

Using industrial waste for wastewater cleaning

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Currently, recycling of industrial wastes in the form of gas, liquid and solid, types and their effective use is an urgent task. In the production of food-processing industry of Uzbekistan enough of a variety of waste organic nature which we can use.

In the laboratory, we have synthesized a reagent- precipitator (sodium salt cottonseed - soapstock) of waste oil and fat. Soapstock formed at neutralization of acids, fats, differ content of total fat, the presence of accompanying substances. The method of neutralization is one of the most widely used methods of refinement - cleaning of fats and oils from the accompanying impurities. The interaction of fatty acids with alkalis are forming, insoluble in the neutral fat of salt, which aqueous solutions are due to the high density are separated from the fat. The separated soap mass is the soap stock. The composition of soapstock, particularly cotton, are mixtures of sodium salts of fatty acids - 60-70% phosphatides - 5-6%) the derivatives of gossypol - 3-50/0, stearins - 1-20/0, neutral fat - 20-25% and the rest - chlorophyll, carotenoids, tocopherols, and other fatty-acid composition of soapstock is composed of oleic acid - 30-360/0, palmitic - 20-23% linoleic - 4-4.5%, myristic - 2-4,8% , stearic acid - 1-2% linolenic - 29-300/0 acid. The composition of soapstock, including cotton blends are sodium salts of fatty acids, phosphatides, gossypol derivatives. Due to the content of fatty acids and derivatives of gossypol, and phosphorus compounds in the soap stock, you can use the waste oil industry as a precipitant reagent to precipitate non-ferrous and heavy metal ions from industrial solutions and waste waters.

The synthesized reagent-precipitator is readily available, nontoxic and cost-effective additives for the deposition of zinc, cadmium, copper, nickel and molybdenum from waste solutions and waste water up to 96-99%.