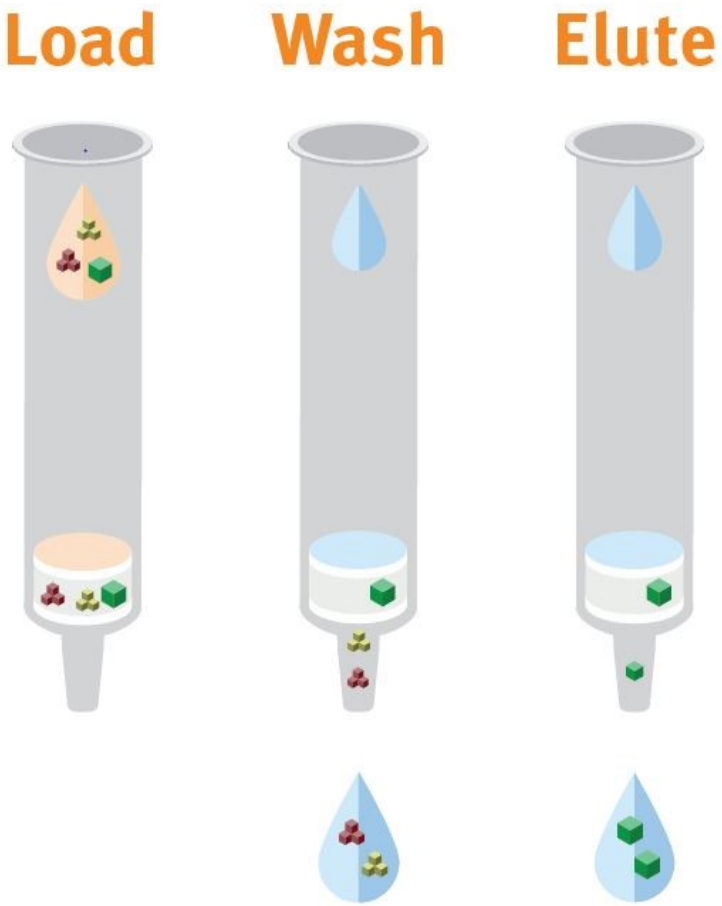
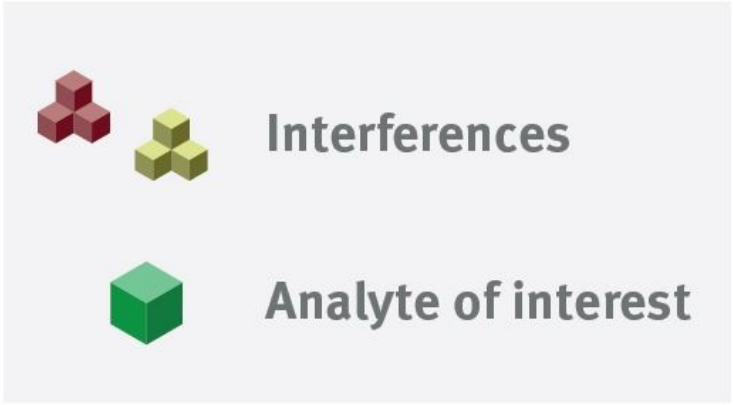
Sample preparation methods

