

Integrated risk assessment and engineering

Evaluation

- ✓ New substances
- ✓ New materials
- ✓ New packaging

Design

- ✓ Application with minimum risks

Optimization

- ✓ Optimized shelf-life
- ✓ Ecodesign
- ✓ Waste reduction

Mono-materials, compliance testing

Multi-materials and – component → transfer without contact

Repeated use

Materials used with flows

Multistep process (industrial treatments, sterilization, microwave, ...)

Material ageing

Numerical tools

- Multiscale modeling of migration
- Probabilistic modeling
- Molecular modeling

Analytical chemistry

- GC-MS, GC-GC-MS, GC-FID, LC-MS, IPC-MS, HPLC-UV
- NMR, FTIR, Raman
- Permeameter
- Microbalance: water, organic solutes

Applications

- Any organic contaminants, nanoparticles
- Thermoplastics, elastomers, varnishes, inks, paper and board
- Compliance testing: food contact, pharmaceutical, cosmetic products

Our partnership

- AgroParisTech
- INRA
- JRC, SCL, ...

Examples of industries

Saint Gobain, Sartorius, Arkema, Solvay, McCain, Vittel, Danone, ...

Case-studies

- Measurement and calculation of transport and thermodynamic properties
- Evaluation of barrier properties of materials
- Cross-contamination of biotechnological devices
- Risk assessment of multilayer hoses