplished and to what extent. In such cases, the FDA investigator must rely on experience and must apply reasonable judgment to determine whether or not an aseptic process is reasonably validated and maintained under suitable control.

This author does not consider an aseptic process to be validated adequately until sufficient testing has established quantitatively the probability of contamination resulting from the aseptic assembly process itself. The initial validation testing data should be based on a sufficient number of replicate studies that simulate actual production conditions as closely as possible to establish reproducibility. Although the specific number of studies and testing intervals have not been standardized by either industry or FDA, such studies generally are performed on multiple, separate days and cover all phases of operation such as start-up, normal operating periods, employee breaks, in-process cleaning, and shift changes. Reasonable prudence and good judgment should be exercised to ensure that validation studies are representative of actual production practices. The examples presented in the remainder of this article illustrate some of the practices observed during recent FDA inspections that have been found to be inadequate to meet requirements for aseptic processing.

Media Fills

Although they are used throughout the pharmaceutical industry, media fills continue to generate controversy. In the absence of any generally recognized preferable method, however, medi fills will probably continue to be used widely. On the one hand proponents of the use of media fills argue that this method en ables the quantitative measurement of contamination rates dur ing the aseptic filling process. Opponents, on the other hand cite the many problems and difficulties in the method, such a the large number of containers required for statistical confi dence, unusual manufacturing conditions that are not amenabl to media fills, and the failure of the method to simulate true con ditions. Undoubtedly, legitimate concerns and problems exist nevertheless, media fills provide an excellent mechanism fo aseptic process validation, and the benefits far outweigh the dis advantages. This is especially true if the method's limitation are recognized and taken into account in the interpretation of th resulting data.

FDA does not require media fills per se, and it recognizes tha better methods may eventually be developed. In most instances however, the use of media fills is currently the only readily available means to determine contamination rates effectively and if a firm does not use them it must have documented valid reasons and suitable alternative validation data. Recent inspec tions revealed, however, that a surprising number of firms hac not subjected their aseptic filling processes to media fill (o equivalent) validation testing and had either inadequate justifi cation or no documented justification at all. For example, sev eral major parenteral manufacturers had not subjected thei aseptic powder filling lines to any formal validation testing. Al though these firms *verbally* cited some of the known variable and uncertainties associated with validation of powder filling they generally had no documented basis for the lack of valida tion. Such deviations from the CGMPs have often resulted in significant regulatory and administrative sanctions includ ing regulatory letters and nonapproval of new drug applica tions (NDAs).

Sample size. A recent inspection of a major antibiotic manufacturer provided an example of aseptic validation that was inadequate because the sample tested was too small. During the normal 8-hr aseptic powder filling period, the firm filled tens of thousands of units. Each validation run consisted of 1 hr of simulated powder filling using sterile lactose powder, after which 20 empty vials and 20 lactose-filled vials were tested for sterility; if test results were negative, the firm considered the validation run to be acceptable. This method of testing clearly fails to validate the filling process: a method using a sample size of only 20 containers would be capable of detecting a contamination rate of only approximately 15% (at 95% confidence levels).[13] Moreover, this particular firm had no *written* specification or limit for validation acceptance criteria. Because the firm's validation system was found to be inadequate, FDA did not allow interstate distribution of products made under the nonvalidated conditions and refused to approve the firm's NDAs. Following this inspection, the firm initiated an extensive program to validate its process properly.

In contrast, another firm routinely tests between 10,000 and 20,000 units for each media fill run. These two examples, however, appear to represent extremes. Lately there has been less controversy over the number of test containers necessary for adequate validation of a media fill run. Several publications have discussed the statistical basis for the commonly accepted 3000-unit minimum sample size, so this needs no further elaboration.

Contamination rates. An area of continuing controversy in

volves the interpretation of media fill results. Obviously, the same data can be interpreted in a variety of ways, and opinions differ on what constitutes acceptable contamination rates.

FDA has not (as of the time of this publication) published written guidelines specifying a minimum contamination rate for media fills. The agency's general position, however, is that terminally sterilized drugs should provide a sterility assurance level (SAL) of at least 10^{-6} and aseptically filled drugs should provide an SAL of at least 10^{-3}. Aseptic processes that are well designed and properly controlled can easily maintain SALs of at least 10^{-} , and in this author's judgment FDA's position is a reasonable one. Firms should be able to establish through media fills that contamination rates resulting from the aseptic assembly itself are maintained at or below this level. In other words, the contamination rate during aseptic filling, based on a 95% confidence level, should be no more than 1/1000. (Of course, unusual manufacturing processes or special considerations may dictate otherwise; in such cases, firms should have documentation of their evaluation and their justification for not maintaining this SAL.) It is important to recognize that validating a process to the 10^{-3} SAL does not mean that FDA is willing to accept one contaminated unit for each 1000 containers on the market. Rather, this is a quantitative measurement — determined by validation data — of the probability that the contamination rate will remain at an acceptably low level.

