

Authentication of edible insects' powders by the combination of DART-HRMS signatures.

The first application of ambient mass spectrometry to screening of novel food

A. Tata^{1\$}, A. Massaro^{1\$}, F. Marzoli², B. Miano¹, M. Bragolusi¹, R. Piro¹ and S. Belluco²

*1. Istituto Zooprofilattico Sperimentale delle Venezie, Laboratorio di Chimica Sperimentale,
Vicenza, Italy*

2. Department of Food Safety, Istituto Zooprofilattico Sperimentale delle Venezie, Legnaro, Italy

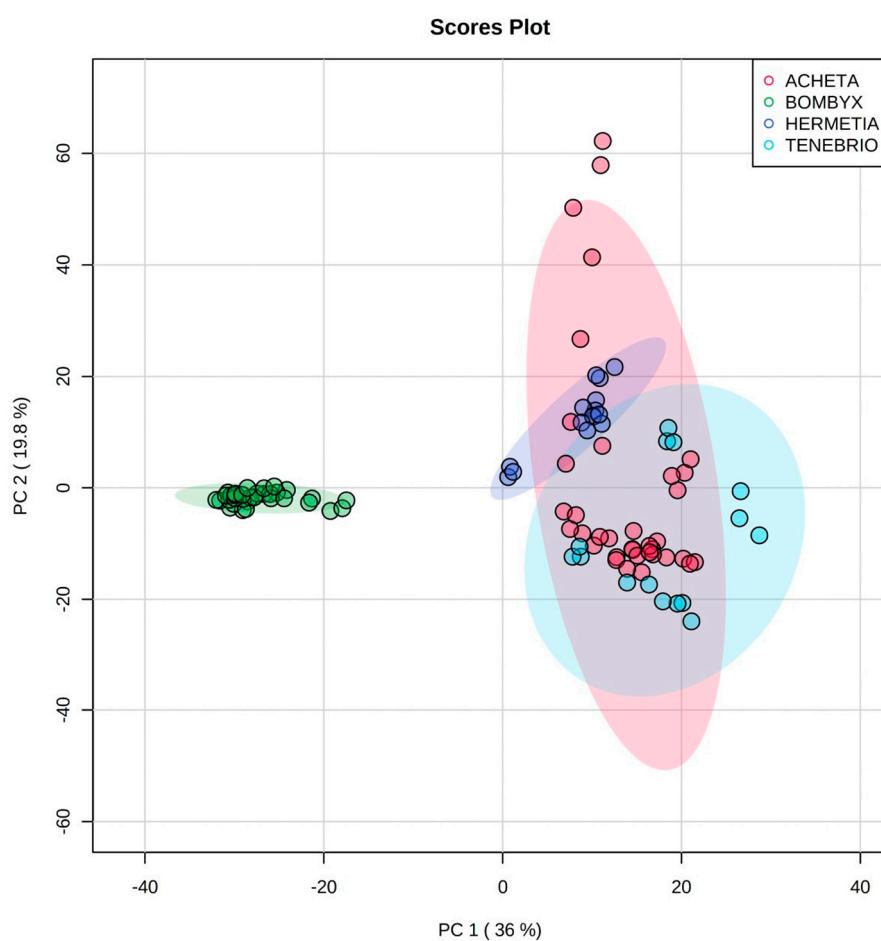


Figure S1. PCA scores plot.

