

ELECTRONIC SUPPLEMENTARY INFORMATION

A rapid dispersive liquid-liquid microextraction of antimicrobial onion organosulfur compounds in animal feed coupled to gas chromatography-mass spectrometry

Marta Pastor-Belda¹, Natalia Arroyo-Manzanares^{1*}, Kateryna Yavir², Paloma Abad³, Natalia Campillo¹, Manuel Hernández-Córdoba¹, Pilar Viñas^{1*}

¹ Department of Analytical Chemistry, Faculty of Chemistry, Regional Campus of International Excellence "Campus Mare Nostrum", University of Murcia, E-30100 Murcia, Spain

² Department of Physical Chemistry, Faculty of Chemistry, Gdańsk University of Technology (GUT), 11/12 G. Narutowicza St., 80-233 Gdańsk 80-233 Poland

³ DMC Research Center S.L.U., Camino de Jayena no. 82, E-18620 Alhendín, Spain

*Corresponding author:

Prof. Pilar Viñas

Department of Analytical Chemistry

Faculty of Chemistry

University of Murcia

E-30100 Murcia

SPAIN

Tel.: +34 868887415

FAX: +34 868887682

e-mail: pilarvi@um.es

Table ESI1
Relative standard deviations for the different methodologies

Procedure	Concentration, $\mu\text{g g}^{-1}$	Repeatability ^a , %RSD		Reproducibility ^b , %RSD	
		PDS	PTSO	PDS	PTSO
DSPE	0.5	14	16	17	22
	5	15	14	19	15
DLLME	0.1	9.7	13	10	13
	2	9.5	11	9.8	11

a. n=9

b. n=15 (3 days)

