

Mr. Wayne E. Adams
 Acting State Food and Drug Commissioner
 Public Service Department
 Reno, Nevada

OCT 14 1943

Dear Mr. Adams:

Your letter of October 8, 1943, to Mr. Queen with respect to the use of sodium sulfite in foods arrived in his absence from the city. You state that "this state like many other states has ruled that the use of sodium sulfite as a preservative in food products is not permissible in any amount." *Meat (all states)*

We did not know that such a ruling had been made in Nevada. The status of preservatives in general and sulfites in particular varies considerably in different states. It has come to our attention that a number of state laws prohibit the use of sulfites in sausage, others prohibit its use in all meats and meat products, a few contain a general prohibition against the use of sulfurous acid or sulfites in all foods, but in most cases the use of preservatives, including sulfites, is regulated under the general provisions of the food law. In such cases, I believe, it has been generally held that the use of sulfites in meat and meat products violates a provision in most food laws against the use of any substance to conceal damage or inferiority or cause the product to appear of better or greater value than it is. However, sulfites may be used in other foods where this prohibition does not apply.

This somewhat confused situation is due in part to the peculiar effect which sulfites have on meats and in part to the provisions of the Federal Meat Inspection Act with respect to the use of preservatives. The Federal Meat Inspection Act and the Food and Drugs Act of 1906 were passed and became effective at about the same time. The Meat Inspection Act prohibits the shipment in interstate commerce of meats or meat food products which were not prepared under inspection provided by the Bureau of Animal Industry (now Meat Inspection Division, Food Distribution Administration) and marked "Inspected and Passed". In connection with meat food products the Act provided that:

**** Inspectors shall mark, stamp, tag, or label as 'Inspected and Passed' all such products found to be sound, healthful, and wholesome, and which contain no dyes, chemicals, preservatives, or ingredients which render such meat or meat food products unsound, unhealthful, unwholesome, or unfit for human food; and

said inspectors shall label, mark, stamp, or tag as 'Inspected and Condemed' all such products found unsound, unhealthful, and unwholesome, or which contain dyes, chemicals, preservatives, or ingredients which render such meat or meat food products unsound, unhealthful, unwholesome, or unfit for human food, and all such condemned meat food products shall be destroyed for food purposes

The Bureau of Animal Industry has held that sulfites are among the chemicals or preservatives prohibited and has not permitted their use in plants making meat products under government inspection.

The Food and Drugs Act of 1906 contained no prohibitions against the use of preservatives in foods but contained general provisions which were applicable in some cases to preservatives, i.e., a food was deemed to be adulterated "If it be mixed, colored, powdered, coated, or stained in a manner whereby damage or inferiority is concealed; also if it contain any added poisonous, or other added deleterious ingredient which may render such article injurious to health;" Enforcement of the Food and Drugs Act of 1906 was under the Bureau of Chemistry of the Department of Agriculture. Dr. H. W. Wiley at that time was Chief of the Bureau of Chemistry. Prior to 1906 he had been conducting experiments on the use of preservatives in foods to determine whether they rendered such foods injurious to health and had made such tests on foods containing sulfites. From these experiments he drew the conclusion that the use of sulfites rendered foods injurious to health and that such foods were adulterated under the Act. The accuracy of these findings was disputed in many quarters and as a result a board of experts, known as the Remsen Board, was appointed to make a further study of the possible danger resulting from the use of certain products in foods, among them sulfur dioxide and sulfites. The Remsen Board on the basis of its experiments reported that as ordinarily used sulfur dioxide and sulfites did not render food dangerous to health. As a result of this finding the use of sulfur dioxide and sulfites was permitted in foods coming under the jurisdiction of the Food and Drugs Act of 1906 unless such use could be shown to conceal damage or inferiority. Since sulfur dioxide and sulfites were not normal ingredients of foods, it was further required that foods in which used should be labeled to show that fact. Under these circumstances it was permissible to use sulfur dioxide in many foods but not in meat products. Sulfur dioxide has been used very extensively in dried fruits, since under normal conditions damage or inferiority is not concealed. This same situation came about in many States as a result of State laws having provisions similar to the Federal laws.

Mr. Wayne B. Adams

The Food, Drug, and Cosmetic Act of 1938, which superseded the Food and Drugs Act of 1906, contains provisions somewhat similar to those of the Act of 1906. Under its provisions a food is adulterated if it contains poisonous ingredients which may render it injurious to health; also if any substance has been added thereto or mixed or packed therewith so as to make it appear better or of greater value than it is; also if damage or inferiority has been concealed in any manner.

The Food and Drug Administration has not taken action against food products containing sulfur dioxide and sulfites on the ground that they may be injurious to health. Evidence that sulfites are dangerous would have to be based almost entirely on the work of Dr. Wiley. This work was published in 1907 as Part 3 of Bulletin 84 of the U. S. Department of Agriculture. This bulletin has long since been out of print but it is likely to be found in your library. The report of the Remsen Board on sulfites was not published, although a copy of the manuscript is available to anyone who wishes to come here and study it. There has been some work on the toxicity of sulfur dioxide and sulfites in recent years but it has not added a great deal to the work done by Wiley and the Remsen Board, except to show that under certain conditions the treatment of foods with sulfur dioxide or sulfites destroys the vitamin B₁ present in such food. This might constitute adulteration in some foods but hardly so in the case of fruits where the initial content of vitamin B₁ is usually small.

Due to the effect of sulfites on meat products, that is, old and dull colored meat can be rendered red and fresh looking, we are of the opinion that its use in meat is likely to render such meat adulterated under the provisions of the Food, Drug, and Cosmetic Act in that damage and inferiority are concealed or the product made to appear better or of greater value than it is. Actually, however, the Food and Drug Administration does not have occasion to proceed against meat products containing sulfur dioxide or sulfites since any such products entering interstate commerce come under the jurisdiction of the Federal Meat Inspection Act and the enforcement of that Act has eliminated the use of sulfur dioxide in meat products packed in establishments having government inspection.

Very truly yours,

JOSEPH CALLAWAY, JR.

Acting Chief, Division of State
Cooperation

cc WD SF

cc Food Div

cc Dr A R Miller

Meat Inspection Division

Food Distribution Adm

JC:tlc

lmg

10-14-43