Some firms have chosen to define their acceptance criteria based simply on the percentage of units found to be contaminated during each individual media fill. For example, some firms have established media fill limits that allow as many as 9 out of 3000 containers to be contaminated (or 0.3%). This method is inadequate because it does not account for the amount of random variation in the estimate. Statistical confidence limits should be used to show how high the true contamination rate may be. In the example cited, in which the observed rate was 9/3000 (0.3%), there was a good chance that the true rate may be higher than the observed rate.

It is important to understand the statistical basis for determining contamination rates. If a certain number of units (R) out of a certain size of sample (N) are found to possess a specific attribute, the sample estimate of the proportion of the population possessing that attribute is $\hat{p} = R/N$ ($\hat{p}$ indicates that the value is an estimate of the actual proportion p).[14] In large samples, the binomial estimate ($\hat{p}$) is approximately normally distributed around the population proportion using the standard deviation $\sqrt{(pq/N)}$, where $q = 1 - p$. There is a 95% chance (0.95 probability) that the range given by $\hat{p} + 1.96\sqrt{\hat{p}\hat{q}/N}$ and $\hat{p} - 1.96\sqrt{\hat{p}\hat{q}/N}$ will include the true population mean (p), where $\hat{q} = 1 - \hat{p}$. This range is called the 95% confidence interval for p. Using the above media fill example (9/3000 contaminated units), the upper and lower confidence limits can be calculated as follows:

$$\text{Upper limit} = 0.003 + 1.96\sqrt{\frac{(0.003)(0.997)}{3000}} = 0.005 \text{ or } 0.5\%$$

$$\text{Lower limit} = 0.003 - 1.96\sqrt{\frac{(0.003)(0.997)}{3000}} = 0.001 \text{ or } 0.1\%$$

Thus, for this example, the confidence interval of 0.1% to 0.5% has a 0.95 probability of containing the true contamination rate; in other words, one can be reasonably sure that these two numbers (0.1% and 0.5%) bracket the true value.

Firms that maintain actual contamination rates below 0.1% usually have noticeably better employee practices and control procedures than do firms with higher media fill contamination rates. If contamination rates are routinely in the range of 0.1% to 0.3%, there is reason to suspect lower levels of control, which usually become apparent through observations during inspections. Contamination rates above 0.3% usually indicate poorly controlled conditions, and inspections of firms with such rates generally reveal significant CGMP problems, which may account for the high contamination rates.

Documentation

Because so many diverse, interrelated systems can affect assurances of sterility and aseptic filling, it is especially important that fail-safe documentation systems detect out-of-limit conditions quickly. These systems should be established to summarize, organize, or tabulate the various environmental data that are routinely collected. Numerous methods are suitable for this purpose, but all have the same principal objective: to summarize the data in such a way that patterns, trends, and especially problems become patently obvious. The need for such systems must not be readily obvious to many pharmaceutical firms because inadequate documentation has been the cause of many of the problems revealed during FDA inspections of aseptic processes.

One of the first areas evaluated in FDA audits is a firm's tabulation or summation systems for each of its environmental monitoring programs. If formal systems are in place, trends are reviewed to determine the degree of control over a prolonged period. Out-of-limit results should have corresponding records showing that resampling took place, as well as subsequent test results. Evaluations of unusual or significant occurrences should be written by the responsible personnel and should include follow-up and corrective actions taken. Selected records will then be audited to determine the appropriateness of the follow-up and corrective actions. Generally, firms with better tabulations have well-documented follow-up and corrective actions. If the tabulation system recognizes and highlights out-of-limit conditions, appropriate follow-up and corrective actions will usually be accomplished.

For some inexplicable reason, however, many firms lack sufficiently organized systems to detect out-of-limit conditions. If a firm has no formal tabulation systems or has systems that appear to be incomplete, the inspection audit is likely to reveal significant problems. It is not uncommon in such cases to uncover major problems — or even out-of-control conditions — that are unknown to the responsible management personnel. For example, a recent inspection of a major parenteral drug manufacturer revealed that repeated microbiological contamination had occurred in a water system and that this contamination had not been recognized by the firm's management despite elaborate computer capabilities for data acquisition, storage, and retrieval. Because the firm did not have a formal tabulation system, a tabulation was made during the inspection. This procedure consisted of simply tabulating by hand the out-of-limit microbiological results from a computer printout several hundred pages long. Once the microbial counts and locations were recorded, a visual examination of the tabulation showed obvious recurring problems at certain locations and during particular time periods.