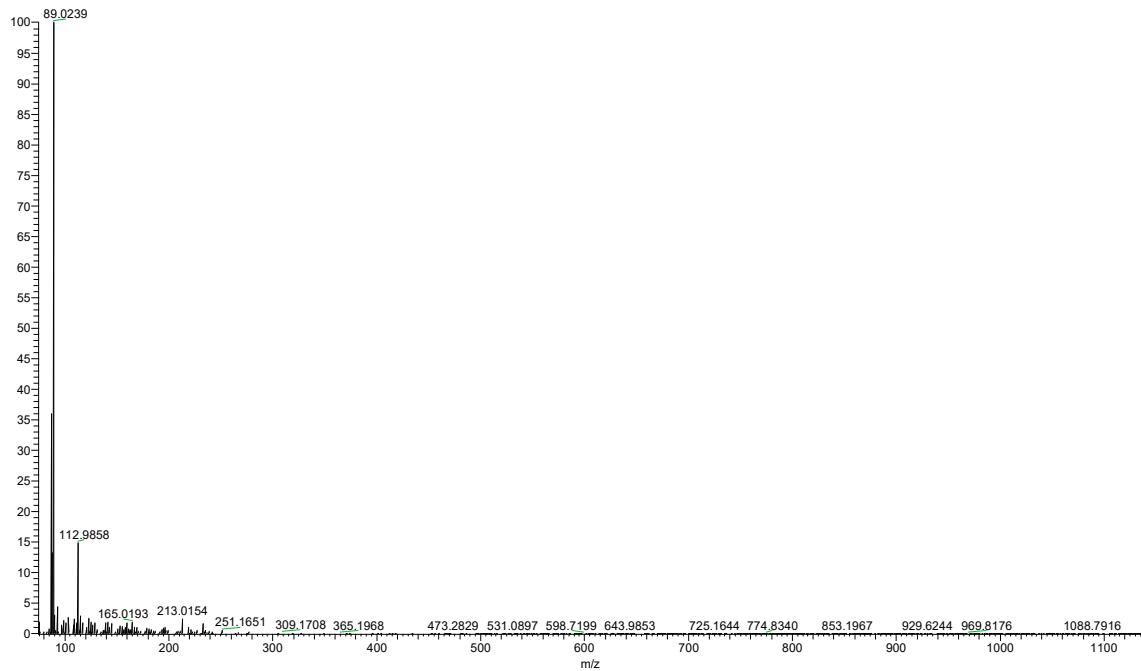


Figure S2. Blank spectrum of the ethylacetate acquired by DART-HRMS in negative ion mode.

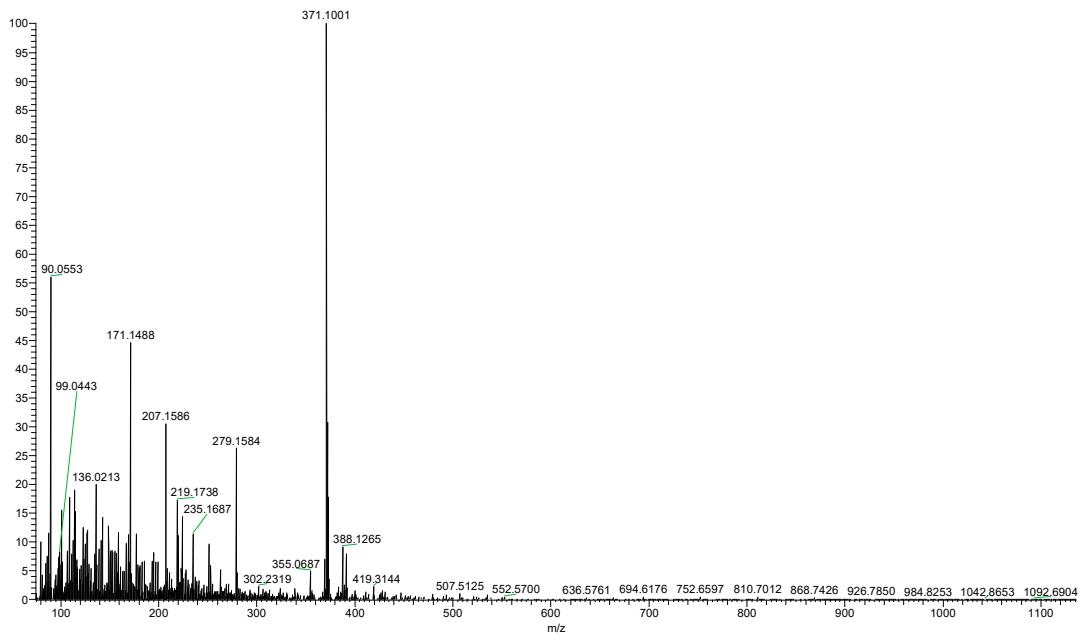


Figure S3. Blank spectrum of the ethylacetate acquired by DART-HRMS in positive ion mode.

