

Title:

Evaluation of Dried Blood and Cerebrospinal Fluid Filter Paper Spots for Storing and Transporting Clinical Material for the Molecular Diagnosis of Invasive Meningococcal Disease

Supplemental Table S1: Real time PCR assays for the detection of *N. meningitidis* in dried blood and CSF specimens.

Target	Primer or Probe Name	Real-time Primers and Probes Nucleotide Sequence (5' to 3')	Final Conc (nM)	Probe Modifications
<i>N. meningitidis</i>				
<i>ctrA</i>	F753	TGTGTTCCGCTATACGCCATT	300	
	R846	GCCATATTCACACGATATACC	600	
	Pb820i	AACCTTGAGCAA"TT"CCATTTATCC TGACGTTCT	200	5' FAM, BHQ1 on "T", 3' SpC6
<i>sodC</i>	F351	GCACACTTAGGTGATTACCTGCA T	300	
	R478	CCACCCGTGTGGATCATAATAGA	300	
	Pb387	CATGATGGCACAGCAACAAATCC TGTTT	200	5' FAM, 3' BHQ1
Nm A	F2531	AAAATTCAATGGGTATATCACGA AGA	900	
<i>sacB</i>	R2624	ATATGGTGCAAGCTGGTTTCAATA G	600	
	Pb2591i	CTAAAAG"TT"AGGAAGGGCACTTT GTGGCATAAT	300	5' FAM, BHQ1 on "T", 3' SpC6
Nm B	F737	GCTACCCCATTTTCAGATGATTGT	900	
<i>synD</i>	R882	ACCAGCCGAGGGTTTATTTCTAC	300	
	Pb839i	AAGAGATGGGYAACAAC"TT"ATGT AATGTCCTTTATTT	200	5' FAM, BHQ1 on "T", 3' SpC6
Nm C	F478	CCCTGAGTATGCGAAAAAAATT	300	
<i>synE</i>	R551	TGCTAATCCCGCTGAATG	300	
	Pb495i	TTTCAATGC"TT" AATGAATACCAC CGTTTTTTTGC	300	5' FAM, BHQ1 on "T", 3' SpC6

Nm W	F857	TATTTATGGAAGGCATGGTGTATG	300	
<i>synG</i>	R964	TTGCCATTCCAGAAATATCACC	100	
	Pb907i	AAATATGGAGCGAATGATTACAG TAACTATAATGAA	200	5' FAM, BHQ1 on "T", 3' SpC6
Nm X	F173	TGTCCCCAACCGTTTATTGG	900	
<i>xcbB</i>	R237	TGCTGCTATCATAGCCGCC	900	
	Pb196	TGTTTGCCACATGAATGGCGG	100	5' FAM, 3' BHQ1
Nm Y	F787	TCCGAGCAGGAAATTTATGAGAA TAC	900	
<i>synF</i>	R929	TTGCTAAAATCATTCGCTCCATAT	300	
	Pb1099i	TATGGTG"TT"ACGATATCCCTATCC TTGCCTATAAT	300	5' FAM, BHQ1 on "T", 3' SpC6

