These samples DIBP, DBP, DEHP and BBP were detected. Especially BBP was found in almost every printing ink at low concentration levels. A screening method using GC-MS was developed to determine the impact of these excipients to the packaging material. In and in a paper converting company. For the amount of additives, printing inks and adhesives and processing aids a raw materials, chemical additives, production aids, printing inks, varnishes or adhesives.

Options to reduce the migration of phthalates are firstly careful selection of raw materials by using only unprinted, non-glued and/or virgin fibres. Secondly a reduction within the processing of paper and board may be an option. By heating or washing steps the content of volatile phthalates could be reduced to a certain extent. The third option is the use of functional barriers on the board or additional inner packaging, which is not attractive due to high costs and additional machinery.

Objectives/Research results

The objective of this project is the reduction of phthalate migration from packaging materials made of recycled board into food contact materials made of recycled fibres. It could exceed the special migration limit of 0,3 mg/kg food for DIBP resp. sum of DBP+DiBP. After identifying the relevant migrating phthalates the possibility of reducing their content within the production process (waste water, deinking, heating…) and a mass balance within the value chain could be estimated. The main sources as well as possibilities for action will be reported.

Application/Economic benefits

This study aims to deliver a overview on the phthalate occurrence in material streams of paper mills and paper board manufacturers with the intention of reducing the phthalates within the paper making process. This investment yields food contact materials with low phthalate content. Knowing the phthalate sources and possibilities of reduction yields paper and board products with low phthalate contents, which respect to nowadays and future legislative requirements. These products of high quality are supposed to be effective in advertising and thus provide an economic advantage on the P&B market.

Period of time: 01.01.2014 – 31.12.2015

Remarks

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