

Phosphonate residues in products exported to the EU

Cautionary Note

Commission Regulation (EU) 396/2005 defines the Fosetyl-Al MRL as the sum of fosetyl, phosphonic acid and their salts expressed as fosetyl. The MRLs for Fosetyl-Al apply to phosphonate residues because phosphorous acid and its salts are included in the residue definition for enforcement of fosetyl.

In early 2014 the European Commission received information from EU Member States and food business operators showing the presence of phosphonates in or on certain products leading to higher residues than the maximum residue level (MRL) of 2 mg/kg laid down in Regulation (EC) No 396/2005 for those products, corresponding to the limit of determination.

EU Commission Regulation (EU) No 991/2014 published in September 2014, increased the MRLs of Fosetyl-Al for a series of fresh produce products (including stone fruit, pomegranates, other). However, these MRLs were only valid for a temporary period, until 31 December 2015. From 1 January 2016, the lower limit of analytical determination (LOD) of 2mg/kg was again applicable unless modified by another Commission regulation. Commission Regulation (EU) 2016/75 published in January 2016 re-instated temporary MRLs for certain tree nuts extended until 1 March 2019, due to data being submitted supporting the extension prior to 31 December 2015 (with work to apply for a full import tolerance underway). Modification to MRLs for blackberry, celeriac and fennel may be anticipated due to data submitted before the end of December 2015 and evaluated by the European Food Safety Authority (EFSA).

In the context of the EU, it is the responsibility of food business operators to find solutions to ensure compliance with the 2mg/kg MRLs, again applicable from 1 January 2016.

While Fosetyl-Al is only registered for a few crops in South Africa, a number of fertilizer products (a. phosphate fertilizers, soil or foliar; b. soil conditioners and c. plant extracted products); bio stimulant products; other (adjuvants, buffering agents) used in South Africa may include phosphonates, not disclosed on the product label, which can result in phosphonate residues which may exceed the EU maximum residue limit (MRL) for Fosetyl-Al (sum of fosetyl, phosphonic acid and their salts, expressed as fosetyl) which reverted back to 2 mg/kg from January 2016, for certain fruit and vegetable crops. Hence, regarding several fruit and vegetable exports to the EU, including stone fruit, pomegranates, other as indicated above, use of such products containing phosphonate crop inputs will likely be threatened by the return to the default MRL (2mg/kg).

This cautionary note is provided to inform growers and stakeholders about the issue, to caution on the use of Phosphonate containing products AND products that may contain phosphonates unknowingly, due to the risk of residues being exceeded regarding exports to the EU. It is also highly recommended that residue analysis is completed in cases where products have been applied to confirm MRL levels are not exceeded (stone fruit, pomegranates/other - 2mg/kg; pome fruit 75mg/kg; table grapes 100mg/kg; Avocado 50mg/kg).

Regarding products exported to the German market and the related secondary MRL requirements (private, non-regulatory MRL requirements) imposed, in trying to manage the issue which may potentially add an additional residue or exceed the required MRL, it is recommended to do residue testing to ascertain the potential risk regarding this concern.

Note: Phosphonates (or phosphonic acids) are a broad family of organic molecules based on phosphorus (chemical symbol P), carbon (C), oxygen (O) and hydrogen (H). Phosphonates include the chemical group: $\text{CH}_2\text{-PO}_3$.

As extracted from the above EU regulations "the residue definition for monitoring applicable to fosetyl comprises the parent compound fosetyl, the degradation product phosphorous acid and their salts. Salts of phosphorous acid are named phosphonates".

(Compiled on behalf of the Phosphonates Focus Group under HORTGRO)