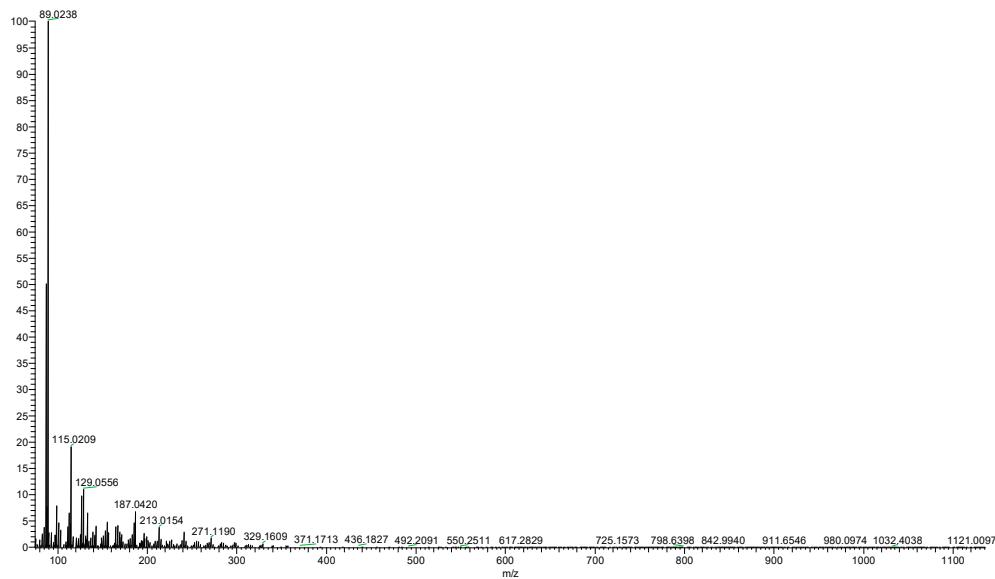


Figure S4. Blank spectrum of the MeOH: H₂O (80:20) solvent acquired by DART-HRMS in negative ion mode.

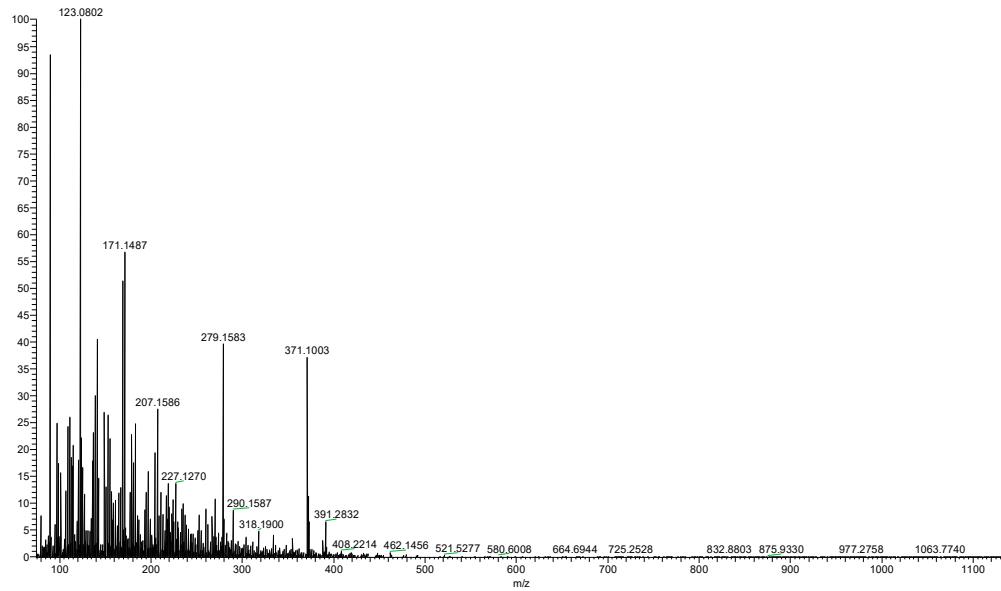


Figure S5 Blank spectrum of the MeOH: H₂O (80:20) solvent acquired by DART-HRMS in positive ion mode.

Table S1. Confusion matrix with the results of the cross-validation of the random forest classifier on training set. Repetitions of the spectra are included.

		<i>Actual class</i>			
		ACHETA	BOMBYX	HERMETIA	TENEBRIOS
<i>Predicted class</i>	ACHETA	27	-	-	-
	BOMBYX	-	24	-	-
	HERMETIA	-	-	12	-
	TENEBRIOS	-	-	-	12

Table S2. Confusion matrix with the results of the test of the random forest classifier on withheld test set. Repetitions of the spectra are included.

		<i>Actual class</i>			
		ACHETA	BOMBYX	HERMETIA	TENEBRIOS
<i>Predicted class</i>	ACHETA	9	-	-	-
	BOMBYX	-	9	-	-
	HERMETIA	-	-	3	-
	TENEBRIOS	-	-	-	3