



9610 Medical Center Dr Suite 230  
 Rockville, MD 20850  
 www.GenArraytion.com

## GenArraytion MultiFLEX™ Bioassay Data:

Mosquito-Borne MultiFLEX™ Panel, Luminex MAGPIX® Instrument															
Sample	K12 Int Control	MS2 Int Control	Chikungunya Virus	P falciparum	West Nile Virus	Yellow Fever	Dengue1	Dengue2	Dengue3	Dengue4	Zika1	Zika2	Zika3	Zika4	Zika1234
No Template Control	8,108	12,980	66	71	64	70	66	75	66	72	63	63	59	63	73
	9,324	14,814	80	73	78	77	85	80	81	69	72	73	79	91	81
Chikungunya Virus	9,304	14,141	9,031	82	85	83	87	99	82	73	76	83	93	90	77
	9,553	15,017	8,632	87	73	448	78	76	81	68	74	82	73	87	72
<i>Plasmodium falciparum</i>	6,064	12,383	78	10,439	83	75	78	75	69	82	58	66	78	88	69
	5,589	11,579	78	9,847	79	75	70	75	80	79	57	74	77	71	77
West Nile Virus	9,104	13,769	73	82	12,713	72	66	79	68	72	64	73	66	80	69
	9,744	14,119	62	69	13,512	62	62	64	61	59	56	62	66	56	67
Yellow Fever Virus	9,219	15,000	63	89	68	7,781	96	74	78	87	82	79	86	83	73
	8,116	13,338	76	67	75	6,395	77	78	76	80	81	63	71	74	74
Dengue Type 1	8,956	14,543	78	82	85	74	10,042	83	82	69	73	81	82	74	80
	9,127	14,754	77	91	81	90	10,452	88	88	86	76	98	83	97	93
Dengue Type 2	7,222	13,441	79	106	86	83	90	7,442	87	91	87	82	94	90	88
	7,222	13,136	85	92	88	91	88	7,102	89	85	79	88	97	97	86
Dengue Type 3	9,947	15,463	93	92	89	89	89	89	4,239	73	103	85	96	97	95
	9,610	14,873	87	94	70	80	89	77	3,772	80	69	69	78	84	86
Dengue Type 4	9,524	15,028	83	95	87	86	86	89	92	5,998	86	85	112	91	101
	6,561	12,682	93	83	95	81	88	87	83	4,437	82	83	84	84	76
Zika Virus	7,915	11,986	141	95	88	93	87	81	93	77	6,295	16,050	10,448	14,955	12,356
	7,141	10,545	99	76	83	77	78	86	93	69	5,795	15,506	9,682	13,467	11,740

### Experimental Synopsis:

All primers for listed targets were multiplexed in individual PCR reactions. Each sample was run in duplicate PCR reactions to show reproducibility. *E.coli* K12 DNA and MS2 Bacteriophage RNA templates were included in the reaction mix as internal controls. PCR products were individually hybridized with an analyte mixture to detect each organism shown. Data for analyte detection was generated using the Luminex MAGPIX® Instrument.

In regards to the Zika Virus samples - A cell culture infected with Zika Virus Strain MR-766 was purchased through ATCC. A total RNA extraction was performed to isolate Zika Virus RNA in solution along with all RNA from infected cell culture. 1ng of total extracted RNA was used as template for Zika Virus testing.

Sample templates for Chikungunya Ross and *P. falciparum* D10 are cDNA and genomic DNA, respectively. Synthetic constructs were used for West Nile Virus, Yellow Fever Virus and Dengue Serotypes 1- 4. For all synthetic constructs, 1fg of template was used per PCR reaction.

Zika Virus Detection – four separate genomic regions of the Zika Virus were targeted in this assay using Zika1, Zika2, Zika3, and Zika4 as shown above. The Zika1234 Analyte combined all four of these targets for simultaneous detection on one analyte.