FDA Turns Back Bid to Reinstate Cyclamates

Artificial noncaloric sweeteners are the backbone of the diet food industry, and their availability is of intense concern to millions of diet-minded, diabetic, or cavity-ridden sweetness lovers.

Thus it may come as a disappointment to many that the Food and Drug Administration (FDA) has sent back a petition submitted by Abbott Laboratories asking that cyclamates, which the FDA banished 4 years ago, be allowed back on the market. The ban was ordered after research indicated that cyclamates might be an agent in causing tumors in the urinary bladders of mice. But many observers believe the scientific basis for the decision was poor, and that pressure by the sugar industry, which was conducting a multilevel advertising and research effort to discredit cyclamates, may have been a strong factor.

Some foreign countries have also banned cyclamates, but others have inaugurated new research projects. The results of a number of these have been published and Abbott officials believe they supply definitive evidence that cyclamates have no carcinogenic or other toxic properties. Last November Abbott presented the FDA with an armload of material from Germany, Japan, the Netherlands, and the United States containing the results of 15 studies and over 300 separate toxicity reports. The studies included lifetime investigations of rat, mouse, and hamster populations ingesting saccharin, cyclamates, cyclohexylamine (the substance cyclamates are metabolized into by some organisms), and the 10 : 1 cyclamate-saccharin combination that has been found to be the tastiest for humans. That should do it, thought Abbott.

Findings Adjudged Inadequate

But the FDA last July thought otherwise. It told Abbott the data were still "inconclusive" and in some cases "ambivalent" and asked the company to work up a massive array of additional data using different rat strains and dealing with such matters as effects on reproductive organs and the cardiovascular system and more information on levels of use, stability, and assay methods. The FDA has agreed, however, to hold a conference on 13 November, where Abbott officials and scientists can present their viewpoints orally.

An Abbott spokesman insists that any good scientist would agree with the company that additional studies are "neither reasonable nor required." He says that the new studies, including a 3-year project conducted at the national cancer research center in Heidelberg, Germany, are far more reliable and extensive than the one that sank cyclamates. The incriminating study, conducted by Abbott, was not designed to evaluate cancer risks but to develop long-term toxicity data on the saccharin-cyclamate combination. Bladder parasites, called nematodes, in the rats could have affected the outcome, as could the fact that some of the saccharin used had an impurity called *ortho*-toluenesulfonamide, which has since been eliminated. At any rate the findings have not been duplicated in the more recent studies. Phillippe Shubik of the Eppley Cancer Research Institute in Omaha says the only real problem with cyclamates has been that large doses of cyclohexylamine have been shown to shrink the testes of rats. He suggests that the only further research needed is to establish maximum permissible dose (this usually involves a safety factor of 100).

Michael Sveda, the chemist who discovered the sweetening powers of cyclamates in 1937, has been on the warpath ever since the new findings were officially disclosed last November at an International Symposium on Artificial Sweeteners held in Hannover, Germany. He claims the original FDA decision was based on a combination of sugar politics and bad science (although consumer activists also strenuously sought the ban). He now accuses the FDA of a "massive coverup of elemental blunders" committed 5 years ago. He thinks the FDA and the National Academy of Sciences, which backed the ban, owe the American people an apology for withholding an alternative to the unhealthful properties associated with sugar.

But the FDA, rendered sensitive by recent criticism that it has downplayed negative findings on new drugs, probably won't back off much from the position it has taken with Abbott. So if cyclamates are ever allowed back on the market, it won't be for quite a while.

Alternative noncaloric sweeteners have been of particular interest to sugar-avoiders since saccharin was taken off the FDA's GRAS (Generally Recognized as Safe) list in 1972 after FDA scientists managed to induce some bladder tumors in rats fed high saccharin doses. It is now approved on an interim basis pending evaluation of a report on saccharin the FDA requested from the National Research Council of the National Academy of Sciences–National Academy of Engineering. The committee's report, now being reviewed within the academy, is supposed to give FDA guidance on whether to further tighten the reins on saccharin. If the committee recommends a ban on its use as a food additive, the Institute of Medicine will move in and decide whether saccharin should be classified as a drug.

These seem to be difficult times for artificial sweeteners. Last July the FDA gave its approval to aspartame, an amino-acid based substance, for use as a table sweetener and as a dry base for dessert-type mixes. But no sooner had it done so than lawyer James Turner and psychiatrist John Olney of the Washington University School of Medicine at St. Louis raised a protest. They say aspartame poses a danger for children because high dosages consumed voluntarily by monkeys have been shown to cause brain seizures. They also say its hazardous qualities are enhanced when ingested in concert with monosodium glutamate. The FDA, pressured also by Senator William Proxmire (D–Wis.), has agreed to hold a public hearing "to resolve the issues raised."

More light may be cast on the artificial sweetener issue next spring, when the NAS intends to devote one of its public forums to sugar and saccharin. There, experts will explore the relative virtues of natural versus synthetic products, regulatory problems, and problems of scientific evaluation and data collection.—C.H.