

# Reference Material

## Free acids, esters and glucosides of acidic herbicides in wheat flour

P2429-RMWf



## Summary

Reference material P2429-RMWf is validated in the ring test P2429-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 P2429-RMWf consists of 120 g of wheat flour, which is spiked with free acids, esters, and conjugates of acidic herbicides (see table 1).

The reference material is validated in ring test P2429-RT with 9 laboratories. The spiked levels as well as the assigned values, which are calculated of the results of the participants of the ring test P2429-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	0.22*	0.225	9
spiked as 2,4-D glucoside	0.39		
2,4-DB (sum) with hydrolysis	0.083*	-	7
spiked as 2,4-DB ethylhexyl ester	0.12		
2,4-Dichlorprop (sum) with hydrolysis	0.14*	0.121	9
spiked as 2,4-dichlorprop methylheptyl ester	0.21		
Fluroxypyr (sum) with hydrolysis	0.016*	-	6
spiked as fluroxypyr methylheptyl ester	0.023		
MCPA (sum) with hydrolysis	0.061*	0.0615	9
spiked as MCPA glucoside	0.11		
Clopyralid (free acid, without hydrolysis)	0.054	0.0563	7
Dicamba (free acid, without hydrolysis)	0.048	-	6
Fenoxaprop-P (free acid, without hydrolysis)	0.066	-	7

\* 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 acid according to the residue definitions.

Acidic herbicides, which are spiked as free acids are evaluated without hydrolysis.