Development of 3D printed microfluidic platforms for the automatic determination of key analytes in the process of recovering valuable metals from electronic devices

Novel strategies based on microfluidic analyzer for monitoring elevated concentrations of Fe(III), Fe(II), Cu(II) and Co(II) in bioreactors used for e-waste recycling.

μFIA system to determine Co(II)

μFIA system to determine Fe(II)

μFIA system to determine Cu(II)

μFIA system to determine Fe(III)

Comparison of results with respect to the reference method

UV-vis

μFIA system

λ=525 nm

λ=515 nm

λ=450 nm

λ=535 nm

EPSEM

Grupo de Investigación en Recursos e Industrias Inteligentes y Sostenibles

David Ricart Fort, EPSEM

Concepción Lao Luque, EPSEM

Maria del Mar Baeza Labat, UAB

Antonio David Dorado Castaño, EPSEM

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