Adsorben Alami Modifikasi Asam (AMA) Berbahan Baku Kulit Kacang Tanah (Arachis hypogea)
Natural Adsorbent Acid Modification (AMA) Made from Nutshell (Arachis hypogea)

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The use of chemicals in the process of remediation of land and water contaminated by heavy metals is considered less environmentally friendly and costly. However, IAARD has found a solution, which is a natural adsorbent material derived from nutshell modified with nitric acid. This technology effectively reduces the heavy metal content (Cr, Ni, Cu and Zn) which is carcinogenic in electroplating waste water (metal coating). The activated nutshell has a good prospect as heavy metal remediator because it has a very high Cation Exchange Capacity (KTK) so it has a high metal absorbency. In addition, this material is easy to obtain and affordable. The use of activated nutshell as a natural adsorbent with a concentration of 0.5 g/l in water with neutral pH is capable to reduce the content of Cr (40%), Ni (62%), Cu (89%), and Ni (85%) in electroplating waste water. The natural adsorbent of nutshell is more effective than active charcoal adsorbents and Zeolites.