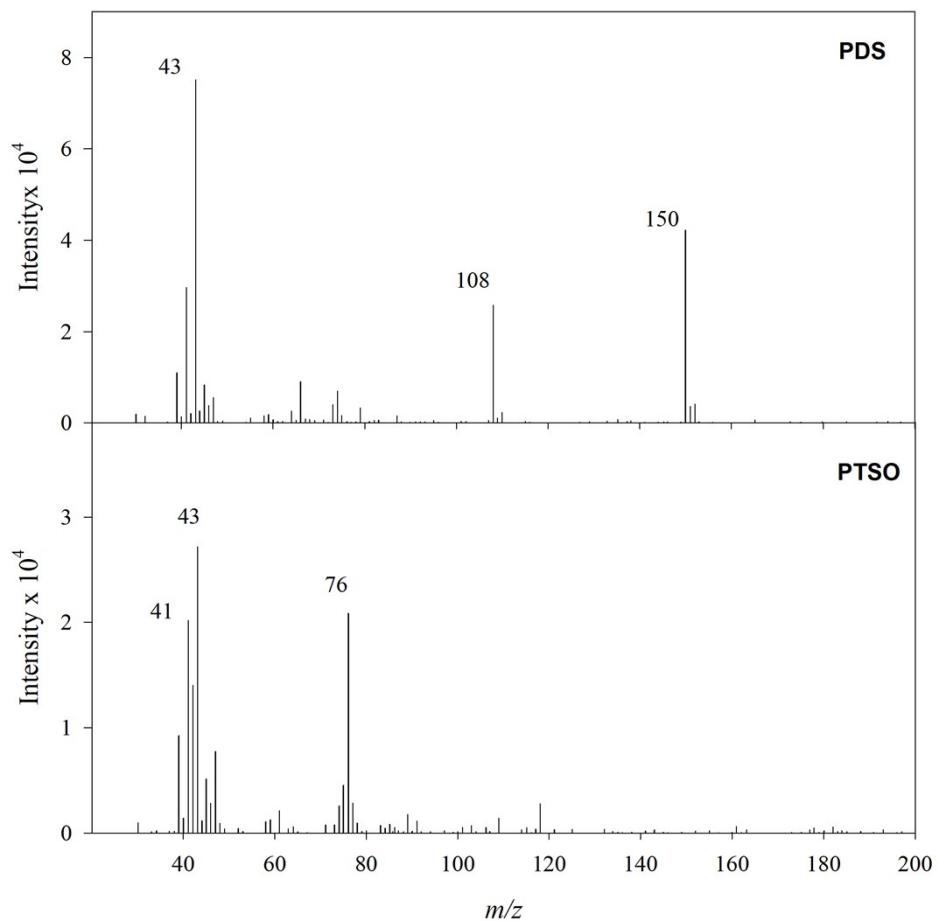


Fig. ESI1 Mass spectra of organosulfur compounds, PDS and PTSO

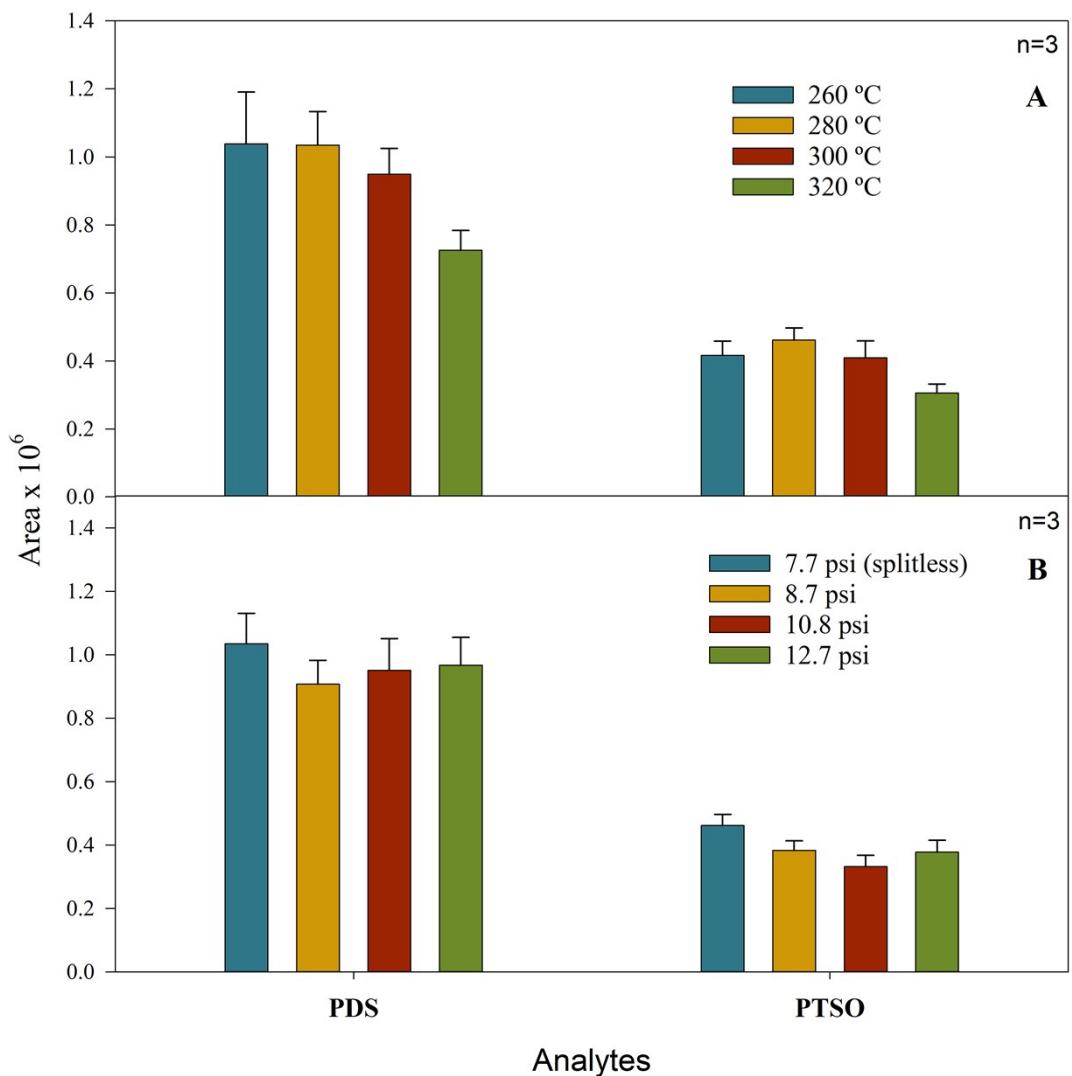


Fig. ESI2 Optimization of the GC injection: A. Inlet temperature; B: Inlet pressure during the first 0.5 min

