

# Research and Analysis on Agricultural Logistics of Sulfites

## —Taking an Example of Mushroom

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### Abstract

Agricultural products are indispensable in people daily diet, and the quality and safety of agricultural products directly affect the health of consumers, so the concern about the logistics of agricultural products in circulation in the process of quality problems in today's society is the development of the necessary preparations. Agricultural products in the circulation process often will be added food additives, and taking mushrooms business for example, in order to maintain the excellent quality of the logistics and transport process, regular addition of sulfur dioxide additive acts as preservation, however, when additive exceeds the state standards, sulfur dioxide food will inevitably bring damage to people's health. Therefore, in the field of logistics, agricultural products after adding sulfur dioxide are explored the effects of it in the national standard and the limitation of food additives, and it is the key to protect consumers.

### Keywords

Agricultural Products Logistics, Sulfur Dioxide, Additive

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### 1. Introduction

In modern society, with the increasing improvement of people's living standards, and gradually deepen exchanges, the degree of attention to diet is also getting higher and higher, but the nutritional value of mushrooms is an essential element to people's concerns. Mushrooms taste very delicious and toothsome, nutrition of them is very rich, people will praise mushrooms, and mushroom in life is often called the "Queen of the plant". The effect of mushrooms is very rich. It is possible to have a cholesterol, and reduce high blood pressure in patients with secondary effects on the elderly. People eat more mushrooms can make their bodies get more help, for

people lacking of calcium, if they have a long-term consumption of mushrooms, it can also help promote the body to absorb calcium, which strengthens the ability to resist direct antibacterial, antiviral, such as osteoporosis, leg cramps and other symptoms, greatly improving the body's immunity; regular consumption of mushrooms can achieve anti-cancer effect, people who are very fat eat more mushrooms will produce an effective of anti-obesity. The most important is that the mushroom juice can replace the role of antihypertensive drugs, as the old saying is that medicine is poisonous, mushroom can be used instead of antihypertensive drugs and it has many advantages more than disadvantages. However, in the circulation of agricultural products in the logistics process, there are many vendors selling mushrooms at the same time, in order to make it more delicious and beautiful appearance, sulfur is usually added as food additives which play a role in the effect of preservation. How much content of sulfur dioxide is contained in food, and it will directly affect our sound in body and mind, thus increasing the importance of detection of sulfur dioxide in mushrooms for food additives is urgently needed [1].

## 2. Abroad Limited Availability of Sulfur Dioxide

With the increase of Chinese modern level of production and exports, as of now, China has been able to be called as the first major exporting countries and importing countries of the world, especially for the export and import of mushrooms has been world-famous. With the gradual increase in China's current level of technology, the annual mushroom production in China has reached more than 100,000 tons, the consumption of dried mushroom and algae in the agricultural sector of our country has become an important pillar of the emerging industry, in the agriculture sector can be ranked second only to the production of food, the ranking has been living in China farming sixth place, which is equivalent to the value into RMB 45 billion yuan. However, due to the saving time and fresh mushrooms relatively short time, many production companies will add mushrooms food additives like sulfur dioxide, the data show that in recent years, adding an excess of sulfur dioxide class of additives, such as Chinese food exports by overseas questioned, for example, in 2007, when China has been criticized several times in a row in Japan and other places, the reason is because the maximum use of mushrooms exported products contain sulfur dioxide has seriously exceeded the maximum limit of the country, with for each country gradually increase the amount of food additives research, we draw a lot of conclusions, such as sulfur dioxide class use of food additives, will not only greatly reduced the nutritional value of the food itself, but also enable consumers to eat cause vomiting, dizziness, asthma and other diseases, which will undoubtedly modern society has hindered progress, so each country for security reasons, have been established and matured sulfur dioxide class maximum level security standards for food additives. For example: China Qingyuan mushroom limits for sulfur dioxide are 0.2 g/kg, Japan sulfur dioxide limits are 30 mg/kg. Thus, it can be seen for the use of sulfur dioxide in food additives, it has caused widespread concern in all countries [2].

## 3. Agricultural Products Circulation of Sulfur Dioxide

People are relying on food to live on this earth, leaving the food, people cannot live a happy life, however, health food, from a certain sense, is affecting people's daily lives. With the rapid development of the logistics industry, agricultural products in the field of logistics will also be a lot of influence, especially on the most widely used processing industry. Due to the rapid development of the food processing technology and improve the science and technology of water products, many manufacturers in order to make their own production of food by the consumers attention and stimulate wider consumption, manufacturers must improve their production of food quality, food quality manufacturers need to rely on the one hand to improve the technical level, on the other hand is more important is the illegal use of food, excess of food additives. Sulfur dioxide is the main component of sulfites and sulfite is our total well known food additive, its role is very wide, in the development of the wine production process is indispensable. For example, a very large effect bleaching, bleach, anti-corrosion and anti-oxidation, therefore, in order to better food sales and the strong support of all countries, manufacturers will be added to foods unscrupulous additives such as sulfites, we all know anything if the amount of increase, then there are certain hazards, food additives, of course, is also true. Sulfite itself is harmful elemental composition, and therefore the amount of sulfite exceeds a certain range, people do not pay attention to diet in the course of the case, overeating sulfite body will have a very great harm, such as will human hemoglobin reduction occurs, some very serious allergies, for example recurrent head ache, occasionally retching, severe dizziness and other symptoms, for added sulfites in foods should attract consumers and manufacturers Note that the

country should move more relevant policies for foods similar sulfite additives have a clearly defined and limited, so for sulfur dioxide in foods or a determination of sulfite for real-life meaning it is very significant [3].

