

The invention relates to processes for obtaining active coal from nutshell and for chemical modification thereof and can be applied for obtaining adsorbents used for treatment of sewage waters, gases, for liquid decoloration and in medicine for human body detoxification.

The process for obtaining active coal from nutshell includes milling of nutshell, separation of fraction of 2...4 mm, which is treated with 87% concentrated orthophosphoric acid in the ratio of 1:4, correspondingly, during 2...15 days at the room temperature with periodic mixing, followed by drying at the temperature of 80...100°C during 12...16 hours. Then the raw material granules are activated during 5...7 hours at the temperature of 380...410°C, it is neutralized with an alkaline up to pH 7, afterwards the mixture is cooled up to the room temperature and it is removed the liquid phase by centrifugation, and the obtained active coal is washed with demineralized water and dried at the temperature of 120°C up to a constant mass.

The process for chemical modification of the obtained active coal includes its oxidation with 30% hydrogen peroxide in the ratio of 1:(9...12), correspondingly, during 60...80 hours, treatment of the obtained product with 1% KOH, neutralization with 0,1N HCl, washing with demineralized water, drying at the temperature of 100...105°C, treatment with melamine or 2-aminopyridine in the ratio of 1:(20...50), correspondingly, at the room temperature during 72...96 hours, washing of the obtained product with demineralized water and drying thereof at the temperature of 100...105°C up to a constant mass.

Claims: 2