ANIARA DIAGNOSTICA LLC

Please note that the uses described in the following page(s) have not been approved or cleared by FDA, with respect to the described assay or test.

In the US, the product is intended **For Research Use Only. Not for Use in Diagnostic Procedures.**

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ANIARA

Manufactured By: HYPHEN BioMed

CE

CEPHEN / CEPHEN LS (aPTT reagent) technical file (#ACK511K/ACK512K/ACK515K-L; ACK521K/ACK522K)

Intended use and principle:

IVD

Determination of Activated Partial Thromboplastin Time (aPTT) on human citrated plasma.

Prolonged if:
-"anticoagulant" activities induced by therapy
- Important factor deficiencies:
II, V, X, VIIIc, IX, XI, XII; HMWK.
- Abnormalities or acquired deficiencies (excessive consumption of factors, hepatic disorders…)
- Coagulation inhibitors (auto-antibodies, LA → CEPHEN LS

- 100 µL of test plasma
- 100 µl of reagent

Mix, 3 min at 37 C

- 100 µl of calcium choride 0.025M (at 37 C)

Record clotting time (sec)

Kit presentation:

Liquid reagents ready to use.

1ml~10tests(manual method)/20 tests (STAR)

Cephen:

ACK511K: 6*1 ml vials
ACK512K: 6*2.5 ml vials
ACK515K: 8*5 ml vials
ACK515L: 12*5 ml vials

Cephen LS:

ACK521K: 6*1 ml vials
ACK522K: 6*2.5 ml vials

Procedure:

- Specimen: human citrated plasma or specific collection for heparinized samples
- Plasma Dilution: undiluted
- Manual method or automated methods adapted to coagulation analysers.
- Assay time: < 5 min

Characteristics and advantages:

- **Ready to use liquid reagent, highly stable** (24 months at 2-8°C or 3 weeks at 30°C; homogenize before each use).
- **Different presentations available**.
- **Safe, optimized, standardized**: Cephalin (from vegetable origin for Cephen , from animal origin and at low level for Cephen LS) and activator (equivalent to colloidal micronized silica).
- Suitable for use with the main **coagulation analyzers**
- **Sensitivity** to: **FII, V, X (<5 to 10%), VIIIc, IX, XI, XII (<20%)**
  Heparins (UFH & LMWH)
  Hirudin; Argatroban
  Lupus anticoagulant (CEPHEN LS)

Related Products:

BIOPHEN Plasma Calibrator, Normal and Abnormal Control Plasma (#A222101, A223201/A223301) ; FVIII:C or FIX deficient plasmas (#ADP040A/K; ADP050A/K); Calcium chloride (#AAR 001A/K; AAR002A/K); Biophen Heparin (#A221003/A221006) ; Biophen FVIII:C (#A221402)

References:

"Hémorragies et thromboses – Du diagnostic au traitement", M.M. Samama et coll., Abrégés, Masson, 2004. www.geht.org (/ héparines)

« Heparin and Low Molecular weight Heparin: The Seventh ACCP Conference on Antithrombotic and Thrombolytic Theory (Hirsch J, Raschke R, Chest, 2004 Sep 126 (3Suppl); 188S-203S.

« Monitoring Unfractionated Heperin with the APTT: time for a fresh look », Eikelboom JW, Hirsch J, Thromb Haemost, 2006 Nov. 96(5) 547-52.

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Accuracy/Reproducibility: example of intra and inter assay results (STAR, N=10)

		APTT (sec)	Intra assay CV (%)	Inter assay CV (%)
Cephen lot 070622B	Normal plasma pool	33	0.38%	2.22%
	Heparinized plasma	67	0.53%	2.26%
Cephen LS lot 070622C	Normal plasma pool	31	0.53%	0.62%
	Heparinized plasma	60	0.34%	1.45%

Assayed specimen:

• Haemoglobin: No significant interference up to 5 mg/ml Haemoglobin added to 3 normal plasmas, assayed with 1 lot of Cephen and 1 lot of Cephen LS.

•Bilirubin: No significant interference up to 0.25 mg/ml Bilirubin added to 3 normal plasmas, assayed with 1 lot of Cephen and 1 lot of Cephen LS.

• Caution: Any sample presenting an abnormal aspect (eg: lipaemic, haemolysed, partial coagulation …) should be rejected

• Specimen collection on citrate 0.109M or 0.129M, and freezing of the samples: similar results for 5 normal plasmas (slightly shorter with citrate 0.109M):

Mean aPTT (sec)(STAR, N=5)	Cephen LS 070622C	Cephen 070622B
0,109M Fresh	31,6	30,5
0,129M Fresh	31,8	31,2
0,109M Frozen	31,4	30,8
0,129M Frozen	31,8	31,4

NORMAL RANGE: Example of Typical results obtained on normal plasma, comparison with various intruments and other commercial reagents

