CRMs for the measurement of PCBs and other organic contaminants in food

Over the last three decades organic contaminants such as polychlorinated biphenyls (PCBs), chlorinated dioxins and furans, organochlorine pesticides and brominated flame retardants have been of increasing importance in European environmental and food monitoring programmes. Recent crises such as in Belgium with PCBs and dioxins in chickens and the citrus pulp affair have led to an increasing demand for reliable analyses. Certified reference materials (CRMs) play a key role in the quality of measurements.

Certificate of CRM 719 – non-ortho PCBs in chub.

Tins with sterilised wet fish as PCB CRMs.

For complex substances, production of CRMs is laborious and costly, and there is a shortage in Europe of reliable CRMs. The projects CERMUS and CHRONO have resulted in the production of three high quality CRMs for PCBs, including dioxin-like PCBs in fish and shellfish with unique narrow uncertainties. The ongoing BROCC project includes a feasibility study on the production of CRMs for brominated flame retardants, organochlorine pesticides and PAHs. In DIFFERENCE, a feasibility study is carried out on the production of CRMs for PCBs and dioxins in food and animal feed.