

Supplementary Information

Quantification of Glyphosate and AMPA by HPLC-ICP-MS/MS and HPLC-DAD: A Comparative Study

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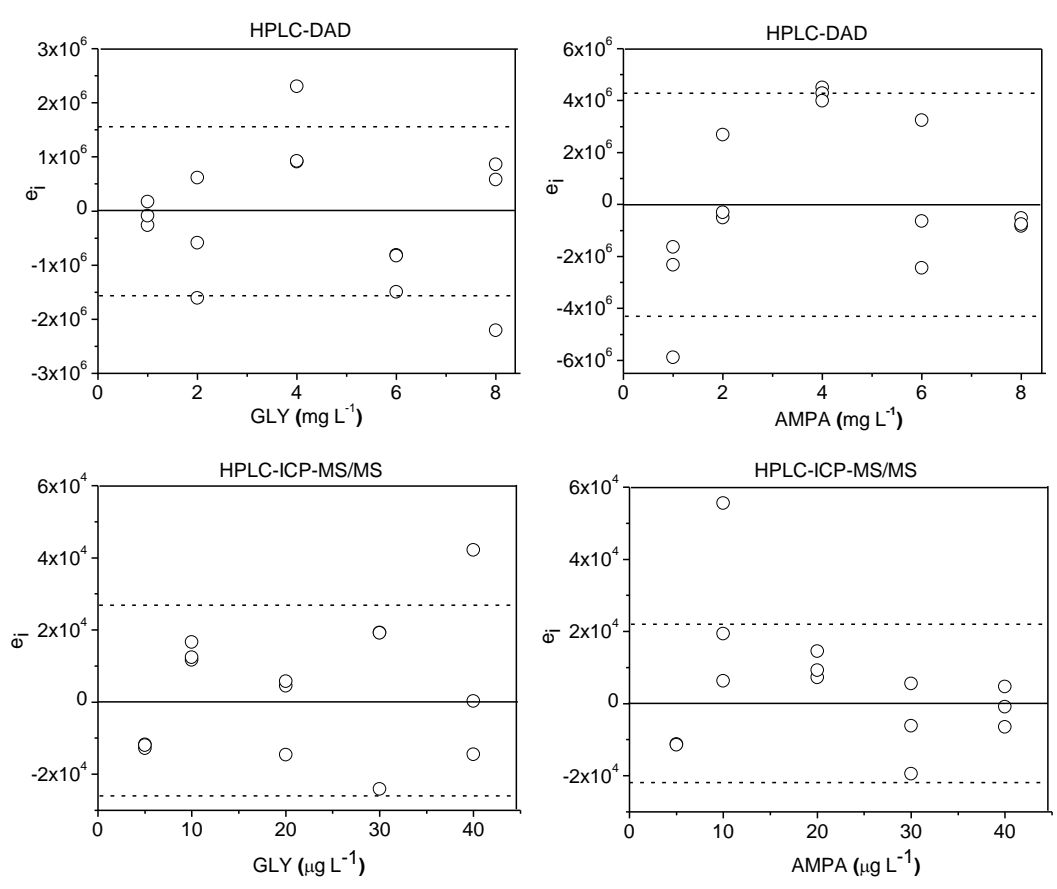


Figure S1. Exploratory graphs of regression residuals from the glyphosate and AMPA curves by HPLC-DAD and HPLC-ICP-MS/MS, indicating the respective extreme values diagnosed by the Jackknife test (e_i = regression residue).

Table S1. Comparison between the angular coefficients of the analytical curves obtained by HPLC-DAD at 250, 260 and 264 nm for glyphosate and AMPA

Analyte	Detector / nm	Angular coefficient	<i>t</i>	<i>t</i> _{crit}
Glyphosate	250	2208471.8	11912.26	2.06
	260	3521271.1		
	250	2208471.8	29313.62	2.11
	264	4080381.0		
	260	3521271.1	9801.51	2.11
	264	4080381.0		
AMPA	250	6796991.9	15573.51	2.11
	260	10630076.2		
	250	6796991.9	18101.95	2.10
	264	11276925.0		
	260	10630076.2	5291.52	2.07
	264	11276925.0		

t: statistical test; *t*_{crit}: tabulated value; slopes differ when $t > t_{crit}$; AMPA: aminomethylphosphonic acid.

Table S2. Tabulated values and statistics of normality, homogeneity and independence of regression residuals

	HPLC-DAD			HPLC-ICP-MS/MS		
	Normality (Ryan-Joiner)	Homogeneity (Levene modified)	Independence (Durbin-Watson)	Normality (Ryan-Joiner)	Homogeneity (Levene modified)	Independence (Durbin-Watson)
GLY	R = 0.98011 $R_{crit} = 0.90876$ –	n = 12 $t_L = -250874.63$ $t_{crit} = 2.14$	d = 1.85643 dL = 0.97448 dU = 1.33055	R = 0.97995 $R_{crit} = 0.92129$ –	n = 14 $t_L = -1913.43$ $t_{crit} = 2.14$	d = 1.58416 dL = 1.10570 dU = 1.37009
AMPA	R = 0.91474 $R_{crit} = 0.90876$ –	n = 14 $t_L = -351908.88$ $t_{crit} = 2.14$	d = 1.59110 dL = 1.04573 dU = 1.34391	R = 0.98339 $R_{crit} = 0.92129$ –	n = 14 $t_L = -1602.72$ $t_{crit} = 2.14$	d = 1.43189 dL = 1.04573 dU = 1.34391

R: Ryan-Joiner correlation coefficient; R_{crit} : tabulated value; n: number of observations; t_L : Levene statistics t ; t_{crit} : tabulated value; d: Durbin-Watson statistic; dL: lower critical limit; dU= upper critical limit; AMPA: aminomethylphosphonic acid; GLY: glyphosate; HPLC-DAD: high performance liquid chromatography with diode array detector; HPLC-ICP-MS/MS: HPLC using inductively coupled plasma with triple quadrupole mass spectrometer.