Reagent	**Cephen LS lot 2**			**Cephen LS lot 1**	**Cephen lot 2**			**Cephen lot 1**	**CK Prest lot 100133**	**PTT Automate lot 061535**
Instrument	KC10	STAR	ACL 7000 (optical)	STAR	KC10	STAR	ACL 7000 (optical)	STAR	KC10	STAR
N	30	30	30	30	30	30	30	30	30	30
Mean APTT (sec)	**29.9**	**31.9**	**25.5**	**32.1**	**28.8**	**30.5**	**25.1**	**33.2**	**32.7**	**32.4**
SD (sec)	2.05	2.51	1.75	2.11	2.01	2.2	1.77	2.57	2.2	2.03
M ± 2SD (sec)	26-34	27-37	22-29	28-36	25 - 33	26 – 35	22 – 29	28-38	28-37	28-37
Min-Max (sec)	27.1-34.1	28.0-37.7	22.5-30.0	28.9-36.1	25.6-33.5	27.1-35.5	22.2-30.0	29.8-39.5	28.9-37.5	28.1-36.3

⇒ Measured aPTT were longer with mechanical than with optical clot detection, as expected, and correlated well with Stago CK Prest or STA-PTT Automate reagents. Each laboratory should verify the expected normal and acceptance ranges in the exact working conditions.

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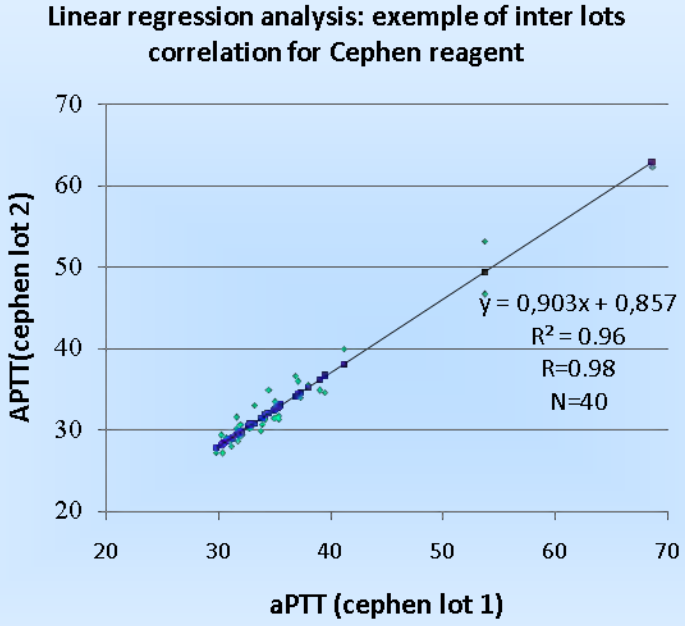
Example of inter lots correlation



⇒ **Good correlation between different lots of Cephen (or Cephen LS) reagents (N=109 normals and controls r^2 = 0.95), also well correlated with Stago CK Prest (N=51 r^2 = 0.94) or STA-PTT Automate (N=39 r^2 = 0.92) reagents for APTT determination.**

Heparin sensitivity: Example of APTT values (seconds) for a normal citrated human plasma pool spiked with UFH or LMWH (STA-R):

STAR (2007)		Plasma Pool + UFH			Plasma Pool + LMWH			
	IU/ml	0	0.1	0.2	0	0.2	0.4	1.0
Cephen Lot 070622B	aPTT (sec)	34.0	50.2	79.0	34.0	44.4	53.2	85.4
Cephen LS lot 070622C	aPTT (sec)	32.5	42.4	60.1	32.5	41.2	49.5	78.4
Stago PTT Automate	aPTT (sec)	33.2	45.4	65.1	33.2	45.6	55.6	93.0

STAR (Feb 2009)		Plasma Pool + UFH				Plasma Pool + LMWH			
Cephen Lot	IU/ml	0	0,20	0,35	0,50	0	0,25	0,50	1,00
Cephen 90201	aPTT (sec)	31.1	59.3	97.9	177.0	31.7	38.4	45.5	60.8
Cephen 080326B	aPTT (sec)	30.1	52.7	85.6	154.9	30.5	37.0	43.1	58.1
Cephen 071205F (12 months at 2-8°C)	aPTT (sec)	31.2	55.8	93.5	169.6	32.1	38.8	45.6	63.2
Stago PTT Automate 101379	aPTT (sec)	30.8	51.6	77.9	116.2	33.3	42.1	50.7	70.8

Cephen is very sensitive to low concentrations of Unfractionated Heparin (UFH) in plasma, and clotting times prolongation , dependent from the tested plasma, is significative from about 0.1 IU/ml. This sensitivity is lower for Low Molecular Weight Heparin (LMWH) (from about 0.2- 0.4 IU/ml) .

Heparin sensitivity : variable for the various APTT reagents marketed, susceptible to slightly vary from lot to lot for a same reagent. Heparin sensitivity must be checked by the laboratory in the actual conditions of testing, and for the lot used. (refer insert).

