

Alpha 2 Macroglobulin concentrators: **Emcyte-FC120 PURE vs Cytonics APIC**

02 November 2015

Donors (N=2) PRP production

Date Drawn	Donor ID	Emcyte 16.6% NA Citrate	APIC 15.5% ACD-A	Emcyte Process Volume/Run	APIC Process Volume/Run
11/2/2015	D1 - BSR-001	10ml sodium Citrate 50 ml whole blood	9 ml ACD-A 51 ml whole Blood	2 X 60 = 120 ml	3 X 45 = 135 ml
11/2/2015	D2 -KP-44866	10ml sodium Citrate 50 ml whole blood	9 ml ACD-A 51 ml whole Blood	2 X 60 = 120 ml	3 X 45 = 135 ml

Production runs with PPP

Device	Total volume PPP	Total Volume Concentrate
Emcyte-FC120 PURE	60 ml	13mL (5 ml + 8mL recoverable hold-up volume*)
APIC	45 ml	10.5 ml

* With inclusion of the 8mL recoverable hold-up volume (not done) the total concentrate volume would be 13 mL, this volume is used for yield calculations listed below.

For each device, the PPP and PPP Concentrate were prepared according to each manufacturer's Instruction for Use (Emcyte FC120 PURE and APIC AP620.3). For the APIC device, the samples were spun at 3,000 rpm for 4 minutes (Sorval RT6000). PPP (45 ml) was transferred to the APIC disposable which was connected to a Watson Marlow pump Model 505U.

Results:

Alpha 2 Macroglobulin (normal value 1,500 – 1,800 µg/mL)

	PPP (µg/mL)	Concentrate (µg/mL)	Times baseline
EmCyte-D1	1341	4,811	3.59
APIC-D1	1341	5,169	3.85
EmCyte-D2	2244	9,230	4.11
APIC-D2	2650	6,464	2.44

Fibrinogen (normal value 1,500 – 4,500 µg/mL)

	PPP (µg/mL)	Concentrate (µg/mL)	Times baseline
EmCyte-D1	3,323	7,678	2.31
APIC-D1	3,323	7,414	2.23
EmCyte-D2	4,804	26,215	5.46
APIC-D2	5,517	13,077	2.37

Albumin (normal value 36 – 37.5 mg/mL)

	PPP (mg/mL)	Concentrate (mg/mL)	Times baseline
EmCyte-D1	54	277	5.1
APIC-D1	54	152	2.81
EmCyte-D2	47	221	4.7
APIC-D2	57	129	2.26

Average protein concentration (mg/mL) in Emcyte-FC120 PURE and APIC products

	α2 Macroglobulin	Fibrinogen	Albumin
FC120 PURE	7.0	16.9	249.0
APIC	5.8	10.2	140.5

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11 November 2015