Analytical Chemistry: Instrumental Analysis

Peter Mikus, Faculty of Pharmacy Comenius University in Bratislava

Solid phase extraction

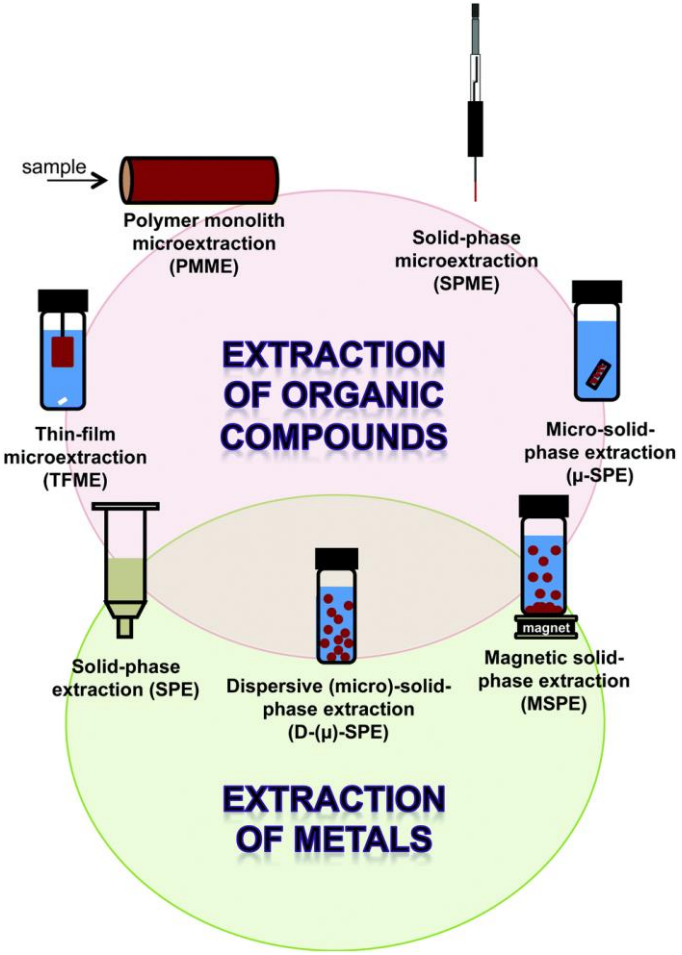




New trend:
New sorbents with enhanced stability and selectivity

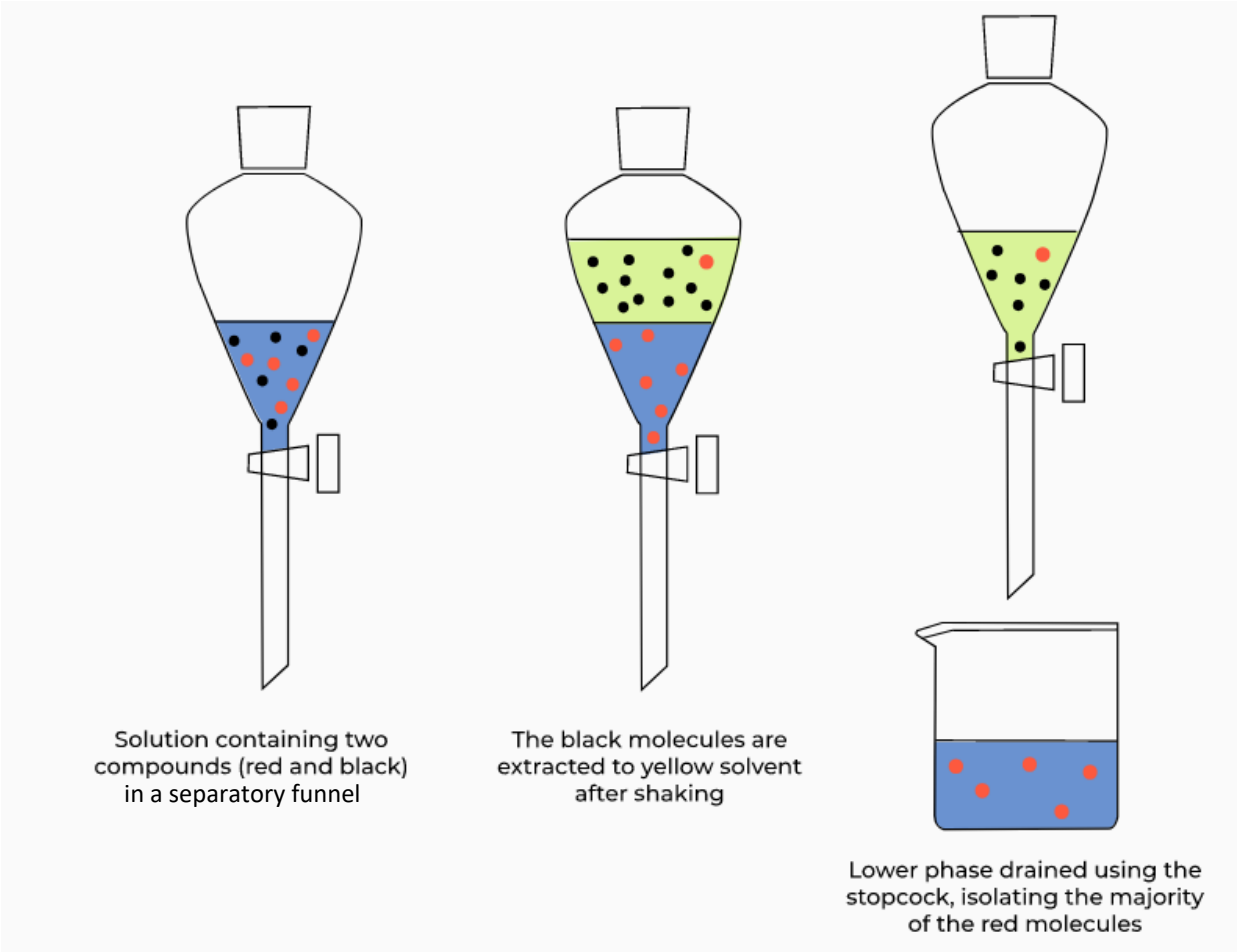
https://sampleprep.biotage.com/expandyourhorizon/sle-spe-and-lle-how-are-those-different

