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“ENTOLUCHO 20%” WATER RESISTANCE CONTAINER

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In our study, it is based on the gas chromatographic separation of imidaclopride and other components in the drug and its recording by UF-detector. The imidaclopride mass fraction of the product is determined by the grading coefficient using an internal standardized method. Considering the mass fraction of imidaclopride in the drug, considering various density of intolucoxide solution taking into account the density determined in 20⁰C according to the calculation of mass fraction. A systemic, water-soluble concentrate is used against pests of agricultural crops, including pests that affect a wide range of poultry, such as plant louse, trips, scabies and so on prepared form liquid solution concentrate containing 200 mg/l imidaclopride active ingredient.

Impact mechanism. The toxic effect speed is very high. The drug has a sharp contact and systemic nature. Imidaclopride encloses postsynaptic nicotine - energy receptors in the nervous system of insects. As a result, the function of the central nervous system weakens, decreases, insects are not fed and die in a day. The order of preparation of the working solution. It is recommended to use the worktop when it is ready.

The prepared solution should be used immediately. The sprayer should be filled with 1/2 volumes and 1 to 300-400 liters of solution, the drug will be added in full dose, then the remaining amount of water will be mixed and thoroughly mixed. Preparation of a working solution and spraying agent should be carried out in special areas. Then this area should be safe. It is sprayed with no air.

Guidelines on the use of drugs. Crops are also used against sucking insects (such as plant louse, trips, cotton tunnels, whiteheads). It is also partly effective in the fight against excavating insects (termites) and some insecticides (Colorado beetle, aqueous rhizomes). It is ineffective in combating nematodes and spiders. Used with other insecticides and fungicides. The drug is extremely dangerous for bees and is classified as a Category 3 hazard category.

Early or late stroke, wind speeds up to 1-2 m/s; for bees, the protective zone should not be less than 4-5 km, the bee should not be removed from the hive to 96-120 hours. It has toxicological properties for fish. The use of the drug is not recommended at a distance of 500 m from fish farms.

Storage Mode. 2 years from production. In closed containers it is stored at -100⁰C to + 400⁰C.

Pest insects have long-term protection.

Provides high efficiency in greenhouses.

It is highly effective in the use of weather conditions.

Does not have phytotoxic properties.

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The active ingredient of the drug is imidacloprid. The chemical name is 4,5-dihydro-N-nitro-1-[(6-chloro-3-pyridyl)methyl] imidazolidine-2-yleneamine.

Formulas: Molecular - $C_9H_{10}ClN_5O_2$. Molecular weight – 255.7

Structure:

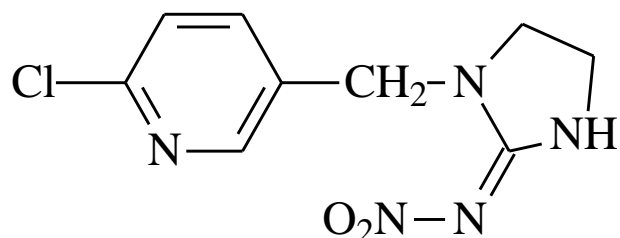


Table 1– Technical parameters

Type of crop	Pest insects	Consumption scale	Implementation period
Cotton	Alif and trips	0.15-0.2	During plant growth
Cotton	Sucker	0.3	During plant growth
Mulberry	Mulberry flatter	0.2-0.3	During plant growth

Technical imidacloprid – powder from white to brown color. Low in hexane, toluene, methanol, acetone, water Entolucho (20%) (here in after referred to as the drug) should be prepared according to the established procedure in accordance with approved technical regulations and according to the approved procedure. The drug consists of the following components: a technical imidacloprid, In this case, I think the solution is prepared on a separate reactor with the water emulsifier. Other emulsifiers and solvents that are not of the same quality as those specified in the technical conditions are permitted.

The physicochemical parameters of the drug should comply with the requirements and principles set out in Table 2.

Table 2 – Physicochemical parameters

The name of the pointer	Norm
1. Appearance	Light liquid color from lighter to brown color
2. Mass fraction of Imidaclopride, g/dm ³	200,0±10,0
3. Mass fraction of acids (calculated to H ₂ SO ₄), %, no more	0,1
4. Stability of 0.2% aqueous emulsion (by drug)	100 cm ³ 2% water soluble emulsion is not allowed after deposition for 2 hours
5. Mass fraction of water, %, no more	0,5
6. Density at + 20 ° C g/sm ³	1,10±0,02

The standard sample of imidoclopride (m) is removed from the pre-extruded 50 sm³ measuring tube (0.0040-0.0050). Dimensions in the tray. 20 sm³ of methanol removed from the purified methanol and mixed until complete melt, and also, with a cleaned bidistilled water, mixed and mixed. All drawings are made with an error of not more than 0,0002g.

Graduation solutions are kept in tightly closed tubs for at least 3 days in the refrigerator. Before use, the solution temperature is maintained to ambient temperature.

Determination of grading coefficients. The chromatogram can be applied to the chromatograph injector using microsprice and the chromatogram will be recorded. Each mixture is chromatized at least three times in the analysis of samples according to the scheme shown in. The grading coefficient K is calculated using the following formula:

$$K = \frac{m_{icc} \cdot A}{S_{icc} \cdot 100}$$

where:

S_{icc} – standard sample of imidoclopride peak surface, relative;

m_{icc} – weighing mass of imidoclopride, standard sample of comparison, g;

A – comparison, %.

Mass fraction of the base substance in the imidoclopride of standard sample in determining the grading coefficient (K), the difference between the maximum difference of values is determined from the average arithmetic value obtained from four determinations not exceeding 0,1.

Mass fraction of acids in sulfuric acid (X_1) is calculated using the following formula:

$$X_1 = \frac{(V - V_1) \cdot 0,00098 \cdot 100}{M},$$

where:

V – 0.02N spent for titration of the tested solution. Sediment volume, sm^3 ;

V_1 – Sodium dimension 0,02 N spent on titration titration control, sm^3 ;

0,00098 – 1 sm^3 Sulfuric acid corresponding to 0.02 N carrier sodium, g;

M – weight of the drug mass, g.

The sum of the allowed error of the analysis result must be $\pm 0.1\%$ when assurance of probability $R = 0.95$. Determination of the stability of a 0.2% aqueous emulsion (by weight).

Stability of 0.2% aqueous emulsion (by drug) is determined according to GOST 16291. XU-1 carafe, made of glass for GOST 21400.

The emulsion is prepared according to A method.

The sample is 0.2 sm^3

Water hardness – 6.8452 mol/dm^3

Temperature – 18-20 $^{\circ}\text{C}$

Deposition of the emulsion diluent can be delayed at room temperature (18-24 $^{\circ}\text{C}$) for 2 hours. Determination of the mass fraction of water.

Detection is carried out according to GOST 23266, Method of electrometric titration by Dyne and Stark method or Fisher method. Determination of drug intensity.

The density of the drug is determined according to Method 1, GOST 18995.1 at $T = 20^{\circ}\text{C}$.

Conclusion. A brief summary of our work is that Entolucho 20% of our product has been studied. Prepared form Impact mechanism The order of preparation

of the working solution Storage mode Technical requirements Safety requirements Control methods Determination of drug appearance. Determination of mass concentration of iodine cleavage Preparation of graduation solutions. Determination of grading coefficients. Calculating the results. Monitoring of results of measurements. The purpose of the study is to study the effects of imidaclopride on insects in entolucho 20% preparation.

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