

The invention relates to the processes of water treatment and can be used for purification of natural and waste waters contaminated with radio isotopes. The process comprises a serial water treatment by powdery mineral sorbent and coagulant, at that fulvo acids being preliminarily introduced in water in an amount of 50-300 mg/dm³. The proposed process allows to withdraw a complex of toxic radio isotopes by 92% for cesium -137, by 55.4% for strontium-90, for 98.7% for europium-152 and for 97.2% for samarium (III). While applying the invention the fulvo acids are practically completely withdrawn at the stage of coagulation water purification, which excludes the repeated contamination of purified water.