Further investigation revealed that conditions had been essentially out of control during a one-month period, and this discovery resulted in numerous inspectional GMP observations. The objectionable conditions cited on the official list of observations (FD-483) at the end of the inspection were so obvious once they were pointed out that the QC director expressed disbelief that his own personnel had not detected them. These problems could have been avoided if the firm had instituted a system that would have detected and highlighted the out-of-limit results.

During the inspection of another major parenteral drug manufacturer, it was found that no formal validation of the HEPA air filtration system had been performed. Assuming that HEPA filters were absolute filters, the firm had failed to test their integrity and had not conducted routine microbiological or physical sampling of air in aseptic filling rooms. Instead the firm relied on settling plates and swabs to detect contamination. Significantly, the firm had no written specification defining the composition of HEPA filters, thinking such a specification unnecessary. Subsequent investigation revealed that the firm's entire aseptic processing department contained air filters made of cellulose and asbestos, yet the responsible management personnel were oblivious to that fact. As a consequence, the firm's NDA approval was withheld until the entire plant was reconstructed to eliminate the asbestos filters. As these two examples illustrate, unless formal specifications and formal documentation systems are established, significant out-of-control conditions can exist in a plant without responsible management personnel being aware of them.

Documenting follow-up actions. Another problem commonly found is the failure to document properly the follow-up and corrective actions taken in response to the discovery of out-of-limit conditions, especially if these conditions can affect aseptic conditions and/or assurances of sterility. The most effective systems include a formal notification process initiated by the responsible department each time an out-of-limit test result is obtained. Copies of the record noting the conditions are sent to other appropriate departments such as production, engineering, quality control, quality assurance, and so forth. This copy serves as a directive to resample the area found to be out of limits. If resampling confirms that the original test was not an artifact, an investigation to determine the probable cause is begun immediately and the use of the system in question is discontinued, if necessary, until control can be reestablished. It is especially important to document corrective actions at the time they are taken. Unfortunately, oftentimes only summary memos are prepared — usually at a later date — if any record exists at all. Although these memos are important summaries of the review and evaluation process, they should not be considered substitutes for primary documentation made at the time the actions were taken.

An especially critical area is that of media fill failures, which frequently are not documented sufficiently. For example, one filling line at a parenteral drug manufacturing plant had media fill failures during five of seven consecutive runs over three months' time. The firm continued to use the line for production batches throughout this period. Virtually no formal records existed documenting actions taken to correct this situation, although the firm claimed to have had extensive discussions and to have taken follow-up action during the three-month period. In this instance, the absence of documentation prevented the firm from being able to establish conclusively that the intervening batches had not been exposed to excessive contamination rates.

Documenting artifacts. If initial findings are suspected to be artifacts of testing, all data gathered and actions taken to establish this fact should be fully documented at the time such actions occur. After testing is completed, a written evaluation signed by responsible personnel should cite the justification for suspecting that the test result was an artifact. All too often, the claim is made that the test result was "obviously" a false positive or an artifact of testing, so no written evaluation or justification exists; however, evaluation of the same situation by an FDA investigator might not lead to the same conclusion — particularly in the absence of primary documentation. In such instances, if the firm is unable to demonstrate that the positive results were invalid, it could incur serious consequences.

Environmental Monitoring

A situation frequently found in inspections is that aseptic filling areas and associated controlled environments, such as raw material and component preparation areas and mixing rooms, suffer from inadequate environmental monitoring. Indications of such an inadequacy include the absence of microbiological testing, insufficient testing frequency, limits that are excessive, and insufficient documentation of follow-up and corrective actions following the discovery of out-of-limit conditions.

During the inspection of an aseptic process, the microbiological environmental monitoring program is inspected in a systematic fashion, giving special emphasis to the areas discussed below. The first step in such an inspection is to identify each room in the plant that is used for the aseptic manufacture of drugs. This list is then divided into two categories: the controlled (but nonaseptic) areas used as mixing rooms and for preparation of raw materials and components (containers, closures, and so on) and the rooms used for aseptic filling and for aseptic manufacturing processes such as drying, milling, and blending. Next, the specific use of each room is defined. Production records should be maintained documenting the use of each area and showing periods of activity and inactivity (such as shutdowns). Any modification of equipment or processes that could affect environmental conditions must be carefully evaluated.

