

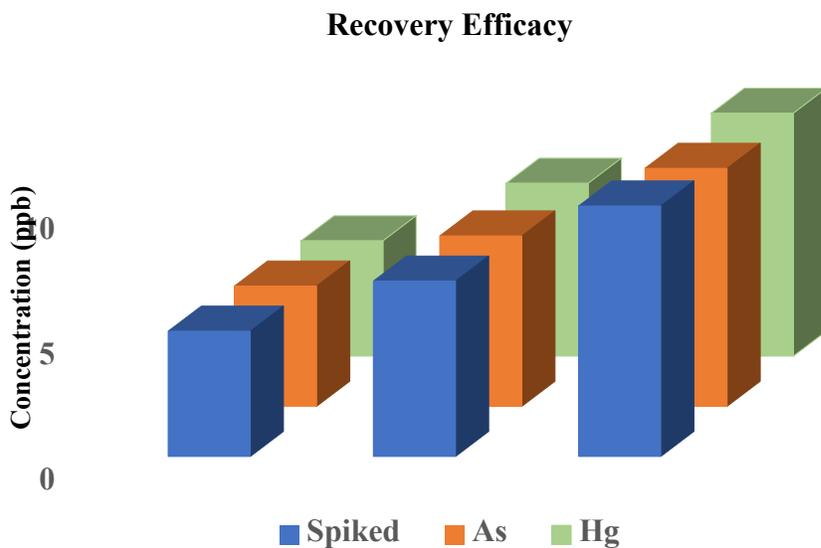
S1. UV-Vis spectra of Mango Leaf

Table T1. Recovery efficacy w.r.t As

Spiked (ppb)	Attained (ppb)	RSD (%)
5	4.8	96
7	6.8	97
10	9.5	95

Table T2. Recovery efficacy w.r.t Hg

Spiked (ppb)	Attained (ppb)	RSD (%)
5	4.6	92
7	6.9	98.6
10	9.7	97



S2 Recovery efficacy w.r.t As and Hg of modified AuNPs via Mango Leaf Extract

Table T3: Comparative analysis of the sensing scheme with other reported works

Sensing Mechanism	Heavy Metal Ion	Medium	Limit of Detection	References
Colorimetric	Hg ²⁺ , Pb ²⁺ and Cu ²⁺	papain-functionalized gold nanoparticles	200 nM	[1]
peroxidase-like activities	Pb ²⁺ and Hg ²⁺	Gold nanoparticles	NP*	[2]
Colorimetric	Hg ²⁺	Cinamon modified gold Nanoparticles	NP*	[3]
Colorimetric	Pb ²⁺	functionalized gold nanoparticles	310 ng mL ⁻¹	[4]
Colorimetric	As ³⁺	glutathione functionalized gold nanoparticles	NP*	[5]
Colorimetric	Hg ²⁺ Pb ²⁺	dual-functional Ag/Au nanoparticles	5 nM, 1.4 nM	[5]
Colorimetric	Pb ²⁺	SiO ₂ core ⁻ Au _{shell} nanocomposites	NP*	[6]

Colorimetric	Hg ²⁺	biogenetic gold nanoparticles	NP*	[7]
Colorimetric	As ³⁺ Hg ²⁺	Mango leaf modified gold nanoparticles	1, 1.3 ppb	This work

*-Not Provided

References

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