

Reference Material

Free acids, esters and glucosides of acidic herbicides in fennel seeds

P2512-RMFe



Summary

Reference material P2512-RMFe is validated in the ring test P2512-RT, which is organised, performed, and evaluated according to the requirements of DIN EN ISO/IEC 17043 and the “International Harmonized Protocol”. DIN ISO 13528 is considered during the evaluation of the submitted results and during homogeneity testing. Details related to the applied statistics are summarised in the full specification, which is provided after purchase of the reference material.

Reference material P2512-RMFe consists of 100 g of milled fennel seeds, which are spiked with free acids, esters, and conjugates of acidic herbicides (see table 1).

The reference material is validated in ring test P2512-RT with 14 laboratories. The spiked levels as well as the assigned values, which are calculated of the results of the participants of the ring test P2512-RT, are summarised in table 1.

Table 1. Spiked levels and assigned values

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
2,4-D (sum) with hydrolysis spiked as 2,4-D ethylhexyl	0.044*	0.0415	13
	0.066		
2,4-DB (sum) with hydrolysis spiked as 2,4-DB ethylhexyl	0.026*	-	5
	0.038		
2,4,5-T (sum) with hydrolysis spiked as 2,4,5-T ethylhexyl	0.076*	0.0700	13
	0.11		
2,4-Dichlorprop (sum) with hydrolysis spiked as dichlorprop glucoside	0.14*	0.145	13
	0.24		
Fluazifop (sum) with hydrolysis spiked as fluazifop methyl	0.053*	0.0541	13
	0.055		
Fluroxypyr (sum) with hydrolysis spiked as fluroxypyr methylheptyl	0.059*	0.0540	13
	0.085		
MCPA (sum) with hydrolysis spiked as MCPA ethylhexyl	0.090*	0.0784	13
	0.14		
4-CPA (without hydrolysis)	0.033	0.0323	12
Dicamba (without hydrolysis)	0.099	0.0984	9
Fenoprop (without hydrolysis)	0.063	0.0664	11
Fenoxaprop (without hydrolysis)	0.038	0.0392	11
Triclopyr (without hydrolysis)	0.077	0.0801	13

* Calculated of the concentration level of the respective spiked ester or glucoside.

The results related to acidic herbicides, which are spiked as esters or glucosides are evaluated after hydrolysis as the sum of free acids, esters, and conjugates, expressed as the free acids according to the residue definitions. Acidic herbicides, which are spiked as free acids are evaluated related to the results without hydrolysis.