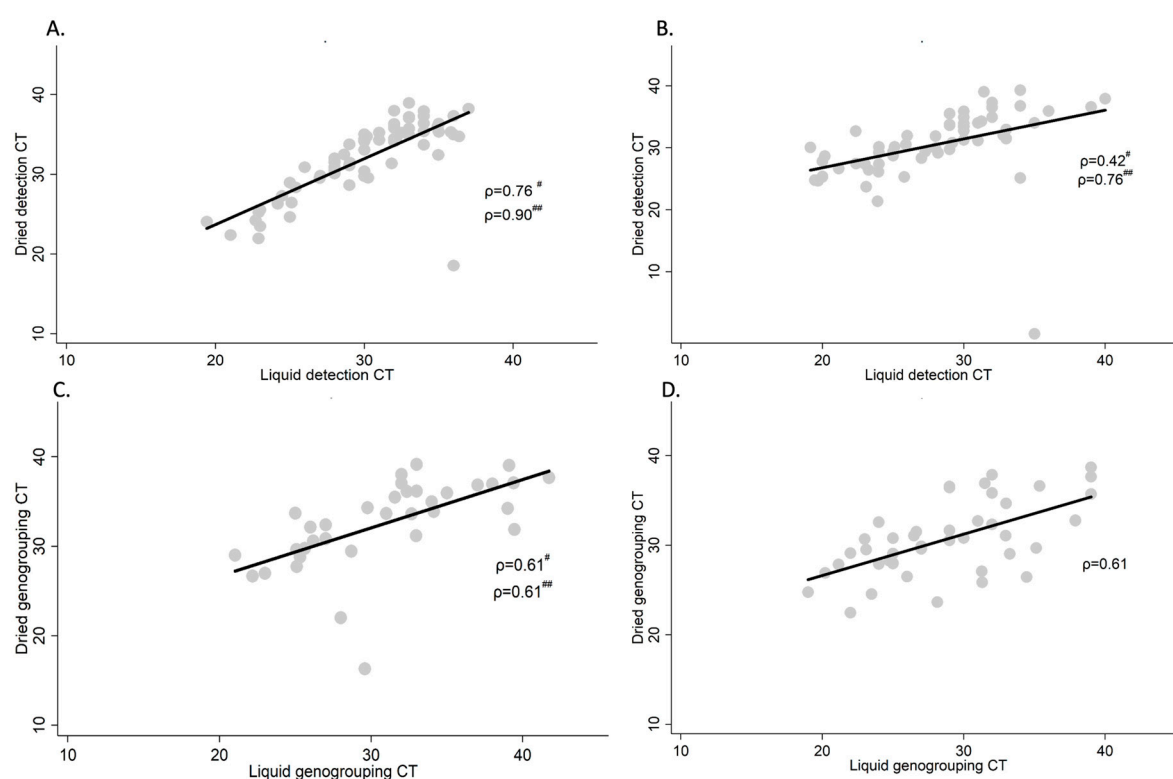
Assay adapted from the US Centers for Disease Control and Elimination (US CDC). The protocol was previously published[1] and further details are available by following this link

<https://www.cdc.gov/meningitis/lab-manual/chpt10-pcr.html>

Supplemental Table S2: PPV and NPV of dried spot assay stratified by specimens' type.

Specimen	Prevalence (%)	PPV (95% CI)	NPV (95% CI)
Blood	20	96.9 (81.3-99.5)	97.3 (95.8-98.3)
	30	98.1 (88.2-99.7)	95.5 (93.0-97.2)
	40	98.8 (92.1-99.8)	93.2 (89.5-95.7)
	50	99.2 (94.6-99.9)	90.1 (85.0-93.6)
	60	99.5 (96.3-99.9)	85.9 (79.1-90.8)
	70	99.7 (97.6-99.9)	79.7 (70.8-86.3)
	80	99.8 (98.6-99.9)	69.5 (58.6-78.6)
CSF	20	94.2 (80.4-98.5)	98.6 (97.2-99.3)
	30	96.5 (87.6-99.1)	97.5 (95.3-98.7)

40	97.7 (91.6-99.4)	96.2 (92.9-98.0)
50	98.5 (94.3-99.6)	94.4 (89.7-97.1)
60	99.0 (96.1-99.7)	91.9 (85.3-95.7)
70	99.3 (97.5-99.8)	87.9 (78.8-93.5)
80	99.6 (98.5-99.9)	81.0 (68.4-89.3)



Supplemental Figure S1. Correlations between liquid (gold standard) and dried filter spot assays

for the detection and genogrouping of *N. meningitidis* infections.

[#]Correlation coefficient with outliers

^{##}Correlation coefficient without outliers

Reference

1. Vuong J, Collard JM, Whaley MJ, Bassira I, Seidou I, Diarra S, Ouedraogo RT, Kambire D, Taylor TH, Jr., Sacchi C, Mayer LW, Wang X. Development of Real-Time PCR Methods for the Detection of Bacterial Meningitis Pathogens without DNA Extraction. PLoS One **2016**; 11(2): e0147765. 10.1371/journal.pone.0147765