

# Analysis of discoloration of quick-frozen fruits and vegetables

## Detail Introduction :

The discoloration of quick-frozen fruits and vegetables can occur in the quick-frozen processing stage, as in the frozen storage stage and circulation stage. It is mainly because of the action of microorganisms. The growth and reproduction of microorganisms must have a suitable temperature range. Above or below this temperature will cause the life activities of microorganisms to be inhibited, stopped or even cause death. Quick-frozen fruits and vegetables use artificial refrigeration technology to reduce the temperature of fruits and vegetables, which can greatly inhibit the activity of microorganisms and enzymes, and can prevent spoilage to a large extent.



Quick-frozen fruits and vegetables generally have changes in color, flavor, nutrition, etc. Before freezing, quick-frozen fruits and vegetables will take measures to inhibit or inactivate enzyme activity to reduce quality changes caused by the presence of enzymes.

Fruits and vegetables contain polyphenol oxidase, these enzymes oxidize phenol into red and black compounds under the action of oxygen, chlorophyllase oxidatively decomposes chlorophyll. In addition, there are acidic substances in the processing water, it will also cause the product to lose its green color. If there is metal ion, it can also catalyze the browning of the product, and the leakage of the refrigerant can cause discoloration.