A recent inspection of a major aseptic drug manufacturer provided an example of inadequate documentation. The firm had installed a new lyophilizer in its aseptic suite but had not shut down production in the suite during this major modification, which included removal of a wall and installation of a temporary wall. The firm had no written records documenting review, authorization, or approval of the decision to break sterility in the aseptic area. It also had no written installation records and no written evidence of an investigation to determine the potential effect of these actions on aseptic conditions. Pressure differential records showed that the temporary wall had collapsed, but there was no documentation showing repair, review or evaluation of this situation or evidence of follow-up testing by QC/QA to determine the potential effect of the collapse on aseptic conditions.

Quality specifications. The next step in the systematic inspection of an environmental monitoring program is to determine if each processing room — whether controlled (but nonaseptic) or aseptic — has microbiological quality specifications (limits) in writing for room air, room surfaces such as floors and walls, and equipment surfaces. Some firms operate without established written limits or with excessive limits, citing the absence of FDA regulations or guidelines requiring specific limits. Although it is true that there are currently no absolute standards de-

fining microbiological environmental limits, FDA does expect each firm to establish its own appropriate limits. In aseptic filling rooms, a microbiological limit for room air of 0.1 cfu/ft^3 has been accepted by many firms, and the agency considers this limit reasonable.

Air sampling. Another relatively common finding during inspections is the absence of microbiological sampling of the air in both nonaseptic but controlled and aseptic processing environments. In its place, some firms rely on agar settling plates, which have only limited application as a qualitative monitoring method. This method should not be used to the exclusion of quantitative methods such as slit-to-agar air samples, centrifugal samples, or air impingers, which offer the advantages of sampling a measured volume of air and of enabling environmental airborne contaminants to be determined quantitatively. Because airborne contaminants can come from virtually any potential source (air filtration leaks, personnel, equipment, and so forth), it is important that aseptic areas be monitored daily to enable early detection of out-of-control conditions.

Documentation. An environmental monitoring program is only as good as its documentation. During FDA inspections, particular emphasis is given to the follow-up and corrective actions taken whenever out-of-limit conditions are detected. As discussed earlier with reference to media fills, formal summary or tabulation records should be maintained in order to detect changes or trends. Whenever out-of-limit samples have been found, a corresponding formal corrective action report should describe the specific actions taken to evaluate the finding and to correct the problem. Again, it is essential that these actions be documented at the time they occur by the personnel actually involved; summary memos written several days or weeks later are insufficient.

In addition to the specific issues covered above, environmental monitoring should include routine determination of the microbiological quality of floors, walls, ceilings, equipment, and personnel. This testing — using Rodac plates, touch plates, or swabs, for example — provides data to confirm the adequacy of cleaning and sanitizing procedures and also can detect contamination from personnel. The program should also include testing to characterize the isolates recovered, using gram staining, speciation, thermal resistance testing (or *heat shocking*), or other means of identification. It is not necessary to identify the genus and species of every isolate, but the characterization should be sufficient to establish a valid data base for the aseptic environment. This data base can then serve to document the effectiveness of cleaning and sanitizing procedures and can also be invaluable in evaluating initial sterility test failures because the presence or absence of common organisms can be instrumental in deciding the disposition of sterility test failures.

Although detection of aerobic bacteria is the primary function of an environmental monitoring program, the methods used should be capable of detecting the presence of molds, yeast, and anaerobic organisms as well. A decision not to test for such organisms should be fully justified and supported by a substantial data base. It is often the case that molds, yeasts, and anaerobic organisms are routinely detected in aseptic areas by firms performing such testing.

Conclusion

This article has attempted to emphasize that aseptic process validation involves the validation of a wide array of diverse systems, each of which can individually affect sterility assurances Varied environmental factors and employee practices contribut to a dynamic situation, making validation in the absolute quanti tative sense difficult at best. Nonetheless, experience gaine from FDA inspections has indicated that many of the problem most frequently encountered could have been prevented if com mon sense and sound scientific principles had been used.

Adequate formal systems must be established for tabulating o summarizing the large amounts of environmental testing an quality control data that modern manufacturing methods re quire. A system that clearly recognizes and highlights problem and trends is one of the most effective means of ensuring tha systems are maintained under control and that problems do no go undetected. Complete documentation of all follow-up an corrective actions taken in response to out-of-limit condition should be prepared by the personnel involved at the time of th occurrence. Finally, the value of having written summary evalu ations and justifications for whatever decisions or actions hav been taken cannot be overemphasized. Although validation o aseptic processes is undeniably a task involving legitimate, unresolved issues, these issues need not lead to major problems a long as good judgment and sound scientific principles are applied to justify whatever position is taken.

