



Chlorates and Perchlorates

What are Chlorates and Perchlorates?

Chlorate (ClO_3^-) is a substance that is formed as a by-product when using chlorine, chlorine dioxide or hypochlorite. Excessive chlorate can impact iodine uptake in humans, especially among infants and children.

The perchlorate ion (ClO_4^-) occurs naturally in the environment, in deposits of nitrate and potash, in the atmosphere, soil and groundwater. Excessive perchlorate leads to a reduction in the production of thyroid hormone.

Levels of chlorate and perchlorate in chillies is subject to legislation which can vary with the country of sale.



Typical Causes of Chlorate and Perchlorate Contamination

- Chlorine, chlorine dioxide or hypochlorite used for the disinfection of drinking and processing water, cleaning of processing food contact surfaces and equipment are the main causes of contamination.
- Perchlorate can occur naturally in the environment and chilli plants can become contaminated if nitrate fertilizers containing perchlorate contaminate the soil in which they are grown.

How does the Chilli Doctor Technical Team Manage Chlorate and Perchlorate Risk?

- ✓ Knowledge of the supply chain.
- ✓ Knowledge of the levels permitted in the countries of sale.
- ✓ By undertaking a thorough assessment of suppliers to ensure that they can provide legal products before they can be approved.
- ✓ Assessing the level of supplier knowledge about chlorate and perchlorate contamination is adequate.