Mary Creagh MP  
Chair  
Environmental Audit Committee  
House of Commons  
London  
SW1A 0AA  

6th June 2019

Dear Ms Creagh,

Thank you for inviting me to give evidence on Tuesday 30th April to your Committee’s inquiry into *Toxic Chemicals in Everyday Life*. During the evidence session, I agreed to write to you with further information on two topics:

- What testing has been carried out on black plastic food packaging?  
- What steps is the FSA taking to reduce exposure to PFOS and PFAS in food?

I have provided responses to both of these topics below. If you have any further questions, please do not hesitate in contacting me.

Yours sincerely

Professor Rick Mumford FRSB  
Deputy Director - Science, Evidence & Research  
Food Standards Agency  
Email: rick.mumford@food.gov.uk
1. What testing has been carried out on black plastic food packaging?
All plastics used for packaging foods are strictly controlled to ensure they are safe, with the food businesses choosing the type of packaging based upon its suitability for the use to which it is put. These regulations are stipulated under European Council Regulation (EC) No. 1935/2004 (also known as the “Framework Regulation”). Article 3 of Commission Regulation (EC) No. 1935/2004 sets out the general requirements that all materials and articles expected, or likely to be in contact with food, shall be manufactured in compliance with good manufacturing practice, so that under normal and foreseeable conditions of use they do not transfer their constituents to food in quantities which could:

- endanger human health; or
- bring about an unacceptable change in the composition of food; or
- bring about deterioration in the organoleptic characteristics (i.e. texture, taste, aroma)

In addition to the Framework Regulation, there are further legal requirements for recyclers to know the quality of the plastic input into their process to ensure the finished plastic complies with the relevant safety/quality legislation. The requirements set out in Commission Regulation (EC) No. 282/2008 on recycled plastic food contact materials and articles will need to be adhered to. Details of these can be found using the link below:

In terms of testing of plastic food contact materials, it is the responsibility of food packaging manufacturers to arrange for this to be carried out. This is because there is a legal requirement to provide a ‘Declaration of Compliance’ with all plastic or recycled plastic food contact materials they sell. This document contains key information about the packaging to ensure that it is safe for food use, such as:

- Functions or known uses (acceptable applications of the packaging);
- Storage conditions which are required to ensure that the packaging is not affected by temperature etc;
- Migration;
- Composition (the ‘recipe’ to which the packaging is made);
- Post-consumer recycling instructions; and
- A declaration of compliance to the legislation in the required country(s).

A migration test on plastic and recycled plastic food contact materials, which includes black plastic (which is often used for the packaging of microwavable ready meals), is required to be conducted. This testing demonstrates that any substances within food packaging do not migrate into the food at undesirable levels under normal conditions and during cooking. It will also demonstrate that the final material is suitable and does not degrade during expected use. Any enforcement officer or competent authority has the right to see a declaration of compliance.
Supplementary information
The colourant habitually used for black plastic food contact materials is ‘carbon black.’ This is a legally permitted plastic additive, as given in Commission Regulation No. 10/2011 on plastic food contact materials (as amended) but has to meet specific purity criteria to be used. Only up to 2.5% by weight can be used in the plastic and the Benzo(a)pyrene content of the carbon black is restricted by law, as is the amount of any chemicals that are capable of being extracted by the solvent toluene.

2. What steps are the FSA taking to reduce exposure to PFOS and PFAS in food?
In their recent Scientific Opinion (published on 13 December 2018), the European Food Safety Authority (EFSA) has proposed a revision of the Health Based Guidance Values for perfluorooctane sulphonic acid (PFOS) and perfluorooctanoic acid (PFOA). It proposed the reduction of the existing Tolerable Daily Intake (TDI) of 150 nanograms per kilogram of bodyweight for PFOS to a Tolerable Weekly Intake (TWI) of 13 nanograms per kilogram of bodyweight, which represents an approximately 80-fold reduction. At the same time, EFSA proposed the reduction of the existing TDI of 1,500 nanograms per kilogram of bodyweight for PFOA to a TWI of 6 nanograms per kilogram of bodyweight, representing a 1750-fold reduction. The consequence of this was an indication that average UK dietary exposure to PFOS and PFOA may be above a level considered safe.

The revised values were based primarily on new epidemiological evidence for a rise in serum cholesterol, associated with exposure to both chemicals and also an apparent link with reduced birthweights, suppressed immune response (PFOS only) and increased levels of a liver enzyme alanine aminotransferase (ALT), which is an indicator of possible liver damage. However, the conclusions by EFSA differed from those of a number of Member State risk assessment bodies, as well as the European Chemicals Agency (ECHA). As a consequence, it has been agreed that the new EFSA TWIs will be treated as ‘provisional’ until the publication of a second EFSA opinion on perfluorinated alkyl substances, which is anticipated towards the end of 2019.

Risk management measures for chemical contaminants in food are normally discussed and agreed at EU level and preliminary discussions have already been held in the appropriate Commission Expert Working Groups, in which the UK plays an active role. However, no immediate actions have been proposed for a number of reasons:

- uncertainty remains about the appropriateness of the proposed new EFSA values and they still need to be confirmed;
- the implications for consumers of the adverse health outcomes remain to be addressed. Furthermore, EFSA did not distinguish between groups of consumers with different sensitivity to those adverse effects;
- the food group containing the highest level of PFOS/PFOA is seafood, the consumption of which has important health benefits. EFSA has consequently been asked to conduct a risk-benefit analysis for seafood consumption (which will also consider additional chemical contaminants) and no measures that might lead to reduced consumption of seafood will be taken before the outcome is published;
• the significance of exposure pathways other than food, for example drinking water and waterproofed outdoor clothing, also needs to be considered; and
• depending on the outcome of the second EFSA opinion on PFAS, any risk management measures may need to be extended to other perfluorinated chemicals. This will be especially important if cumulative effects of different related chemicals are identified.

In terms of previous work conducted by the Food Standards Agency, we began investigating perfluorinated compounds in food as long ago as 2004, when they were first identified as an emerging risk. Following an early attempt to assess dietary exposure, the Committee on Toxicity (COT) was asked to review the available data and, on that basis, it established preliminary TDIs for PFOS and PFOA of 0.3 and 3.0 µg/kg bodyweight respectively. The corresponding COT statements were published in October 2006. In 2008, EFSA conducted its own review and reached similar conclusions, setting the TDIs at 0.15 and 1.5 µg/kg bodyweight.

Although no immediate concerns for consumer health were identified and dietary exposures were well below the TDIs, the FSA has continued to include PFAS in investigations into the occurrence of environmental contaminants in food and expects to be well-placed to participate in any future discussions concerning the need for risk mitigation measures. In the meantime, the FSA is liaising with other UK Government departments and agencies in the establishment of a UK/EU strategy regarding perfluorinated chemicals.

It is worth noting, that in the event of EU exit, the legislative requirements defined in EU legislation will be transposed into UK law.