

Commonly used low-temperature disinfectants and the usage in the process of production and operation of cold chain food

Types of disinfectant	Main active ingredients and dosages	Usage	Attentions
Chlorine-containing low temperature disinfectant	Sodium dichloroisocyanurate Binary packaging, powder and liquid	<ol style="list-style-type: none"> <li>1. Disinfection methods: spraying disinfection, soaking disinfection and wiping disinfection.</li> <li>2. Disinfectant dosage: 3000mg/L as the active level concentration of low temperature disinfectant under -18 °C, while 10-20min as the actuation duration and about 200ml/m<sup>2</sup> for the spray. 5000mg/L as the active level concentration of low temperature disinfectant under -40 °C, while 10-20min as the actuation duration and 200ml/m<sup>2</sup> for the spray.</li> </ol>	<ol style="list-style-type: none"> <li>1. Low-temperature disinfectants used on site must be legal and effective. Before going on the market, disinfection products shall take the hygiene and safety evaluation and put on record according to the <i>Notice on Technical Requirements of Hygiene and Safety Evaluation for Low-temperature Disinfectants Printed and Issued by the National Health Commission of the People's Republic of China</i> (G.W.B.J.D.H.[2020]NO.1062).</li> <li>2. Disinfection should be strictly carried out in accordance with the scope and method of usage. It is strictly forbidden to use beyond the scope. It is recommended to determine the content of effective ingredients (chlorine-containing disinfectants) before usage.</li> </ol>
Chlorine dioxide low temperature disinfectant	Chlorine dioxide	<ol style="list-style-type: none"> <li>1. Disinfection methods: spraying disinfection, wiping disinfection.</li> <li>2. Disinfectant dosage: strictly follow the product description for usage.</li> </ol>	<ol style="list-style-type: none"> <li>3. While doing the mechanized low-temperature disinfection, the disinfection equipment shall be debugged to make it reasonably match with low-temperature disinfectant, and ensure that the low-temperature disinfectant can cover all six sides of the outer packaging in sufficient quantity; For the first-time usage, the on-site disinfection effect shall be evaluated, and the it can only be used if the disinfection is qualified.</li> </ol>
Dioxide low temperature disinfectant	Hydrogen peroxide or peracetic acid	<ol style="list-style-type: none"> <li>1. Disinfection methods: spraying disinfection, soaking disinfection and wiping disinfection.</li> <li>2. Disinfectant dosage: strictly follow the product description for usage.</li> </ol>	<ol style="list-style-type: none"> <li>4. When disinfecting at low temperature, the technical training of disinfection staff shall be strengthened, ensure the standardization of disinfection operation, and the sufficient and full coverage of disinfectants.</li> </ol>
Quaternary ammonium salt low temperature disinfectant	Quaternary ammonium salt	<ol style="list-style-type: none"> <li>1. Disinfection methods: spraying disinfection, soaking disinfection and wiping disinfection.</li> </ol> <p>Disinfectant dosage: strictly follow the product description for usage.</p>	<ol style="list-style-type: none"> <li>5. Organic matter has a great influence on disinfection effect. When the disinfection object is seriously polluted, it shall be washed or soaked with low-temperature disinfectant before further treatment. Spraying or wiping disinfection is strictly prohibited.</li> <li>6. When preparing, subpackaging and using low-temperature disinfectants, personal protection shall be strictly taken. Overalls, masks, gloves and others shall be well worn so as to avoid direct contact with skin.</li> <li>7. Low-temperature disinfectant is an external disinfectant, which shall not be taken orally. It shall be placed out of the reach of children. If it accidentally splashes into eyes, it shall be washed with water immediately. It shall be treated immediately for any severe case. Do not contact with flammable materials and stay away from fire.</li> </ol>