Contaminants in duck and other speciality eggs

Maes o ddiddordeb ymchwil: Chemical hazards in food and feed
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Background

Within the European Union, limits for dioxins and dioxin-like PCBs have been applicable to hen eggs and products since 2002 and these were revised in 2011, with non dioxin-like PCBs also being incorporated into regulations. In 2014, the European Commission indicated that it was considering extending the limits to eggs from other types of bird. However, there was a lack of supporting data and also the proposal did not take into account the increasing popularity of eggs from more unusual species. This study was carried out to determine whether there might be a problem of compliance for the other more commonly consumed non-hen eggs (duck and quail) and also to obtain a snapshot of the contaminant profile of other available eggs. A wide range of organic environmental contaminants was investigated as eggs are known to be a good indicator of localised pollution.

Objective/Approach

Just over one hundred egg samples were collected from various locations across the UK, using outlets such as supermarkets, farm shops and specialist food stores. The majority of the samples were eggs from duck (70) and quail (10), but eggs were also obtained from other species including ratites (ostrich, emu, rhea), goose, turkey, pheasant, peafowl, guinea fowl and gull. All of the samples were analysed for a range of organic environmental contaminants including chlorinated, brominated and mixed halogenated dioxins, furans and biphenyls, (PCDD/Fs, PCBs, PBDD/Fs, PBBs, PXDD/Fs and PXBs), polybrominated diphenyl ethers (PBDEs) and polychlorinated naphthalenes (PCNs) by established methods with gas chromatography-mass spectrometry, using internal standardization with 13C labelled material.

Research report
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