

# Validated Reference Material

## Glyphosate, AMPA, and glufosinate in wheat flour

P1601-RMWh

- Summary -



Please note:

Reference material P1601-RMWh is a validated control material and not a certified reference material. The reference material consists of 200 g of wheat flour, which is spiked with glyphosate, AMPA and glufosinate. The reference material is validated in ring test P1601-RT with 11 laboratories. The spiked levels and the assigned values, calculated of the results of the participants of the ring test P1601-RT, are summarised in table 1.

The corresponding untreated wheat flour (200 g) is available as blank material (P1601-BLWh).

*Table 1. Descriptive statistics*

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total No. of results
Glyphosate	0.037	0.034	11
AMPA	0.055	0.050	11
Glufosinate	0.076	0.085	11

## Homogeneity testing

Seven samples of the test material are used for homogeneity testing. Each subsample is analysed in duplicate (table 2). The results confirm the homogeneous distribution of the analytes in the test material and the spiked levels.

Table 2. Results of the homogeneity testing

Subsample No.	Extraction No.	Glyphosate [mg/kg]	AMPA [mg/kg]	Glufosinate [mg/kg]
1	1	0.032	0.052	0.079
	2	0.035	0.052	0.080
2	1	0.031	0.046	0.077
	2	0.039	0.051	0.087
3	1	0.032	0.050	0.080
	2	0.032	0.045	0.076
4	1	0.035	0.042	0.080
	2	0.032	0.052	0.083
5	1	0.032	0.051	0.078
	2	0.032	0.052	0.083
6	1	0.035	0.045	0.078
	2	0.032	0.045	0.091
7	1	0.031	0.053	0.080
	2	0.032	0.046	0.082
Mean [mg/kg]		0.033	0.049	0.081
Standard deviation [mg/kg]		0.0021	0.0035	0.0039
Coefficient of variation [%]		6.5	7.3	4.8
Spiked level [mg/kg]		0.037	0.055	0.076
Recovery of the spiked level [%]		89	89	107

## Stability testing

One subsample of test material was stored for stability testing at -18 °C in the dark. After the deadline of results reporting, the test sample is analysed in duplicate for all parameters (table 3). Recoveries of  $\geq 96$  % compared to the mean value of the homogeneity testing confirm the stability of all parameters throughout the whole testing period.

*Table 3. Results of the stability testing*

Parameter	Spiked level [mg/kg]	Mean level at homogeneity testing [mg/kg]	Result of stability testing sample 1 [mg/kg]	Result of stability testing sample 2 [mg/kg]	Mean value of the stability testing [mg/kg]	Recovery compared to mean of the homogeneity testing [%]
Glyphosate	0.037	0.033	0.035	0.034	0.035	105
AMPA	0.055	0.049	0.051	0.052	0.052	106
Glufosinate	0.076	0.081	0.075	0.081	0.078	96