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International News

Submitted by K. Hausman
Embassy of Switzerland Bulletin

8TH CIRCULAR LETTER TO ALL SCIENTISTS IN SWITZERLAND WORKING WITH RECOMBINANT DNA MOLECULES

The Commission for Experimental Genetics of the Swiss Academy of Medical Sciences takes the position that all research done in Switzerland with in vitro recombined DNA molecules should follow the recommended Guidelines and that the responsibility for the correct performance of each research program as well as for the proper instruction of staff is up to the scientist directly the project. Institutional biosafety committees may, in addition to their control function, assist a scientist with advice; the final responsibility, however, rests with the scientist in charge.

The Commission recommends that the American "Guidelines for Research Involving Recombinant DNA Molecules" be followed. The latest complete version of these Guidelines was published in June 1983 in the Federal Register, vol. 48, pp 24556-24581. In the meantime, two supplements to the Guidelines were published in the Federal Register, namely on November 23, 1983 (vol 48, p 53057) and on April 25, 1984 (vol 49, pp 17847-17848). Copies of these Guidelines and of the supplements are available on request from the Commission for Experimental Genetics (c/o Abt. Mikrobiologie, Biozentrum, Klingelbergstr. 70, 4056 Basel).

Regional Councillor Reports

REGION 3 COUNCILLOR JOYCE STECHER:

— Mary Lou Zett has accepted assistant councillor responsibility and Treasurer of the North East FDA/FDC conference. Mary Lou will take over as Region 3 councillor in 1985-86 as Joyce is stepping up to become chairman of her local section.

— The 16th Annual N.E. FDA/FDC conference is scheduled for March 25th in New Brunswick, NJ. The topic will be Irradiation Technology.

REGION 4 COUNCILLOR DON GARDNER:

— FDC will sponsor another statistics course in 1985, dates to be announced, are tentatively April 8, 9 in Toronto.

REGION 12 COUNCILLOR BILL LIEBERMAN:

— Plans to contact each section chairman in Region 12 regarding FDC participation.

REGION 14 COUNCILLOR MIKE ENG:

— Plans moving ahead for the 1985—86 Southwest FDC/FDA conference.

FPI Sets Program on Federal Food Regulatory Developments

WASHINGTON, D.C. -- The sixth annual Food Processors Institute (FPI) program on "Federal Food Regulatory Developments," will be presented April 16, 1985 in Washington, D.C. at the J.W. Marriott Hotel.

The program, presented in cooperation with the National Food Processors Association (NFPA), features an experienced faculty of attorneys and regulatory specialists. The program is designed for food industry lawyers and executives, quality control and government relations personnel, and federal and local regulatory officials. There will be in-depth coverage of recent developments in food regulation by the Federal Food and Drug Administration (FDA), the United States Department of agriculture (USDA) and the Federal Trade Commission (FTC). This will include evaluation of significant regulations and court decisions, and major scientific and policy issues, affecting food production and marketing. The program will focus on such current topics as: sodium labeling, regulations of sulfites in food, control of pesticide residues, processing controls, color additive issues, food irradiation, container integrity requirements, status of artificial sweeteners, food standards and economic regulations, sweetener labeling, diet and health claims in food labeling, meat and poultry inspection and label approval procedures, proposed meat and poultry inspecion and enforement legislation, and food advertising claims.

The program will begin promptly at 9 a.m. on Tuesday, April 16, 1985 and will conclude by 5 p.m. The program will include individual presentations, panel discussions and ample opportunity for questions. There will be a luncheon address on current food law issues by a federal regulatory official. Each attendee will receive a course manual, including detailed outlines, written analysis of current issues and copies of pertinent laws, regulations and court decisions.

Fee for the program is $250.00 which includes a course manual, reference materials, lunch and coffee breaks. Each participant will receive a certificate upon completing the program. As in the past, arrangements will be made for the program to be approved for "Continuing Legal Education" (CLE) credits in those states with CLE requirements.

To register, or obtain more information about the program, contact:

Jill P. Strachan, Ph.D.
The Food Processores Institute
1401 New York Avenue, N.W.
Washington, D.C. 20005
(202) 639-5957

Statistical Quality Control Short Courses

Statistical Methods Applied To Productivity Improvement and Quality Control For The Food Processing Industry:

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For further information contact: Robert C. Pearl, Food Science & Technology Dept., University of California, Davis, CA 95616; phone (916) 752-0980.

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