

Tratamientos de muestra en el control multianalito de residuos y contaminantes en matrices complejas de alimentos y muestras medioambientales

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Food Safety - From the Farm to the Fork

**COMMISSION REGULATION (EU) No 37/2010 on
pharmacologically active substances and their
classification regarding maximum residue limits (MRL)
in foodstuffs of animal origin**



**COMMISSION REGULATION (EU) No 396/2005
Pesticides database MRL**

(<http://ec.europa.eu/food/plant/pesticides/eu-pesticidesdatabase/>)
500 pesticides and default value of 0.01 mg/kg for substances not specifically listed

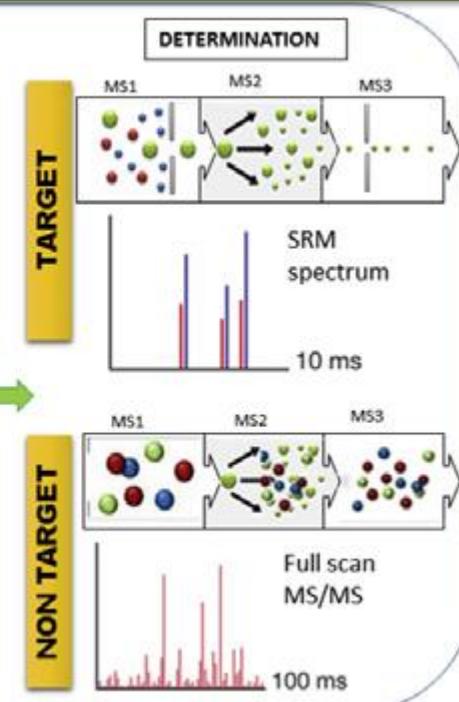
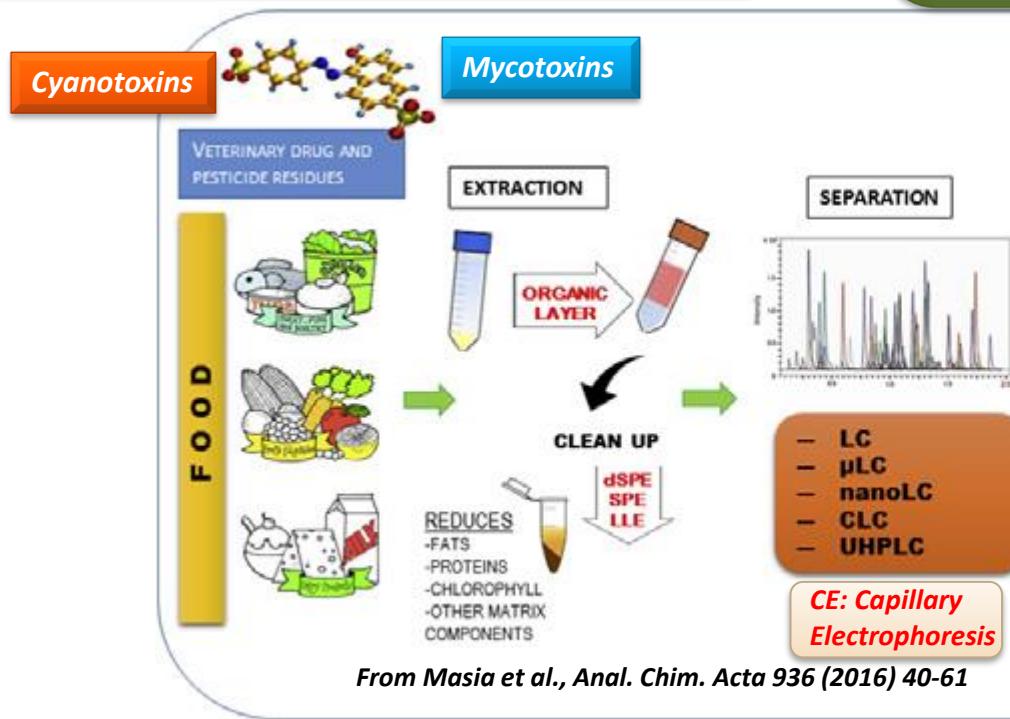
REGULATION 1881/2006: Maximum levels for certain contaminants in foodstuffs (including mycotoxins in some matrixes)

https://ec.europa.eu/food/safety/chemical-safety/contaminants/catalogue/mycotoxins_en



Regulation (EU) 2021/808 on the performance of analytical methods for residues of pharmacologically active substances used in food-producing animals and the interpretation of results.

SANTE/11813/2017. Guidance document on analytical quality control and method validation procedures for pesticide residues and analysis in food and feed.



COMMISSION REGULATION (EC) 401/2006 on methods of sampling and analysis for the official control of the levels of mycotoxins in foodstuffs

