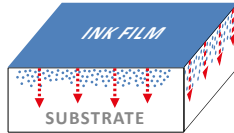## What is migration?

Migration is the transfer of substances from the food packaging into the contents of the pack i.e. the food! There are 3 different types of migration :
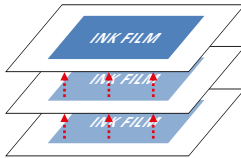
Penetration migration

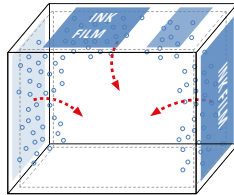Migration from the packaging into the food and vice-versa.

Set-off migration

Migration form the printed to the unprinted side of the packaging through pressure in the printed stack or reel.

Gas or vapour phase migration

Migration by evaporation of volatile substances when heated.

The successful production of fully compliant packaging is heavily influenced by various factors, such as the appropriate selection of inks and coatings, cleaning products, and other printing materials and aids and additives. Since migration not only comes from the primary packaging, we need also to analyse it in the secondary packaging. Migration mainly occurs with small and less complex molecules (<1000 da)

Analytical Service GmbH

Do you have anymore questions?

For more information, please contact at any time :

Argus Analysen Service GmbH

Hannoversche Straße 33

31319 Höver (Sehnde)

Germany

☎ +49(0) 511 | 5471 – 155

@ info@argus-analysen.de

⊕ www.argus-analysen.de

Your first choice for chemical analysis

What is Argus?

Argus Analytical Service is a 100% subsidiary of Jaenecke & Schneeman Druckfarben GmbH - one of the leading manufacturers of low migration printing inks.

Thanks to this connection, the complete Argus Analytical expertise is enhanced and combined with the necessary knowledge of the inks, coatings, and production methods. Argus Analysis Service GmbH offers the most basic test methods for migration analysis. We use the method of the analytical chromatography in combination with mass spectrometry. The chromatography serves the separation of mixtures of substances into their individual components. Then the mass spectrometry provides information on the mass of the separated substances. Like a fingerprint, the migrated substances are characterized and identified by their fragmentation patterns.

Furthermore the Argus Analysis Service GmbH offers further analysis outside of the ink area, such as qualitative and quantitative analyzes of raw materials and impurities.

Argus introduces itself

Gas chromatography (GC)

GC analysis is a method for separating mixtures into their individual chemical compounds. The GC is only applicable for components that are gaseous or vaporized without decomposition (boiling range up to 400 ° C, molecular weight <500u).

High performance liquid chromatography (HPLC)

The HPLC is a liquid chromatography method with which mixtures can be separated into their individual chemical compounds. In contrast to gas chromatography, which is a very good method for separating vaporizable materials, non-volatile substances can be analyzed by HPLC.

Mass spectrometry (MS)

MS referred to methods, the mass of molecules can be obtainedThe MS is an important method of analytical chemistry in the elucidation of the structure of compounds and the composition of mixtures. The qualitative (detection of (un) known substances) and quantitative (how much substance is present) detection of very small amounts of substances is possible.

GC-MS / HPLC-MS

GC-MS or the HPLC-MS is the coupling of a gas chromatograph (GC) or a liquid chromatograph (HPLC) with a mass spectrometer (MS).In this case, the GC or HPLC is used for the separation of the substance and the mass spectrometer for the identification and / or quantification of the individual substances.

Our Offer

Analytical systems

> GC-MS Perkin Elmer
  with autosampler and Headspacesampler

> LC-MS Varian (500-MS Ion Trap)

> IR Bruker ALPHA-Platinum FT-IR-Spektrometer
  with Platinum-Diamant ATR-samplemodule

> Viscosimeter

> Refractometer

> pH meter

> Conductivity

> Tackometer (Tack)

Analysis

> Qualitative und quantitative chemical analysis

> Global- and specific Migrationanalysis
  - Photoinitiators
  - Monomers and Acrylates
  - 10 ppb screening

> Residual solvent determination

> Material Control

> Purity of a substance

> Identification of substances and impurities

> Impurity screening

> Record of IR-spectra of liquid and solid samples