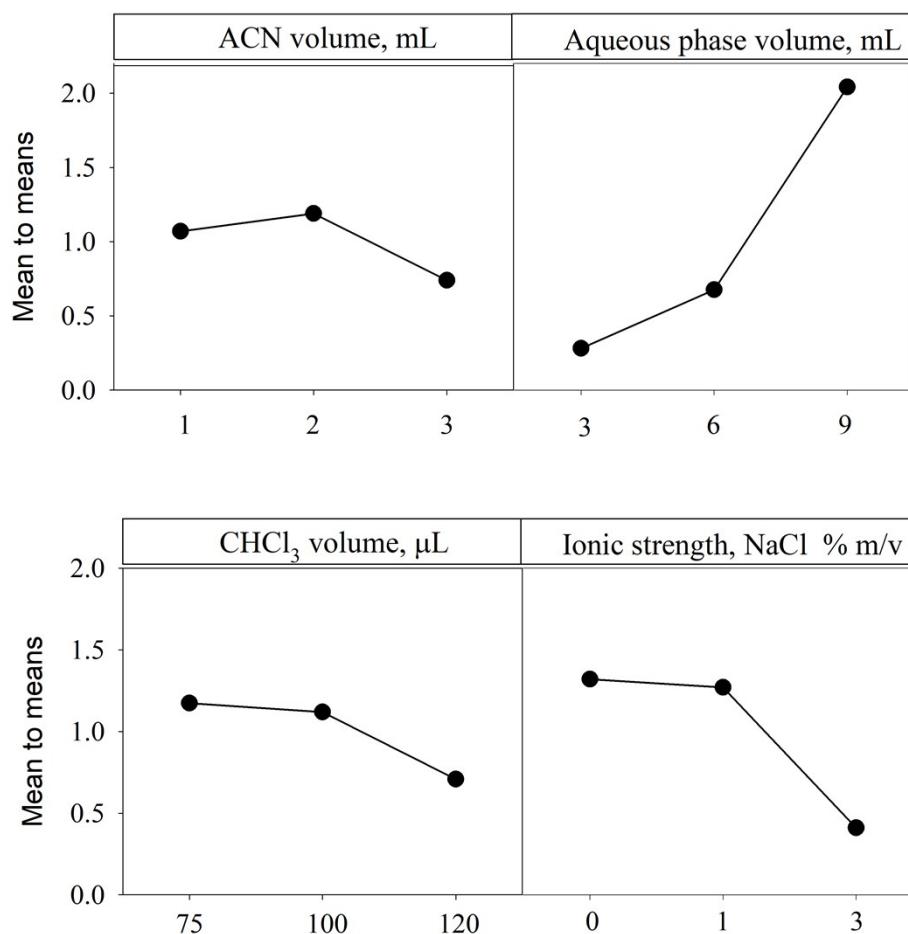


Fig. ESI3 Effects of factor levels of the chloroform volume, acetonitrile volume, aqueous phase volume and sodium chloride concentration in the aqueous phase, on the mean relative response for PDS and PTSO obtained from the Taguchi orthogonal design application for the optimization of the DLLME step

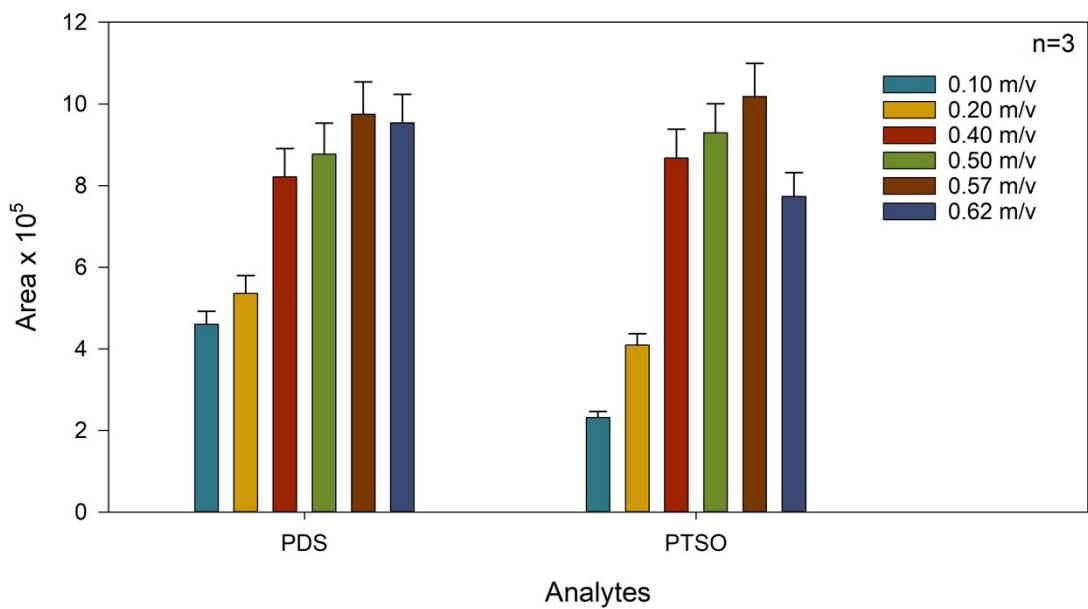


Fig. ESI4 Optimization of feed mass/acetonitrile volume ratio (m/v) for the extraction of organosulfur compounds from animal feed