



CONSULTANCY SERVICES

- Substantive advice on PCR materials
- Set-up of optimized testing plans for compliance verification of PCR
- Documents review, DoCs for raw materials verification
- Compliance assessment based on EU 10/2011
- Toxicological risk assessment e.g. by TTC-concept method

PLASTIC MATERIALS AND ARTICLES FROM PCR

- Overall and specific migration for compliance with EU 10/2011
- Content and migration analysis of Non-Intentionally Added Substances (NIAS)
- Content analysis:
 - metals
 - SVHC
 - alkylphenols
 - bisphenols
 - phthalates
 - content of fluorinated alkyl compounds (PFOS, PFOA, etc.)
 - chain chlorinated paraffins (LCCP, MCCP, SCCP)
 - polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE)

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J.S. HAMILTON OFFER
FOR PCR MATERIALS

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WHAT IS PCR?

PCR materials are recovered plastics that are recycled, i.e. re-processed. Mostly they originated from consumers, from used plastic packaging, which the consumer trash in the bin. The stream of such a waste includes: packaging from food products, packaging from cosmetics, household chemicals or medicaments. Therefore, they are a mixture of such materials as: LDPE, HDPE, PP, PS, PET, laminates and other plastics.

WHY PCR MATERIALS?

Currently, the European Union takes the great emphasis on increasing the usage of recycled plastics, including PCR plastics, for the production of packaging. The reason for this approach is the desire to reduce the amount of waste being landfilled and reduce the impact of the rainfall on the environment. According to the Single Use Plastic Directive of 2019. By 2025, PET beverage bottles are to contain at least 25% recycled plastic. From 2030, PET beverage bottles are to contain at least 30% recycled plastics. At the same time, the market of packaging for food and cosmetic products strives to produce packaging with the highest possible share of PCR material. This is a trend that has already started from for several years. Packaging made of 100% PCR is already available on the market.

SAFETY PCR MATERIALS

Pursuant to the Regulation (EC) 1935/2004 each food contact material must be safe for the final recipient, i.e. the consumer, under foreseeable conditions of use. Regulation (EU) 1934/2004 defines this safety as:

- no chemical release above safe limits,
- no change in food composition,
- no change in the organoleptic characteristics of the food.

Recycled plastics intended to be used in contact with food should also meet the requirements of the Commission Regulation (EC) No. 282/2008. The Work is currently underway to amend this regulation. The current legal status requires the use of PCR plastics behind a functional barrier. The above requirements can also be applied to packaging intended for cosmetics. The packaging manufacturer must ensure constant supervision of the entire production process and the composition in the final product. For this reason, there are additional risks associated with the use of PCR plastics. The most important is the possibility of contamination of the main material with admixtures of other materials. The final product may contain substances that are not allowed to come into direct contact with food, such as printing inks, adhesives, varnishes, coatings. PCR materials may contain substances that are commonly considered harmful and undesirable, such as: bisphenols, phthalates, heavy metals, SVHC substances and others.

It should be remembered that production batches may differ significantly from each other. For this reason, the scope and frequency of tests should be significantly increased. J.S. Hamilton Poland offers the wide range of analyzes to ensure the safety of the produced PCR materials is achieved.