#### 4. Sulphite Contained in the Role of Agricultural Products

**Bactericide:** In real life, drinking has become the public's favorite, every dinner time, wine is essential, however, for example, wine processing process, sulfur dioxide and sulphites understandable but plays a role similar to wine, sulfur dioxide in the ingredients that play a role inside fungicides, wine manufacturing process, often using fruits such as grape wine inside is bound to use, and there will be a large number of bacteria on the skin of the fruit, so the main effect of sulfur dioxide is It can kill bacteria on the skin of the fruit, which play a protective role. Moreover, the most important role of sulfur dioxide is able to maintain the high quality of wine quality, wine brewing process, the sulfur dioxide can purify the role of wine quality, for some brewing process used by the rotten fruit, sulfur dioxide and sulphites effectively hindered the enzyme which contains a powerful oxidant properties, to prevent oxidation properties and a strong inhibition of oxidation of the wine, so as to maintain the proper wine sweet and refreshing, delicious tone uniform high quality.

**Decolorizer:** Sulfur dioxide has a very strong reduction, it is a good reducing agent, sulfite is because sulfur dioxide plays a very big role, it will only be added to foods, sulfur dioxide and sulphite is called good "bleach", after adding food, you can make bad food lose its original color, become consumers liked the color, but the use of sulfur dioxide in excess of additives in food, they often remain many similar sulfite toxic substances in food, diet to consumers brought great harm. Many fruits after a certain period of time after the sale, it will lose its original "juicy" activity, in order to make products like fruits and restored to its original activity, vendor or supplier is selling fruits on sulfur dioxide will be added class bleach, can play either on the surface of the fruit to remove the remaining dirt, you can also play a restore fruit juicy, delicious appearance, after the consumer good sense to promote the consumption of fruit products, and added sulfur-based additives fruit is also ideal for preservation, the preservation effect is greatly increased. In addition, additives such, for the storage of raw fruits, or is maintaining its freshness, acidity increase, adjusted for pasta and so play a significant role. Sulfur dioxide will have a very large dissolved in the acidic environment of the solution, you can play and create acidic conditions for the production role for the surface type of food, can often play a regulating surface pH in food type and the degree of surface type soft food etc. [4].

**Antiseptic:** For many real-life food, as the weather gradually gets hot, or the special requirements of the food itself, etc., influence, need to be sold before the frozen foods are not often heard, for example frozen dumplings, frozen prawns etc. the food is obvious, in order to make frozen food after not lose their freshness, manufacturers can add sulfur dioxide and sulfites food additives, which effectively protects the freshness of food, prevent it the degree of corruption, so there is always sulfite "fresh, preservative" reputation, but also the need to control the amount added. Some scholars have proposed protective effect of sulfur dioxide in food, as well as play a role in food sterilization [5], as well as scholars in accordance with the existing usage of sulfur dioxide, the analysis assumed that this approach is correct, whether it should be continued [6].

**Anti-browning performance:** Regular consumption of fruits or vegetables, such as apples, bananas, oranges, mushrooms, and after some time, often appear on the surface of the fruit has long black spots, like seafood products, for example living prawns there will be a similar phenomenon, there will be a long time after browning phenomenon. Browning is divided into two phenomena, called enzymatic browning, another called non-enzymatic browning. In order to effectively counteract enzymatic browning occur, so it will add sulfur dioxide and sulfites in food additives often fruit or vegetables, it will restrain good fruit or vegetable contained in a large number of enzymes having activity, thereby effectively inhibit the enzymatic browning phenomenon, to ensure the quality of the appearance of the fruit or vegetable and extremely rich in nutritional value. Non-enzymatic browning often occur in some latex-like foods, such people often eat dairy products like milk, or children often like to drink syrup products of non-enzymatic browning phenomenon often occurs, and in dairy products often add sulfur dioxide and sulfites food additives, can effectively inhibit the non-enzymatic browning, maintaining the original delicious milky solution.

#### 5. Conclusion

Agricultural products are the important foods in people's daily diet. Agricultural products in the circulation process, the majority of agricultural products will go through processing and other sectors; in order to maintain

the original quality of agricultural products, color and taste, in most cases, companies will use sulfite salt to maintain the quality of agricultural products, and such behavior that enterprises can quickly produce consumer out, but get little consumers has a lot of damage. With the advent of agricultural product quality and safety problems, people own more and more attention to diet, local governments should enhance the quality of agricultural products in the logistics distribution process to control security. If agricultural products' additives exceeded the national standards, someone responsible for it should be punished; on the basis of it, the consumer should play a supervisory role to expose problems of the agricultural products with excessive additives and they should make the society better than before for everybody.

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