

The European Commission (EC) has lowered the maximum residue levels (MRLs) for two disinfectants used in the food industry, with the new regulation due to enter into force next year. 

As a result, the fresh produce trade may need to adjust its current usage practices or explore the use of alternative products.

By mid-2015 didecyldimethylammonium chloride (DDAC) and benzalkonium chloride (BAC) - quaternary ammonium compounds (QACs) used for disinfectant purposes - will be subject to a MRL of 0.1 mg/kg in all foods.

The move follows a lengthy monitoring process since 2012 by both food trade bodies and regulatory authorities in continental Europe, which identified unexpected residues of DDAC and BAC above the set limits at that time.

"In 2012 the EC and member states agreed on an enforcement level of 0.5 mg/kg [for DDAC and BAC] as a proportionate risk management measure on a temporary basis," explains Dr Naresh Patel of Scientific Analysis Laboratories (SAL), an analytical laboratory in the U.K.

"At the same time a monitoring program within the EU was set up to enable a better understanding of the source and the magnitude of DDAC and BAC residues in food."

Based on the results of the monitoring data generated by EU member states, Patel says the EC subsequently derived a proposal to set a temporary MRL at the level of 0.1 mg/kg.

Meanwhile, the European Food Standards Agency (EFSA) was requested to assess whether the proposed temporary MRLs for DDAC and BAC were sufficiently protective for consumers.

Following that review, the EC voted at the June 2014 meeting of the EC Standing Committee on the Food Chain and Animal Health (Pesticide Residues section) to re-set the MRLs for DDAC and BAC to 0.1mg/kg.

According to the U.K. Department for Environment, Food and Rural Affairs (Defra), the implementation of the latest regulation is likely to be published in November 2014 following scrutiny by the European Parliament and the European Council.

However, the current guideline levels of 0.5 mg/kg will be maintained for a further nine months after publication as a limited concession to concerns made by the U.K. that the reduction to 0.1mg/kg was unnecessary.

As such, the levels of 0.5 mg/kg will continue to be applied until mid-2015.

"Following the submission of further member state monitoring data the EC proposed that revised statutory levels of 0.1 mg/kg be set for both chemicals for all foods on the basis that the great majority of member state monitoring results indicated residues below that level," a Defra spokesperson explains.

"An exception was results from the U.K. which showed a significant proportion of foods tested with residues at or above 0.1 mg/kg - most significantly in pre-prepared foods, including bagged salads.

"The EC acknowledged the U.K. results but noted that these were relatively small in number - and in its view too small a proportion of the total results obtained to influence the proposal."

Using DDAC and BAC

DDAC and BAC are used in the processing of a wide variety of foods of plant and animal origin, covering most foods consumed by the public. The new MRL of 0.1 mg/kg will apply to all of these foods.

The primary source of DDAC and BAC residues is the result of disinfectant treatment of equipment surfaces, as well as the disinfection of water used for food washing and irrigation.

"Biocide products containing BAC and DDAC are used extensively as disinfectants in food production, including facilities used to prepare and process fresh foods for marketing," the Defra spokesperson notes.

Defra states that the new MRLs set are likely to mean that DDAC and BAC disinfectant uses may need to be adjusted to ensure the new MRLs are not breached.

Alternatively, the agency said users may be required to use alternative biocide products to maintain standards of microbiological control in food production.

Within the U.K., Defra claims stakeholders have been kept informed of developments throughout the process, including those manufacturing and/or marketing the biocide products concerned, as well as trade bodies representing food processors and suppliers - including businesses dealing with fresh and chilled produce such as the Fresh Produce Consortium.

Those contacts are still being maintained while the trade considers adjustments to practices in order comply with the new MRLs, according to Defra.

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