

Teilnehmer: Anna Abraham

Bestimmung des Gehaltes von Glycolen in Inkjet-Pigmenttinten



Betreuer: DI Dr. Markus Eibl
Auftraggeber: Mondi Neusiedler GmbH

Abstract:

The following diploma thesis provides an insight into a specific method for analysing ink jet pigment inks. For the characterisation of the humectants the inks from Canon OCE and Hewlett Packard, two global leaders, are used.

The contained polyalcohols have a strong impact on the drying time, particularly on paper. Therefore it is essential to know the exact composition of the ink.

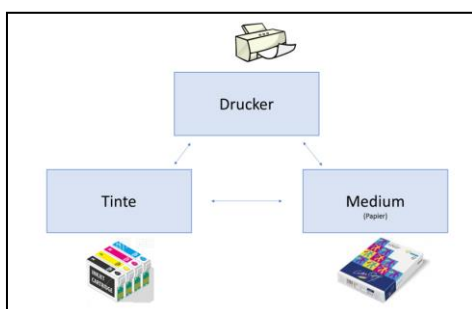
Due to good water solubility, the analysis by high performance liquid chromatography is appropriate, though a certain preparation of the inks is needed. For this purpose, various methods for the separation of pigment and liquid phase are worked out. Each method reveals several advantages.

Furthermore, the inks get characterised by features like dry content, surface tension and pigment content.

To get an overview, the results of the chromatography will be compared according to the features of the manufacturers as well as according to the colours at the end of this thesis. This comparison should provide additional information regarding the drying time of the ink on the paper.

Within the framework of this diploma thesis 17 different inks were analysed. Amongst these are common home printer inks, test inks (so-called drawdown inks) and a clearing solution.

The distinguishing of the inks affirms that the test inks clearly differ from the conventional ones in terms of the amount of the substances. Moreover, a significant difference between the inks of Canon OCE and Hewlett Packard could be determined.



The printing quality depends on the medium, the ink and the printer.

To analyse the ink on the HPLC, a certain preparation is needed.

