Analyst

CORRECTION

View Article Online
View Journal | View Issue

Cite this: *Analyst*, 2021, **146**, 6335

Correction: Surface enhanced Raman scattering for the multiplexed detection of pathogenic microorganisms: towards point-of-use applications

Matthew E. Berry, Hayleigh Kearns, Duncan Graham and Karen Faulds*

DOI: 10.1039/d1an90082j

rsc.li/analyst

Correction for 'Surface enhanced Raman scattering for the multiplexed detection of pathogenic micro-organisms: towards point-of-use applications' by Matthew E. Berry *et al.*, *Analyst*, 2021, DOI: 10.1039/D1AN00865J.

The authors regret that an incorrect version of Table 1 was included in the original article. The correct version of Table 1 is presented below.

Centre for Molecular Nanometrology, Department of Pure and Applied Chemistry, Technology and Innovation Centre, University of Strathclyde, 99 George Street, Glasgow, G1 1RD, UK. E-mail: karen.faulds@strath.ac.uk

Table 1 A summary of the general approaches and studies discussed within this review

SERS approach	Summary	Performance
(1) Label-free detection	• SERS substrates for the capture of pathogens. • Intrinsic vibrational fingerprint of pathogens detected (no Raman reporters used).	• Detection of three Gram negative bacterial strains (LOD 10^5 CFU mL^{-1}).[50] • Detection of *E. coli* and *S. aureus* in tap water and milk (LOD 10^3 CFU mL^{-1}, 10 min).[51] • Detection of multiple bacterial strains (LOD 1 CFU mL^{-1}, 5 min).[52] • Detection of bacterial strains in mung bean sprouts (LOD 10^2 CFU mL^{-1}, 4 hours).[53] • Sampling and detection of bacterial pathogens from skin wound (LOD 10^6 CFU mL^{-1}, 8 hours (5 min for sampling)).[99] • Detection of meningitis pathogens in clinical CSF.[103]
(2) Microfluidics	• Sample preparation, reaction, separation and detection integrated into a single device. • Supports label-free and label-based detection.	• Label-free detection of *E. coli* and *S. aureus* in blood (LOD 10^5 CFU mL^{-1}, 100 CFU mL^{-1} in culture).[57] • Label-free detection of three bacterial strains in serum (LOD 4 CFU mL^{-1}, 15 min).[59] • Label-based detection of *S. enterica* and *N. lactamica* using DEP enrichment (LOD 70 CFU mL^{-1}, 10 min).[61] • Label-based detection of three bacterial pathogens at millilitre scale in blood (LOD <100 CFU mL^{-1}, 13 min).[63] • Label-based detection of *E. coli* using DEP enrichment (LOD 1 CFU mL^{-1}).[65] • Detection of eight foodborne pathogens.[98] • Label-free detection of multiple viral strains in clinical nasopharyngeal swabs.[106]
(3) Nucleic acid-based detection	• Coupling of assays for the detection of pathogenic DNA with SERS substrates. • SERS nanotags functionalised with DNA/RNA aptamers. • Supports label-based detection.	• Detection of meningitis pathogenic DNA (LOD in pM range).[72] Detection of pathogen DNA in clinical CSF.[73] • Detection of KSHV and BA DNA using LFA (LOD in fM range).[74] • Detection of *S. aureus* and *S. typhimurium* using aptamer-based magnetic sandwich assay (LOD 15 CFU mL^{-1}).[78] • Detection of *E. coli* and *S. aureus* using aptamer-based magnetic sandwich assay in urine samples (LOD 50 CFU mL^{-1}, 1.5 hours, 20 CFU mL^{-1} and 15 min for culture).[79] • Detection of *E. coli* using aptamers in beef samples (LOD 100 CFU mL^{-1}, 20 min).[81] • Detection of influenzae A H1N1 in complex mixtures (LOD 97 pfu mL^{-1}, 20 min).[82] • Detection of DNA from 11 common RTI pathogens using LFA (LOD in fM range, 20 min). Detection from throat swab.[110] • Detection of *S. enterica* and *L. monocytogenes* in milk, chicken and beef using LFA and RPA (LOD 22 CFU mL^{-1}).[111] • Detection of plant pathogens on commercial crops using RPA outside of laboratory.[114] • Real time detection of MRSA genes using miniaturized PCR system.[115]
(4) Immunoassays	• Specific binding of pathogen antigen and antibodies coupled with SERS nanotags. • Supports label-based detection.	• Detection of Zika and dengue biomarkers using dipstick immunoassay (LOD 0.72 ng mL^{-1}).[86] • Detection of multiple viral strains using magnetic LFA (LOD 10 pfu mL^{-1}).[89] Detection in blood, serum and sputum (LOD 10^5 pfu mL^{-1}). • Detection of three bacterial pathogens using magnetic sandwich assay (LOD 10 CFU mL^{-1}).[90] Same LODs confirmed on portable system (1 hour).[108] • Detection of multiple viral and bacterial pathogens in serum using magnetic sandwich assay (LOD 10 pg mL^{-1}).[91]

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