Micro-SPE



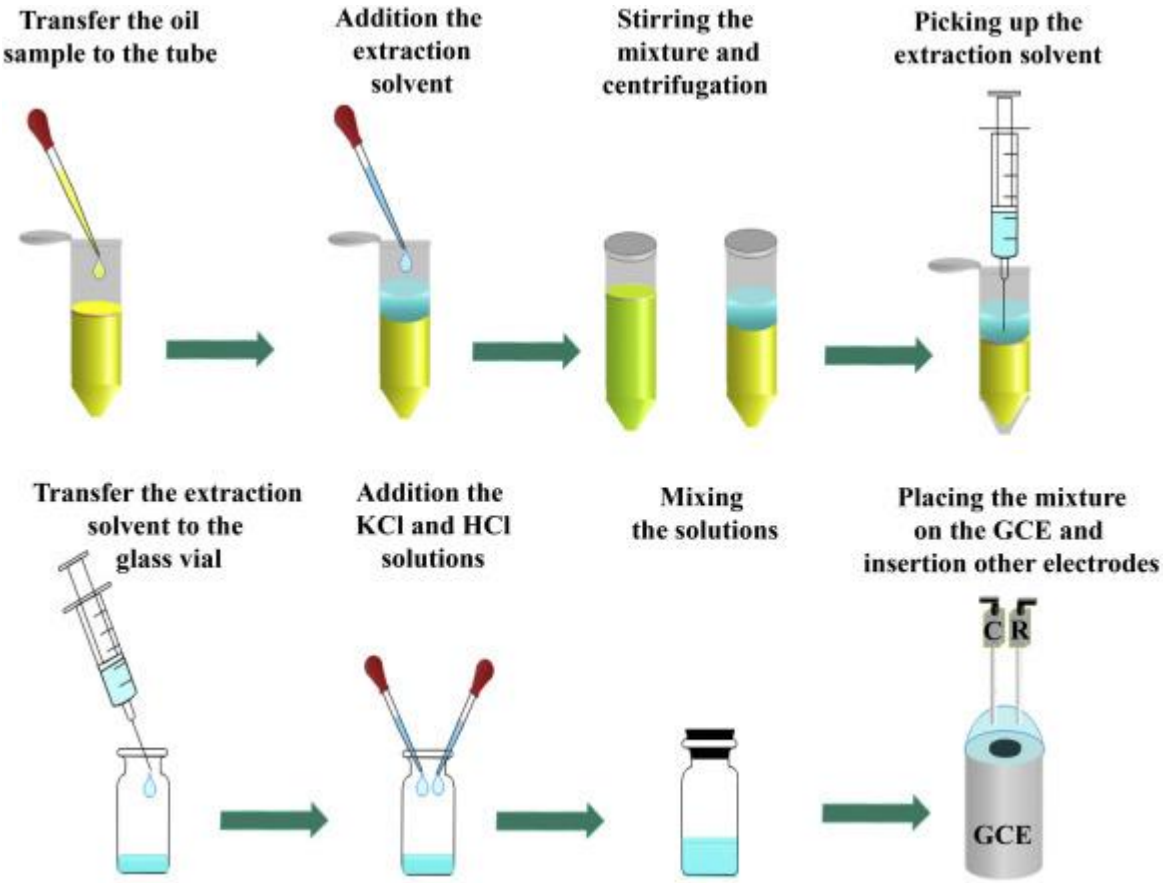
https://pubs.rsc.org/en/content/articlelanding/2019/an/c8an01194j#!divAbstract

