

Reference Material of  
***rolling proof 2023***  
Multi-method pesticides in  
carrots  
P2321-RMCa



- Summary -

Please note:

Reference material P2321-RMCa is a validated control material and not a certified reference material. The reference material is validated in ring test P2321-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 P2321-RMCa consists of 120 g of a carrot homogenate, which is spiked with 30 multi-method pesticides (see table 1). The corresponding unspiked carrot homogenate (120 g) is available as blank material P2321-BLCa. The blank material is free from all spiked parameters at a level of 0.01 mg/kg (not detected).

The reference material is validated in ring test P2321-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 P2321-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-DDT	0.059	0.0555	9
4,4-DDE	0.022	0.0208	9
4,4-DDT	0.019	0.0197	9
Aldrin	0.026	0.0262	9
Chlorfenvinphos	0.033	0.0325	9
Chlorothalonil	0.045	0.0308	9
Chlorthal-dimethyl	0.041	0.0371	9
Clomazone	0.028	0.0303	9
Cyazofamid	0.030	0.0292	9
Dicofol, 4,4' -	0.037	0.0312	8
Diphenylamine	0.045	0.0380	9
Endosulfan sulfate	0.045	0.0420	9
Ethofumesate	0.055	0.0555	9
Fluazifop-P	0.24	0.232	8
Haloxifop	0.082	0.0743	9
Isofenphos	0.039	0.0350	9
Linuron	0.020	0.0209	9
Methiocarb	0.051	0.0523	9
Metribuzin	0.044	0.0280	9
Oxamyl	0.025	0.0247	9
Pentachloroaniline	0.051	0.0467	9
Phenthoate	0.043	0.0420	9
Prometryn	0.020	0.0201	9
Prosulfocarb	0.069	0.0653	9
Quizalofop-ethyl	0.13	0.126	9
Tebuconazole	0.21	0.189	9
Tefluthrin	0.066	0.0617	9
Tepraloxydim	0.071	0.0667	9
Terbuthylazine	0.026	0.0269	9
Trifluralin	0.030	0.0283	9