

*Supplementary Materials*

# **2-LED- $\mu$ Spectrophotometer for Rapid On-Site Detection of Pathogens Using Noble-Metal Nanoparticle-Based Colorimetric Assays**

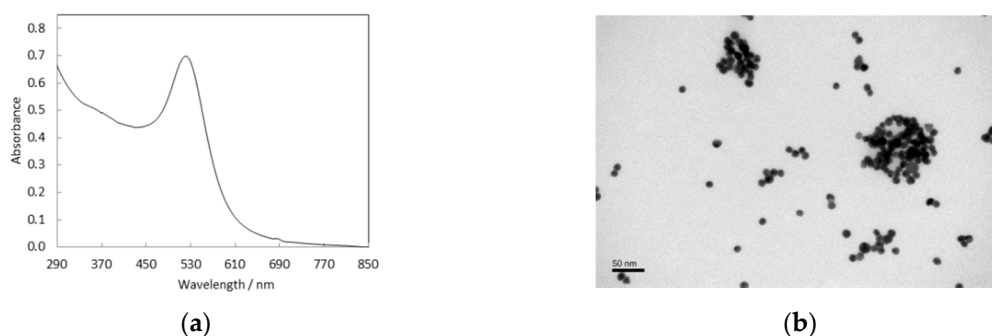
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## Synthesis of AuNPs



**Figure S1** Colloidal spherical gold nanoparticles (a) UV-Vis spectrum of used particles with a resonance peak at 520 nm; (b) Corresponding transmission electron microscopy (TEM) image. Scalebar: 50 nm.

## Primers and DNA-AuNP probes

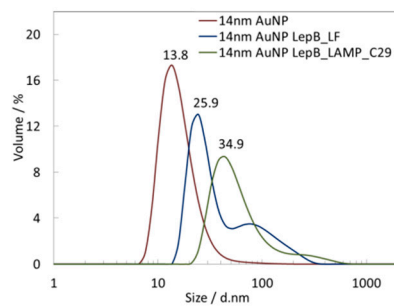
**Table S1** Oligonucleotides used in this study.

AuNP probe name	Sequence (5'-3')
LP_lepB_LF_thiol	Thiol-C6-aaa aaa atg tct att ctt tct ttt gcc cag ac
LP_dotA_LF_Thiol	Thiol-C6-aaa aaa aga g gac aat ggc cca ctc a

**Table S2** Primers used in this study.

Primer name	Sequence (5'-3')	T <sub>m</sub> (°C)	GC-Content (%)
LP_lepB_LF	TGT CTA TTC TTT CTT TTG CCC AGA C	55,0	40,0
LP_lepB_LB	CAC GGA CAT GCC TTT GTT CC	55,0	55,0
LP_lepB_F3	TCT TTA CGT TGA TGA ACT AGC	44,0	38,0
LP_lepB_B3	AAG TTG AAA GTA TTA GGG TCT AC	43,0	34,0
LP_lepB_FIP	AGA GCA AAC AGA TTA GGG GTG CCA TCA CGT GTG AAG CCA A	77,0	50,0
LP_lepB_BIP	ATA GCG GTG GTG AAG CGA TTG TAA ATA GGC GGC GCA AT	77,0	50,0
LP_dotA_LF	GAG GAC AAT GGC CCA CTC A	53,0	57,0
LP_dotA_LB	CGT TGA CCT TTG CCA ATC TGA	55,0	47,0
LP_dotA_F3	CGT CAA GCA ACC TGA TCT	45,0	50,0
LP_dotA_B3	TGC CGC AAT CAA AAT CCT	51,0	44,0
LP_dotA_FIP	CCA TCA TGG AAT TGT TGA CAA ATC CTA ATC CTC AAC GAC AGT CTG	75,0	42,0
LP_dotA_BIP	GCC AGG TCA ACC AGG AAT AAA ACG CTT CAT ATA ATA AAG CGA CGT	75,0	42,0

## DLS Measurements



**Figure S2** Experimental results of the dynamic light scattering (DLS) measurements with pure AuNPs, LepB AuNP probes and complementary LAMP amplicon hybridized to LepB AuNP probes