

YELLOW SUGARS FROM BEETS AND ENVIRONMENTAL SAFETY

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Everyone knows that white sugar due to its distinctive taste is among the basic food. It easily and completely digested and as an energy source has advantages over other food. But the use of excessive amounts of sugar can cause a number of diseases. White sugar, like all refined products, is almost completely devoid of the whole complex of minerals and aminoacids, in contrast to yellow, the bitter along with coloring substances containing organic impurities is necessary for the human body. In Ukraine, there is a tendency to expand the range of sugar products by producing various kinds of yellow sugar beets. On the surface of the crystal in the film crystal solution contains complex minerals and amino acids, including essential. Currently yellow sugars are produced in accordance with the provisional specification approved by regional certification centers. It is important to establish the safety of the product as yellow sugar production process involves a number of operations that can theoretically lead to revenues of dangerous or even toxic substances in its composition. Now the sugar beet is registered in the State Register of pesticides and agrochemicals: Agila, Dan-S, Vanguard. In the production of sugar disinfectants, defoamers, agents are used for reducing scale and other chemicals. As disinfectors formaldehyde, bleach, poisons of amines, hydrogen peroxide, and others are used. These chemicals are used to kill microorganisms in industrial solutions and to disinfect water that comes into production. In order to reduce the surface tension of viscous solutions surfactants are used, to reduce foam defoamers such as «EROL AMC 8076», «EROL HFX 851 MOD 1 F», «ESTER C», «DEFOSPUM HWK», «BREOX FCC», «Rypoks-6», «Propynol B-400», flocculants are used. These substances increase the deposition of suspended particles. As a result, chromatographic studies have revealed the presence of organochlorine pesticides in yellow sugar II and III crystallization, namely heptachlor, DDT, DDE, but their concentration does not exceed acceptable regulation.

KEY WORDS: yellow sugar, safety, organochlorine pesticides, defoamers, disinfectant