Liquid – liquid extraction



https://www.mikedavid.org/Hydrocarbon-Extraction-The-Complete-Guide_b_30.html

Micro-LLE



https://www.sciencedirect.com/science/article/abs/pii/S1572665720301491

Micro-dialysis

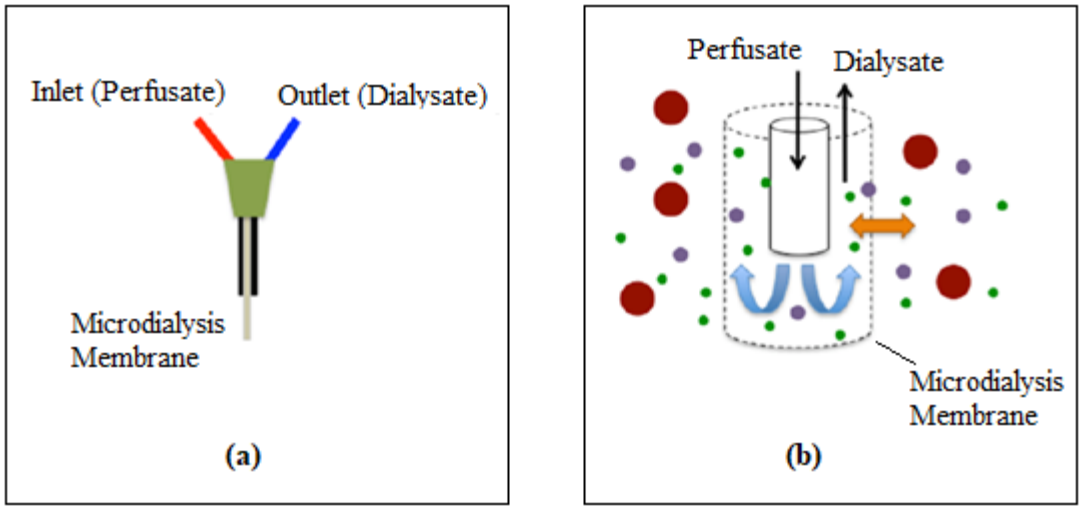
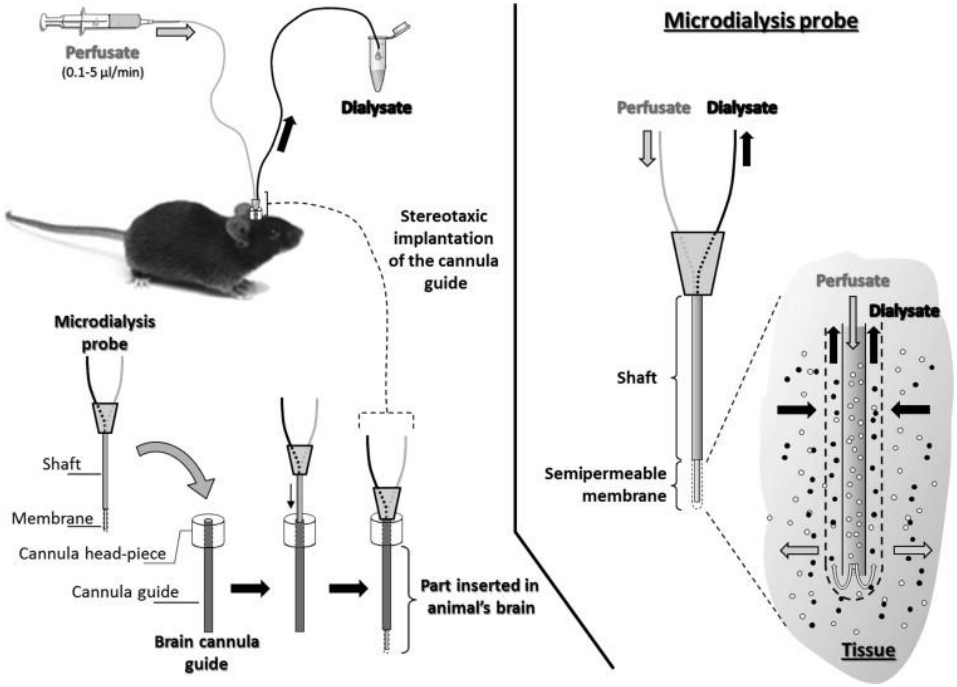


