

TAKE ADVANTAGE OF OUR COMPETENCE IN ALL MIGRATION-RELATED QUESTIONS

The phenomenon that **substances migrate** into the food from the food packaging is a multi-layered problem in the true sense of the word. In addition to the raw materials and auxiliary substances used in papermaking, additional substances that are added during the converting operation are also introduced into the finished product. A certification of the **safety of foodstuffs** for human consumption is indispensable.

In its research and industrial projects, PTS addresses the characterisation of raw materials and products. In doing so, the **barrier action** of films, foils and coatings are analysed and tested. Experts conduct in the PTS laboratories determinations for a variety of constituents as well as **migration measurements** under variable conditions. We consequently use this basis to develop the most effective **strategic solution** together with the customer.

The **mineral oil content** is determined in accordance with a PTS method modelled on the offline method for determining aliphatic and aromatic hydrocarbons (MOSH, MOAH) that was prepared by the Federal Institute for Risk Assessment (BfR) in co-operation with the Cantonal Laboratory of Zurich. The barrier effects of films and foils, coatings, adsorbents and coating layers are examined based on migration studies (e.g. into the Tenax® simulant). Measurements of samples and technical products serve to **develop and further optimise the products**.

Our **instrumental analytical facilities** also make it possible to determine softeners (phthalates), diisopropylnaphthalenes (DIPN), benzophenone and other volatile organic substances as well as to conduct efficacy tests of barriers on an expanded spectrum of materials. We develop an individual testing concept according to your exact specifications and customise it to the particular purpose of the product.

Upon request, the results can be placed in a legal context and certificates issued for our customers.

We look forward to solving your individual requirements!

OUR RANGE OF SERVICES AT A GLANCE

As a reliable partner, consultant and analytical service provider, we at PTS develop individualised customer solutions in research and industrial projects.

- » Development of barriers to prevent the migration of undesirable constituents.
- » Production and testing of test samples on laboratory and pilot scales.
- » Determination of undesirable constituents in paper and paperboard such as mineral oil, phthalates, DIPN and other substances.
- » Determination of the migration of constituents such as mineral oil and other substances from paper and board into food stimulants (Tenax migration).
- » Migration tests into dry foodstuffs.
- » Barrier efficiency determination of films and foils, coating layers, coatings and adsorbents for mineral oil hydrocarbons and other substances.
- » Determination of the impact of creasing and scoring, folding and cut edges on the migration properties of folding box packaging and bags.
- » Screening tests for unknown substances.



Dr. Antje Harling
Phone: +49-3529-551-663
antje.harling@ptspaper.de



Dr. Markus Kleebauer
Phone: +49-89-12146-387
markus.kleebauer@ptspaper.de

www.ptspaper.com

Papiertechnische Stiftung

Pirmaer Strasse 37 · DE-01809 Heidenau/Germany
Phone +49 (0)3529-551-60 · Fax +49 (0)3529-551-899



AVOIDING UNDESIRABLE SUBSTANCES IN FOOD PACKAGING

AVOIDING UNDESIRABLE SUBSTANCES IN FOOD PACKAGING

Mineral oil in secondary fibre packaging paper and board can migrate into food in a variety of ways. In the near future, maximum values for the mineral oil content in paper or the maximum permissible migration into food will be formalised in the 22nd ordinance amending the German Consumer Goods Ordinance (also termed the “Mineral Oil Regulation”) planned by the Federal Ministry of Food and Agriculture (BMEL). Verification of the exclusion of migration or the efficacy of a reliable migration barrier can therefore be indispensable when certifying compliance with the safety requirements for materials that come into contact with food.

Certain **softeners** such as **phthalates** are also regarded as undesirable contraries in recycled paper. They enter the paper loop by way of dispersion adhesives or varnishes. According to Recommendation XXXVI of the Federal Institute for Risk Assessment, phthalates are subject to limitations restricting migration into the food, the compliance with which must be verified by analytical testing. Diisopropylnaphthalenes (DIPN) enter the secondary fibre loop by way of carbon copy paper. Their content in the paper should be as low as technically achievable and therefore requires analytical testing.

Other **constituents of printing inks** such as primary aromatic amines (paA), photoinitiators (benzophenones), colorants and optical brighteners (bleeding resistance) or BPA must not transfer to the food. This must also be tested and verified.

PTS, with all its professional expertise on issues regarding analytical testing and food laws, is a reliable partner and would be pleased to provide advice on what is both necessary and worth looking at on a case-by-case basis.

