



chop the sample up,  
freeze over night



mix homogeneously  
with dry ice



# QuEChERS Multiresidue-Method

II. add 10 mL  
acetonitrile



III. add ISTD-solution



IV. shake ~ 1 min



V. add  
4g MgSO<sub>4</sub>,  
1g NaCl,  
1g Na<sub>3</sub>Citrat x 2H<sub>2</sub>O  
0.5g Na<sub>2</sub>HCitrat  
Sesquihydrate



VI. shake ~ 1min



## Advantages:

- **Quick** (~30 min/batch of 6 samples)
- **Easy** (no laborious steps)
- **Cheap**
- **Effective** (wide scope, low consumption)
- **Rugged** (minimal sources of errors)
- **Safe**

VII. Centrifuge 5 min/~3000 g



VIII. take aliquot...



IX. d-SPE with  
MgSO<sub>4</sub> + PSA (+GCB  
or ODS)



X. shake ~ 30 sec



XI. centrifuge 3 min /~3000 g



XII. take aliquot



XIII. adjust pH with HCOOH



30 min

GC/LC

I. weigh 10g of  
sample homogenate



Extract in acetonitrile  
→ amenable to GC-, LC- and (D)-SPE

[www.quechers.com](http://www.quechers.com)

## Ordering Information

Description	Qty.	Cat. No.
<b>Dispersive SPE (dSPE) Products, packed in 15 mL centrifuge tube</b>		
<b>Citrate Extraction Tube</b> 4 g magnesium sulfate (Cat. No. 63135) 1 g sodium chloride (Cat. No. 71379) 0.5 g sodium citrate dibasic sesquihydrate (Cat. No. 71635) 1 g sodium citrate tribasic dihydrate (Cat. No. 32320)	50	55227-U
<b>Mg<sub>2</sub>SO<sub>4</sub> Extraction Tube</b> 6 g magnesium sulfate (Cat. No. 63135) 1.5 g sodium acetate (Cat. No. 24,124-5)	50	55234-U
<b>PSA SPE CleanUp Tube 1</b> 900 mg magnesium sulfate (Cat. No. 63135) 150 mg Supelclean PSA (Cat. No. 52738-U)	50	55228-U
<b>PSA/C18 SPE CleanUp Tube 1</b> 900 mg magnesium sulfate (Cat. No. 63135) 150 mg Supelclean PSA (Cat. No. 52738-U) 150 mg Discovery DSC-18 (Cat. No. 52600-U)	50	55229-U
<b>PSA/ENVI-Carb SPE CleanUp Tube 1</b> 900 mg magnesium sulfate (Cat. No. 63135) 150 mg Supelclean PSA (Cat. No. 52738-U) 15 mg Supelclean ENVI-Carb (Cat. No. 57210-U)	50	55230-U
<b>PSA/ENVI-Carb SPE CleanUp Tube 2</b> 900 mg magnesium sulfate (Cat. No. 63135) 150 mg Supelclean PSA (Cat. No. 52738-U) 45 mg Supelclean ENVI-Carb (Cat. No. 57210-U)	50	55233-U

Sample packs of these tubes are available. Please contact your local Sigma-Aldrich office or distributor.

For more information on this tubes please visit our website [www.sigma-aldrich.com/quechers](http://www.sigma-aldrich.com/quechers) or contact our technical service.



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