Figure 1: Schematic diagram of: a microdialysis probe (b), microdialysis process technique (the semipermeable membrane of the microdialysis probe restricts the diffusion of large molecules such as red blood cells, large proteins and virus)

Priya, R.S. and Córcoles, E.P., 2012. Microdialysis Monitoring of Biomarkers for Early Recognition of Intestinal Ischemia, In "Sepsis – An Ongoing and Significant Challenge". Azevedo, L. (Ed.), Chapter 10, InTech, DOI: 10.5772/50240. Available from: https://www.intechopen.com/books/sepsis-an-ongoing-and significant-challenge/microdialysis-monitoring-of-biomarkers-for-early-recognition-of-intestinal-ischemia)

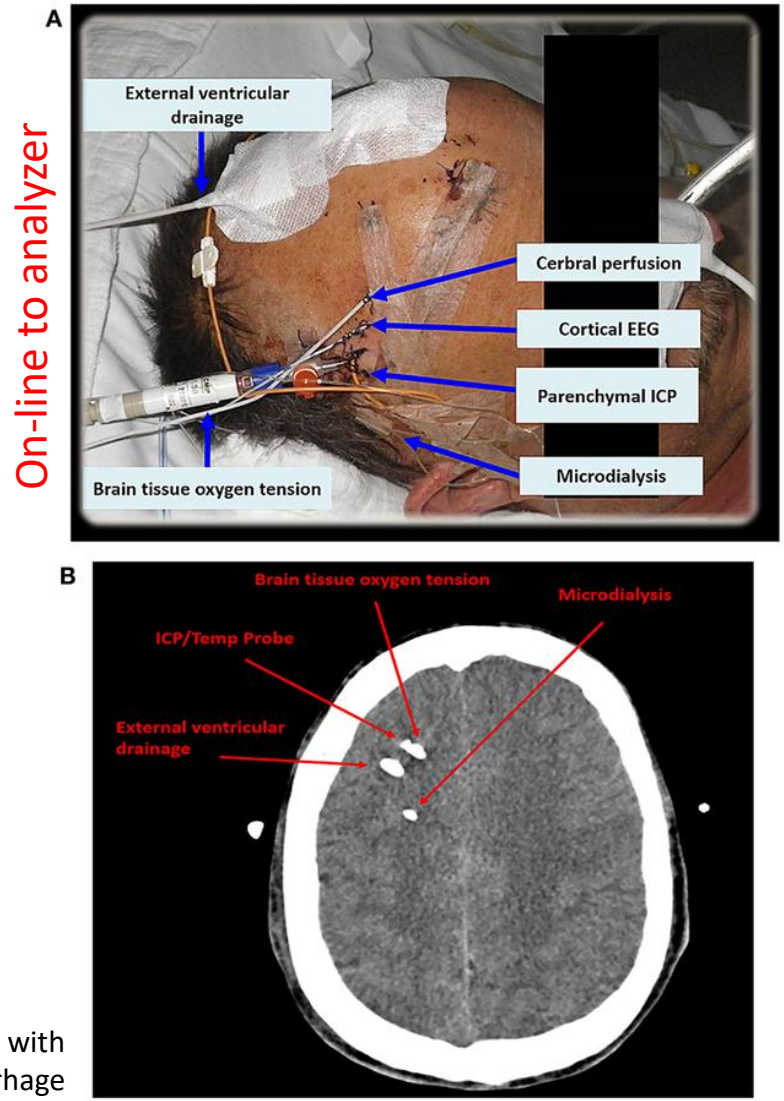
Off-line and on-line miniaturized sample preparation systems

Off-line



https://www.sciencedirect.com/topics/neuroscience/microdialysis

On-line to analyzer



Clinical Use of Cerebral Microdialysis in Patients with Aneurysmal Subarachnoid Hemorrhage

https://www.frontiersin.org/articles/10.3389/fneur.2017.00565/full