

### Sonication effects on froth flotation for deinking from white ledger

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The recent increase of white ledger (WL) consumption is due to wide use of printer and copier toner ink. Also, used WL is now recycled by applying the froth flotation method to remove ink. In this study, the sonication method was applied to liberate ink from used WL. Results indicated no difference in yield in spite of increased whiteness and ERIC with longer disintegration time. Consequently, 92.9 % of whiteness and 26.9 ppm ERIC were obtained for 30 minutes of disintegration time. Longer disintegration than 30 minutes had no effects on whiteness. On the other hand, higher than 93 % of whiteness was achieved in 2minutes of disintegration time when the ultra-sonication was applied. Application of sonication for 10minutes resulted in 94.4 % of whiteness and 21.6 ppm ERIC. The highest whiteness (95.9 %) was obtained by applying sonication for 20 minutes and froth flotation with oleic acid as a collector under the acidic condition (pH5).