

## **Supplemental Data**

**Development of Monitoring System for Assessing Rheumatoid Arthritis within 5  
Minutes using a Drop of Bio-fluids**

**Supplemental Table 1. Summary of the precision test for soluble CD14 (sCD14) using the FREND™ system**

sCD14 (ng/mL)	5		20		100	
	SD	CV (%)	SD	CV (%)	SD	CV (%)
Repeatability	0.54	10.1	1.48	7.3	6.36	6.2
Between Run	0.00	0.0	1.16	5.8	3.03	2.9
Within Day	0.54	10.1	1.88	9.3	7.04	6.9
Between Day	0.12	2.2	0.00	0.0	0.00	0.0
Within Laboratory	0.56	10.3	1.88	9.3	7.04	6.9
Lot-to-Lot	0.34	6.5	1.38	6.7	5.24	5.0

CV, coefficient of variation; SD, standard deviation

**Supplemental Table 2. Measurement of sCD14 FREN<sup>TM</sup> and sCD14 test cartridge and recovery from specimens containing potential interferents using**

Interfering substance	Concentration	Recovery (%)
Acetylsalicylic acid	200 µg/mL	91.9
Ascorbic acid	200 µg/mL	98.5
Bilirubin	20 µg/mL	105.1
Glucose	20 µg/mL	98.4
Prednisolone	1 µg/mL	102.9
Methotrexate	1 µg/mL	103.5
Tacrolimus	1 µg/mL	97.4
Leflunomide	1 µg/mL	113.4
Hydroxychloroquine	1 µg/mL	101.1
GM-CSF	1 µg/mL	97.7
IL-4	1 µg/mL	89.2
TNF- $\alpha$	1 µg/mL	88.6
IL-13	1 µg/mL	104.3

IL, interleukin; GM-CSF, granulocyte-macrophage colony-stimulating factor; TNF- $\alpha$ , tumor necrosis factor- $\alpha$ .