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Title: SERS BASED ULTRAFast AND SENSITIVE DETECTION OF LUTEINIZING HORMONE IN HUMAN SERUM USING A PASSIVE CHANNEL MICROCHIP

Authors: Belma Gjergjizi, Ferah oėun, Ender Yıldırım, Merve Eryılmaz, Yeşim Selbes, Necdet Sağlam, Uėur Tamer



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SERS BASED ULTRAFAST AND SENSITIVE DETECTION OF LUTEINIZING HORMONE IN HUMAN SERUM USING A PASSIVE CHANNEL MICROCHIP

Belma Gjergjizi^a, Ferah Çoğun^b, Ender Yıldırım^b, Merve Eryılmaz^c, Yeşim Selbes^c, Necdet Sağlam^a, Uğur Tamer^{c, *}

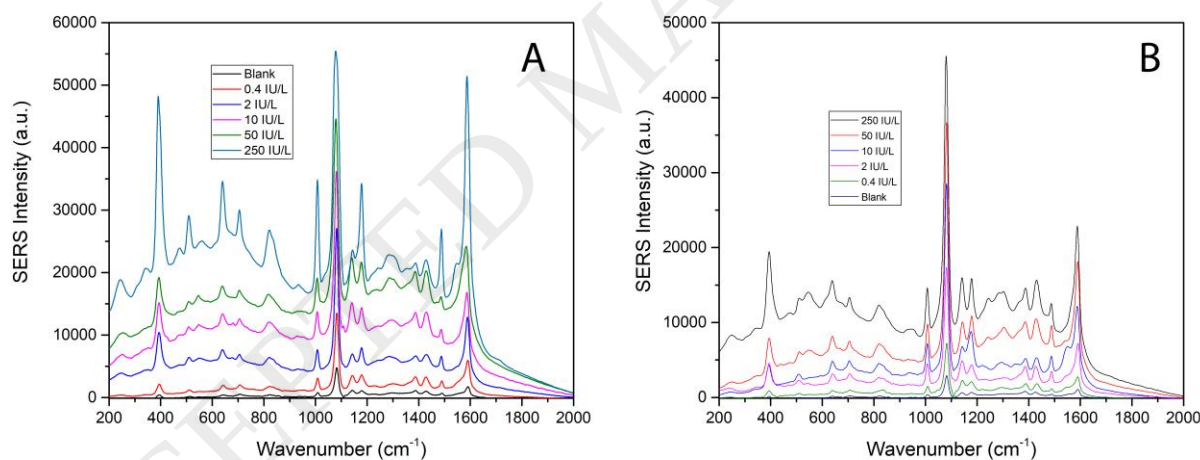
^a Hacettepe University, Faculty of Science, Department of Biology, 06800, Beytepe, Ankara, Turkey

^b Cankaya University, Department of Mechanical Engineering, 06790, Etimesgut, Ankara, Turkey

^c Gazi University, Faculty of Pharmacy, Department of Analytical Chemistry, 06330, Etiler, Ankara, Turkey

* Corresponding Author at Gazi University, Faculty of Pharmacy, Department of Analytical Chemistry, 06330, Etiler, Ankara, Turkey. E-mail address: utamer@gazi.edu.tr

Graphical abstract



Highlights

- Antibody modified gold nanoparticles enable the capture human luteinizing hormone (LH)..
- The gold nanoparticles are also modified as a Raman reporter.
- Sandwich immunoassay for detection of the analyte.
- A passive channel microchip is designed for fast analysis of LH with small amount of reagents.
- Surface-enhanced Raman spectroscopy lowers the limit of detection.
- Successful recovery of LH spiked in serum samples via the microchip.

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