

Herein, we describe an original novel method which allows the decontamination of the chromium-containing leather wastes to simplify the recovery of its considerable protein fractions. Organic salts and acids such as potassium oxalate, potassium tartrate, acetic and citric acids were tested for their efficiency to separate the chromium from the leather waste. Our investigation is based on the research of the total reversibility of the tanning process, in order to decontaminate the waste without its previous degradation or digestion. The effect of several influential parameters on the treatment process was also studied. Therefore, the action of chemical agents used in decontamination process seems very interesting. The optimal yield of chromium extraction about 95% is obtained. The aim of the present study is to define a preliminary processing of solid leather waste with two main impacts: Removing with reusing chromium in the tanning process with simple, ecological and economic treatment process and potential valorization of the organic matrix of waste decontaminated