

Reference Ranges for Multiplate[®] analysis

Version 1.0



This document summarizes the reference ranges for the Multiplate[®] tests when using various anticoagulated blood samples and blood collection tubes.

Please note that it is recommended to determine your reference ranges locally to take account of local conditions and the acceptance testing.

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Reference ranges for Multiplate® analysis using double wall hirudin blood tubes

Hirudin blood tube (double wall), Premium Vacuette® system (Material number 6675751001)

	ADPtest	ADPtest HS	ASPItest	TRAPtest	COLtest	RISTOtest low	RISTOtest high
Agonist	ADP	ADP + PG E1	Arachidonic acid	TRAP-6	Collagen	Ristocetin	Ristocetin
Standard volume	20 µL	20 µL + 20 µL	20 µL	20 µL	20 µL	12 µL	50 µL
Final concentration	6.5 µM	6.3 µM / 9.4 nM	0.5 mM	32 µM	3.2 µg / mL	0.2 mg / mL	0.77 mg / mL

n	53	51	50	53	53	53	53
Median (AUC)	772 AU*min 77 U	624 AU*min 62 U	906 AU*min 91 U	1055 AU*min 106 U	891 AU*min 90 U	53 AU*min 5 U	1395 AU*min 140 U
5° Percentile (AUC)	569 AU*min 57 U	425 AU*min 43 U	706 AU*min 71 U	836 AU*min 84 U	716 AU*min 72 U	0 AU*min 0 U	981 AU*min 98 U
95° Percentile (AUC)	1130 AU*min 113 U	998 AU*min 100 U	1148 AU*min 115 U	1280 AU*min 128 U	1253 AU*min 125 U	195 AU*min 20 U	1802 AU*min 180 U
Reference range AUC [AU*min]	569 – 1130	425 – 998	706 – 1148	836 – 1280	716 – 1253	0 – 195	981 – 1802
Reference range AUC [U]	57 – 113	43 – 100	71 – 115	84 – 128	72 – 125	0 – 20	98 – 180

ADPtest HS = ADPtest high sensitivity; PG E1 = Prostaglandin E1

Reference ranges for Multiplate® analysis using r-hirudin blood tubes

Hirudin blood tube S-Monovette® 2.7 mL r-Hirudin (order no. REF 04.1944.001, Sarstedt AG & Co.)

	ADPtest	ADPtest HS	ASPItest	TRAPtest	COLtest	RISTOtest low	RISTOtest high
Agonist	ADP	ADP + PG E1	Arachidonic acid	TRAP-6	Collagen	Ristocetin	Ristocetin
Standard volume	20 µL	20 µL + 20 µL	20 µL	20 µL	20 µL	12 µL	50 µL
Final concentration	6.5 µM	6.3 µM / 9.4 nM	0.5 mM	32 µM	3.2 µg / mL	0.2 mg / mL	0.77 mg / mL

n	206	139	57	74	74	71	71
Median (AUC)	840 AU*min 84 U	684 AU*min 68 U	987 AU*min 99 U	1202 AU*min 120 U	851 AU*min 85 U	61 AU*min 6 U	1268 AU*min 127 U
5° Percentile (AUC)	534 AU*min 53 U	311 AU*min 31 U	745 AU*min 75 U	941 AU*min 94 U	459 AU*min 46 U	15 AU*min 2 U	896 AU*min 90 U
95° Percentile (AUC)	1220 AU*min 122 U	1071 AU*min 107 U	1361 AU*min 136 U	1563 AU*min 156 U	1166 AU*min 117 U	337 AU*min 34 U	2013 AU*min 201 U
Reference range AUC [AU*min]	534 – 1220	311 – 1071	745 – 1361	941 – 1563	459 – 1166	15 – 337	896 – 2013
Reference range AUC [U]	53 - 122	31 - 107	75 - 136	94 - 156	46 - 117	2 - 34	90 - 201

ADPtest HS = ADPtest high sensitivity; PG E1 = Prostaglandin E1

Reference ranges for Multiplate® analysis using lithium-heparin blood tubes

lithium-heparin blood tubes, 17 U / mL lithium-heparin

	ADPtest	ADPtest HS	ASPItest	TRAPtest	COLtest	RISTOtest low	RISTOtest high
Agonist	ADP	ADP + PG E1	Arachidonic acid	TRAP-6	Collagen	Ristocetin	Ristocetin
Standard volume	20 µL	20 µL + 20 µL	20 µL	20 µL	20 µL	12 µL	50 µL
Final concentration	6.5 µM	6.3 µM / 9.4 nM	0.5 mM	32 µM	3.2 µg / mL	0.2 mg / mL	0.77 mg / mL

n	150	71	150	82	30	31	30
Median (AUC)	830 AU*min 83 U	690 AU*min 69 U	1063 AU*min 106 U	1206 AU*min 121 U	877 AU*min 88 U	310 AU*min 31 U	922 AU*min 92 U
5° Percentile (AUC)	548 AU*min 55 U	406 AU*min 41 U	790 AU*min 79 U	923 AU*min 92 U	607 AU*min 61 U	134 AU*min 13 U	645 AU*min 65 U
95° Percentile (AUC)	1167 AU*min 117 U	992 AU*min 99 U	1410 AU*min 141 U	1509 AU*min 151 U	1077 AU*min 108 U	685 AU*min 69 U	1161 AU*min 116 U
Reference range AUC [AU*min]	548 - 1167	406 - 992	790 - 1410	923 - 1509	607 - 1077	134 - 685	645 - 1161
Reference range AUC [U]	55 - 117	41 - 99	79 - 141	92 - 151	61 - 108	13 - 69	65 - 116

ADPtest HS = ADPtest high sensitivity; PG E1 = Prostaglandin E1

Reference ranges for Multiplate® analysis using citrated blood tubes

Citrated blood tubes, 3.2% citrate

	ADPtest	TRAPtest	COLtest
Agonist	ADP	TRAP-6	Collagen
Standard volume	20 µL	20 µL	20 µL
Final concentration	6.5 µM	32 µM	3.2 µg / mL

n	94	94	94
5° Percentile (AUC)	383 AU*min 38 U	691 AU*min 69 U	431 AU*min 43 U
95° Percentile (AUC)	848 AU*min 85 U	1169 AU*min 117 U	901 AU*min 90 U
Reference range AUC [AU*min]	383 - 848	691 - 1169	431 - 901
Reference range AUC [U]	38 - 85	69 - 117	43 - 90

Reference ranges for citrated blood only exist for agonists that can be re-calcified. (NaCl (0.9%) / CaCl₂ (3 mM), Mat. No. 6675972190 - was used as diluent solution.)