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Rethinking De-inking

Today's world is continually promoting people to recycle and "go green". In order to make the products we recycle environmentally safe, certain steps must be followed. De- inking paper is one of the processes in recycling paper. Many people are curious to see if "green" inks affect the de- inking process. This experiment was designed to test two hypotheses. Hypothesis 1 stated that "green" inks would de-ink from paper for recycling. Hypothesis 2 stated that "green" inks made with seeds will de-ink better than those made with fruits or vegetables because seeds usually do not contain as much pigment as fruits or vegetables. "Green" inks were prepared from beets, raspberries, soybeans, and black walnuts. The ink was applied to paper, which was pulped and de-inked using air and soap. The slurry was then formed into paper, and tested for paper brightness. The paper treated with soy ink de-inked the best. Black walnut showed the least de-inking. The raspberry was about the same but it de-inked better than the black walnut. The first hypothesis was supported but the second hypothesis was rejected.