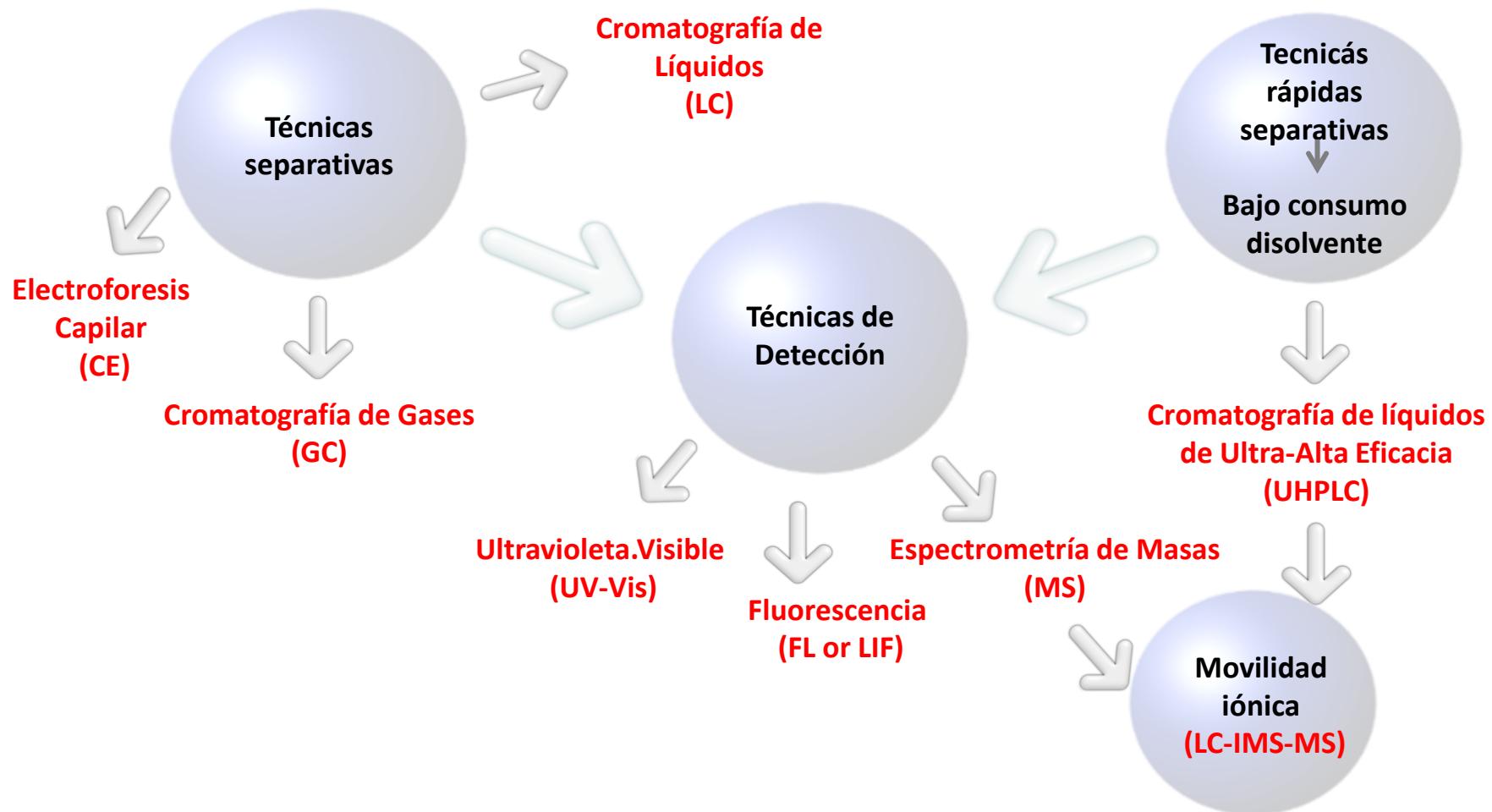
Confirmation: MS/MS

Prohibited substances: minimum 4 identification points

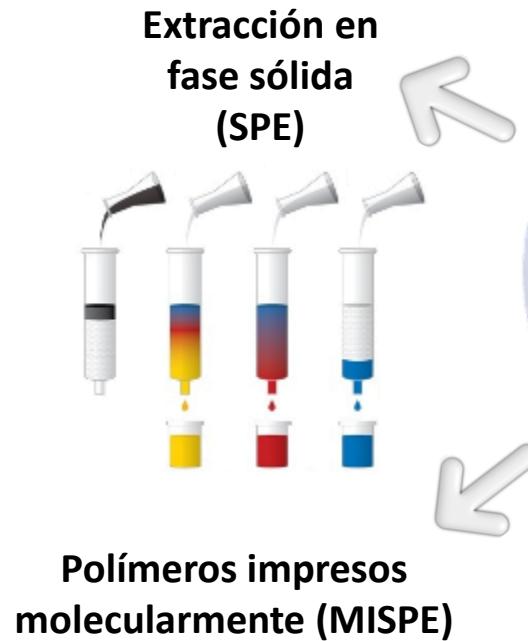
Allowed substances (with MRL): 3 identification points

1 precursor ion (1 point) + 2 fragment ions (1.5 points) = 4 points

Desarrollo de métodos analíticos para el control simultaneo de contaminantes y residuos en alimentos en el marco legal de la UE



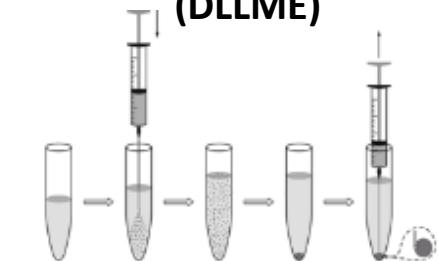
Tratamientos de muestra en seguridad alimentaria



Tendencia
↓
Rápidez, facilidad, bajo coste, bajo impacto ambiental

Extracción líquida presurizada (PLE)
Extracción asistida por microndas (MAE), Fluidos supercríticos (SFE)

Técnicas miniaturizadas (Microextracción líquido-líquido Dispersiva (DLLME))



Extracción líquido-líquido asistida por sales (SALLE)

QuEChERS (Quick, Easy, Cheap, Efficient, Robust)



Columnas de inmunoafinidad



GREEN ANALYTICAL CHEMISTRY

