

SEITZ-FILTER-WERKE

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FILTRIERMATERIALIEN ALLER ART

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December 14, 1973

GESCHAFTSLEITUNG

TO: HEARING CLEARK
Food and Drug Administration

AT: Room 6 - 86
5600 Fishers Lane
ROCKVILLE, Maryland 20852, U S A

Dear Sir:

Department of Health, Education, and Welfare:
Food and Drug Administration (21 CFR Parts 121, 128, 133)
proposed rulemaking on Asbestos Particles in Food and
Drugs, as printed in
Federal Register, Vo. 38, No. 188, Friday, September 28,
1973

The above-mentioned memorandum on "Asbestos Particles in
Food and Drugs" covers the principal question of health
risk resulting from asbestos particles as contained in
beverages, talc, and parenteral drugs.

In said memorandum, the FDA provides for regulations
limiting the use of asbestos-containing cellulose filter
pads in the manufacturing of pharmaceutical products and
finished drugs.

In our experience and from the experience of well-known
producers, the wording as shown in § 133.8 will result
in an immense chain of difficulties not only for the
industries involved but also for the controlling agencies.
Therefore we ask you to reconsider the wording in § 133.8
based on our following comments.

To begin with, please allow us to give you some background
on our company.

Since 1913, the SEITZ-FILTER-WERKE have been the world's
oldest and largest manufacturer of asbestos-containing
cellulose filter pads, of which more than 1,000,000
square metres are produced annually just for the pharma-
ceutical manufacturers. Since our range of products in-
cludes also membrane filters, one can exclude that we may
follow any selfish business interests by our comments.

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We have the impression that in point of technology we may be able to contribute something on the advantages and disadvantages of the systems (i.e. filter pads and membrane filters respectively). The comparison as shown in the attached SEITZ paper "Sterilizing filtration", dealing with advantages and disadvantages of these two systems, may be of assistance to come to an objective judgment of the matter (encl. 1).

For industrial manufacturing and processing of pharmaceutical raw material and finished drugs, substitution of asbestos-containing filter pads by membrane filters as requested in the FDA report, will result not only in a great deal of problems hard to solve. A great number of them cannot at all be produced with the required properties, when not using asbestos-containing filter pads of the clarifying, and sterilizing type respectively.

For example, we point to the PYROGENOUS ADSORPTION only mentioned in said report, but not appreciated in its real importance. Enclosed please find three Special Papers (encls. 2, 3 and 4) which prove such adsorption power of asbestos-containing filter pads. With all certainty, the worldwide high level of pyrogenous-free infusions is to be attributed only to the use of adsorbing sheets made of cellulose-asbestos mixtures. Cellulose pads which contain asbestos do remove even exotoxins, for instance aflatoxins, from parenteral drugs (encl. 5). However, membrane filters do not possess this adsorptive power which is of so eminent importance for the quality of pharmaceutical products.

Other industrial advantages offered by the asbestos-containing cellulose filter pads are mentioned, for example, on pages 14 thru 17 (encl. 1). The commercial production of colloidal solutions in particular protein solution, such as haemoderivates and sera, will be impossible unless asbestos-containing cellulose filter sheets are used. At the present time, for the separation of viruses and bacteria as required for the manufacturing of virus vaccines, there is no other way in point of technology than the filtration by means of asbestos-containing cellulose filter pads. Remember the polio-catastrophy in the United States in the fifties, caused by substituting asbestos sterilizing filter pads by other filter media.

We would like to mention another important application of the cellulose asbestos filter sheets which not necessarily involves the pharmaceutical industry: This is the preparation of virus, bacteria and poison-free drinking water out of contaminated surface water, which might become necessary especially in cases of catastrophic nature. This process can easily be performed with sterilizing cellulose asbestos pads (encls. 6, 7 and 8).

The proposed regulation 133.8 is based on the implication that additional asbestos particles are introduced into the solutions when filtered with the help of asbestos-containing cellulose filter media. To our knowledge there are no scientific papers which prove that point. At the contrary, it is considered to be secured that asbestos particles in comparable magnitude have been identified in filtrates no matter whether filtrated with the help of asbestos-containing cellulose filter pads or - for example - membranes. R. CROUT's FDA-suggested experiments (see the 20 August 1973 report) prove this fact as well as the investigations made by BADAMI and RICKARDS, TBA Rochdale, UK. The results of such research work is collected in our paper "Health Hazards Caused by Filter Sheets Containing Asbestos?" (encl. 9). It cannot be excluded that different techniques lead to failing opinions. The methods as applied to this date of analytical evidence, are in no way coherently sized up and approved. It is widely known that amongst other a ubiquitous minimum amount of asbestos must be accepted in air and water; no regulation can prevent that fact. Likewise, no regulation will eliminate asbestos particles in the range of 10^{-12} g/ml from any parenteral drug.

European standards would not allow to derive conclusive evidence of health hazards due to chrysotile asbestos originating from filter pads.

Possible health hazards caused by asbestos particles are based on the conclusion from the medical reports as listed in the bibliography of the Federal Register 38/188 which states that damages caused in the animal experiment, are based on a 1,000,000,000 higher asbestos dose than ever found in well prepared parenteral drugs.

To come to an appropriate evaluation, the terms involved should be defined in standards and clear to everyone. In this context, how to define "Particle-free and Asbestos fiber-free"?

The tolerances for asbestos should be determined according to type, size and concentration. Such tolerance values should be tuned to their analytical recording possibilities and to the possible hazard involved.

Type of the asbestos:

For Filter pads or sheets, besides cellulose, only chrysotile asbestos is used; same is harmless in comparison with amphibole asbestos referred to in literature as hazardous.

Here we may state that with regard to the allowed maximum asbestos concentration in talc pursuant to § 121.2006 c 2, we believe that a mistake occurred in respect of a health hazard of the mentioned asbestos type.

The geometrical shape and its size:

It appears to us that this point was not yet considered. It is especially the length of the fiber and the fiber diameter which should be of highest importance for any hazards suspected.

The paper published by Smith in Amer. Ind. Hyg. Assoc. I 33 Abstract 162 p. 63, February 1972 (encl. 10) shows that only particles larger than 5 um are believed to be mesotheliom-producing. Particles of less than .86 um do not show any reaction in the animal experiment.

Concentration:

We feel that unless secured evidence is available of dose-response-relationship which can be found through medical experiment, a responsible statement will not be possible.

In accordance with the European pharmaceutical industry, we are of the opinion that based on the GMP asbestos-containing filter material cannot be excluded from the manufacturing process of parenteral drugs. We thereby feel it is absolutely essential to demand a filtrate free of particles (including asbestos fibers) as basically outlined in your proposed rules, but according to our above mentioned thoughts about tolerances.

Furthermore, we feel that exact means of determination of these fiber sizes should be developed. Only this would guarantee that given standards will be observed.

Particles and fiber sizes can be obtained by means of a final filtration with a non-migrating filter media, such as hardened filter paper, sintered glass or matter, membranes etc.

We know that well-known companies in the pharmaceutical field are very concerned with this matter. They are presently preparing their comments, but we are afraid that they will not be ready for distribution before the deadline of December 27, 1973.

Since we feel that these comments will be very helpful to all parties concerned, we ask your permission to present these papers as soon as they become available.

Very truly yours,

SEITZ-FILTER-WERKE
Theo & Geo Seitz
Management

A large, stylized handwritten signature in black ink, likely belonging to a representative of Seitz-Filter-Werke, is written over the typed name. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

10 encls.

Literature to our letter dated Dec. 10, 1973

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