

Reconstitution of lyophilized plasma samples

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Influence of

- Time after reconstitution:
15', 30', 45', 60', 75', 90'
- Temperature:
-20°C, 4°C and RT

on PT and aPTT results

Materials: samples

- **1 normal plasma: IPH**
- **2 heparinized samples**
Fraxodi (Nadroparin) 0.72 IU/ml - IPH
Fragmin (Dalteparin) 0.49 IU/ml - IPH
- **1 artificially depleted sample**
INR 2.30 - IPH
- **1 pool of plasma samples from patients treated with oral anticoagulants**
INR 3.85 - Commercial

Methods: PT and aPTT

- **PT:**

Neoplastin CI Plus on KC4

Interassay variability: 2.6-3.1%

Expanded uncertainty: 6%

- **aPTT:**

STA-PTT A on Start4

Interassay variability: 2.7-3.2%

Expanded uncertainty: 6%

Results: Time after reconstitution

	Time	PT sec	%	aPTT sec	%
Normal	15'	13.90	0.00%	34.95	0.00%
	30'	13.55	-2.52%	34.00	-2.72%
	45'	13.75	-1.08%	34.75	-0.57%
	60'	13.95	0.36%	34.00	-2.72%
	75'	13.85	-0.36%	34.85	-0.29%
	90'	13.95	0.36%	34.95	0.00%
Fraxodi	15'	13.45	0.00%	39.45	0.00%
	30'	13.50	0.37%	39.75	0.76%
	45'	13.30	-1.12%	38.90	-1.39%
	60'	13.65	1.49%	39.20	-0.63%
	75'	13.70	1.86%	39.05	-1.01%
	90'	13.40	-0.37%	39.35	-0.25%
Fragmin	15'	14.05	0.00%	63.45	0.00%
	30'	13.95	-0.71%	65.85	3.78%
	45'	14.00	-0.36%	66.90	5.44%
	60'	14.05	0.00%	66.65	5.04%
	75'	14.05	0.00%	68.10	7.33%
	90'	14.05	0.00%	67.80	6.86%

Results: Time after reconstitution

	Time	PT sec	%	aPTT sec	%
Depleted INR 2.30	15'	24.45	0.00%	56.85	0.00%
	30'	24.70	1.02%	56.95	0.18%
	45'	24.90	1.84%	56.50	-0.62%
	60'	24.65	0.82%	55.95	-1.58%
	75'			55.95	-1.58%
	90'	25.25	3.27%	56.75	-0.18%
Patient INR 3.85 Commercial	15'	41.00	0.00%	58.80	0.00%
	30'	38.70	-5.61%	58.05	-1.28%
	45'	38.15	-6.95%	58.75	-0.09%
	60'	38.85	-5.24%	58.55	-0.43%
	75'	39.35	-4.02%	59.00	0.34%
	90'	37.00	-9.76%	59.75	1.62%

Results: Temperature PT sec

	Time	RT	4°C	-20°C
Normal	15'	13.85	13.45	13.35
	30'	13.30	13.45	13.45
	45'	13.70	13.60	13.35
	60'	13.50	13.55	13.50
Fraxodi	15'	12.65	12.65	12.30
	30'	12.95	12.90	12.80
	45'	13.05	13.15	12.95
	60'	13.00	13.00	12.90
Fragmin	15'	13.05	13.25	13.00
	30'	13.40	13.10	13.15
	45'	13.15	13.10	13.15
	60'	13.20	13.75	13.65

Results: Temperature PT sec

	Time	RT	4°C	-20°C
Depleted INR 2.30	15'	24.45	24.50	24.05
	30'	23.45	24.35	24.35
	45'	24.40	23.90	24.15
	60'	24.40	23.75	23.95
Patient INR 3.85 Commercial	15'	37.50	37.20	39.10
	30'	37.45	37.30	39.95
	45'	36.95	37.15	39.85
	60'	39.20	37.70	37.05

Results: Temperature PT

	Time	RT	4°C	-20°C
Normal	15'	0.00%	-2.89%	-3.61%
	30'	-4.14%	-3.01%	-3.01%
	45'	-1.09%	-1.82%	-3.65%
	60'	-2.59%	-2.22%	-2.59%
Fraxodi	15'	0.00%	0.00%	-2.77%
	30'	2.32%	1.93%	1.16%
	45'	3.07%	3.83%	2.30%
	60'	2.69%	2.69%	1.92%
Fragmin	15'	0.00%	1.53%	-0.38%
	30'	2.61%	0.37%	0.75%
	45'	0.76%	0.38%	0.76%
	60'	1.14%	5.30%	4.55%

Results: Temperature PT

	Time	RT	4°C	-20°C
Depleted INR 2.30	15'	0.00%	0.20%	-1.64%
	30'	-4.26%	-0.43%	-0.43%
	45'	-0.20%	-2.25%	-1.23%
	60'	-0.20%	-2.87%	-2.05%
Patient INR 3.85 Commercial	15'	0.00%	-0.80%	4.27%
	30'	-0.13%	-0.53%	6.54%
	45'	-1.49%	-0.95%	6.36%
	60'	4.34%	0.51%	-1.15%

Results: Temperature aPTT sec

	Time	RT	4°C	-20°C
Normal	15'	33.88	35.33	33.83
	30'	33.73	35.50	33.25
	45'	34.88	34.55	33.60
	60'	34.78	34.83	33.90
Fraxodi	15'	39.48	39.28	39.23
	30'	40.03	39.38	39.48
	45'	40.58	39.85	39.85
	60'	40.53	40.23	40.08
Fragmin	15'	65.40	68.33	66.88
	30'	67.00	72.15	67.35
	45'	68.23	71.23	71.10
	60'	68.73	74.35	71.58

Results: Temperature aPTT sec

	Time	RT	4°C	-20°C
Depleted INR 2.30	15'	56.98	57.90	55.90
	30'	57.13	56.15	56.70
	45'	57.35	56.20	54.63
	60	56.13	55.83	54.73
Patient INR 3.85 Commercial	15'	57.78	59.03	57.15
	30'	57.10	58.00	56.65
	45'	57.73	58.93	56.75
	60'	58.68	59.53	56.03

Results: Temperature aPTT

	Time	RT	4°C	-20°C
Normal	15'	0.00%	4.28%	-0.15%
	30'	-0.44%	4.82%	-1.85%
	45'	2.87%	1.94%	-0.79%
	60'	2.59%	2.73%	0.07%
Fraxodi	15'	0.00%	-0.51%	-0.63%
	30'	1.37%	-0.25%	0.00%
	45'	2.71%	0.92%	0.92%
	60'	2.59%	1.85%	1.48%
Fragmin	15'	0.00%	4.47%	2.26%
	30'	2.39%	10.07%	2.91%
	45'	4.14%	8.54%	8.35%
	60'	4.84%	13.02%	8.99%

Results: Temperature aPTT

	Time	RT	4°C	-20°C
Depleted INR 2.30	15'	0.00%	1.62%	-1.89%
	30'	0.26%	-1.44%	-0.48%
	45'	0.65%	-1.35%	-4.10%
	60'	-1.51%	-2.05%	-4.01%
Patient INR 3.85 Commercial	15'	0.00%	2.16%	-1.08%
	30'	-1.18%	0.39%	-1.97%
	45'	-0.09%	1.99%	-1.78%
	60'	1.53%	2.98%	-2.98%

Conclusions

- No clear conclusions can be drawn for all samples
- ? Analysis within 60'
- ? RT