

Technical Datasheet

Analysis Name:	Determinantion of Glyphosate, AMPA and Glufosinate by LC-MS/MS
Method Number:	LIBR 130
Scope Application:	Description of an in-house method for quantitative determination of Glyphosate, Aminomethylphosphonic acid (AMPA) and Glufosinate by liquid-chromatography tandem mass-spectrometry (LC-MS/MS) after FMOC-derivatization
Description:	A 1-g test portion is supplemented with isotopically labelled internal standards. Water (10 mL) is then added and the resulting slurry is thoroughly shaken. A liquid-liquid clean-up is performed with dichloromethane (5 mL). After centrifugation, an aliquot (0.5 mL) of the supernatant is taken and the analytes are derivatized with 9-fluorenylmethoxycarbonyl chloride (FMOC-Cl) at pH 9 and at room temperature for 15 min (structure of the derivatized compounds is shown in Figure 2). The derivatization reaction is then stopped by addition of formic acid and the solution is washed with dichloromethane. After centrifugation, the supernatant is filtered and injected into the LC-MS/MS instrument. The derivatized analytes are analysed in selected reaction monitoring (SRM) mode by negative electrospray ionisation (ESI).
Sample Weight Required:	100 g
Method Reference:	-
Analytical Platform:	LC-MS/MS
Special Information:	Method in process for accreditation ABNT ISO 17025: 2017.

Analyte Reported	Alias	Unit of Measure	Typical Limit of Quantification	Uncertainty
Glyphosate	-	mg/kg	0.010	< 20 %
Glufosinate	-	mg/kg	0.010	< 20 %
AMPA	-	mg/kg	0.010	< 20 %