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EXTERNAL EVALUATION of Cephen and Cephen LS reagent on patients treated with Unfractionated Heparin, using the STA-R instrument (Feb2008):

Reagent	Biophen Hep 6	Cephen (3min)		Cephen (4min)		Cephen LS (3min)		Cephen LS (4min)		APTTA Stago		APTT. Trinity		APTT-LS Trinity	
LOT	72302	070622		070622		070622		070622		100670		111416		111444	
Patient	[UFH] IU/ml	aPTT (sec)	M/T	aPTT (sec)	M/T	aPTT(sec)	M/T	aPTT (sec)	M/T	aPTT (sec)	M/T	aPTT (sec)	M/T	aPTT (sec)	M/T
Pool	0,08	28,6		28,7		32,1		31,1		34,9		34,4		34,9	
7	0,04	39,7	**1,4**	37,9	**1,3**	44,3	**1,4**	42,1	**1,4**	58,8	**1,7**	44,3	**1,3**	43,5	**1,2**
11	0,07	56,2	**2,0**	50,9	**1,8**	57,1	**1,8**	51,8	**1,7**	67,4	**1,9**	66,6	**1,9**	60,5	**1,7**
12	0,10	50,4	**1,8**	50,5	**1,8**	47,9	**1,5**	49,9	**1,6**	56,0	**1,6**	59,6	**1,7**	54,0	**1,5**
4	0,11	47,3	**1,7**	44,8	**1,6**	49,5	**1,5**	47,6	**1,5**	59,7	**1,7**	65,2	**1,9**	56,0	**1,6**
14	0,11	33,5	**1,2**	32,0	**1,1**	41,3	**1,3**	38,9	**1,3**	43,2	**1,2**	43,3	**1,3**	38,3	**1,1**
17	0,13	78,6	**2,7**	70,0	**2,4**	73,7	**2,3**	67,4	**2,2**	81,2	**2,3**	78,6	**2,3**	66,1	**1,9**
22	0,13	54,9	**1,9**	48,3	**1,7**	52,6	**1,6**	45,2	**1,5**	50,2	**1,4**	51,4	**1,5**	51,5	**1,5**
30	0,14	58,0	**2,0**	52,2	**1,8**	65,6	**2,0**	57,1	**1,8**	71,6	**2,1**	62,9	**1,8**	60,2	**1,7**
25	0,17	58,2	**2,0**	54,0	**1,9**	56,3	**1,8**	50,6	**1,6**	61,8	**1,8**	57,4	**1,7**	46,9	**1,3**
5	0,18	45,4	**1,6**	38,5	**1,3**	QIP		37,2	**1,2**	37,0	**1,1**	38,5	**1,1**	36,1	**1,0**
9	0,18	57,3	**2,0**	53,9	**1,9**	58,0	**1,8**	54,2	**1,7**	71,1	**2,0**	65,2	**1,9**	71,4	**2,0**
29	0,18	58,2	**2,0**	55,8	**1,9**	65,2	**2,0**	61,5	**2,0**	96,4	**2,8**	60,4	**1,8**	61,5	**1,8**
13	0,20	56,2	**2,0**	58,2	**2,0**	57,1	**1,8**	54,4	**1,7**	67,4	**1,9**	64,7	**1,9**	59,2	**1,7**
19	0,20	40,7	**1,4**	39,4	**1,4**	47,0	**1,5**	46,7	**1,5**	55,0	**1,6**	53,5	**1,6**	51,3	**1,5**
15	0,22	83,7	**2,9**	76,2	**2,7**	85,0	**2,6**	76,2	**2,5**	100,8	**2,9**	104,1	**3,0**	101,1	**2,9**
6	0,24	67,4	**2,4**	58,2	**2,0**	QIP		58,7	**1,9**	60,8	**1,7**	64,5	**1,9**	55,1	**1,6**
26	0,28	56,9	**2,0**	54,2	**1,9**	63,6	**2,0**	58,8	**1,9**	63,1	**1,8**	64,8	**1,9**	59,0	**1,7**
20	0,29	58,6	**2,0**	54,4	**1,9**	61,8	**1,9**			66,9	**1,9**			112,5	**3,2**
28	0,30	78,9	**2,8**	74,3	**2,6**	91,6	**2,9**	80,0	**2,6**	133,8	**3,8**	74,6	**2,2**	81,1	**2,3**
8	0,31	73,6	**2,6**	72,6	**2,5**	70,7	**2,2**	71,3	**2,3**	84,3	**2,4**	90,6	**2,6**	87,5	**2,5**
18	0,36	68,6	**2,4**	64,5	**2,2**	66,5	**2,1**	60,2	**1,9**	69,9	**2,0**	59,3	**1,7**	51,5	**1,5**
16	0,38	55,8	**2,0**	58,2	**2,0**	57,0	**1,8**	54,8	**1,8**	63,5	**1,8**	61,1	**1,8**	57,1	**1,6**
3	0,39	41,4	**1,4**	40,8	**1,4**	45,1	**1,4**	43,8	**1,4**	52,8	**1,5**	54,5	**1,6**	57,2	**1,6**
10	0,46	76,6	**2,7**	73,1	**2,5**	79,0	**2,5**	72,6	**2,3**	97,8	**2,8**	85,3	**2,5**	86,0	**2,5**
21	0,48	50,2	**1,8**	49,1	**1,7**	53,9	**1,7**	51,8	**1,7**	56,7	**1,6**	60,8	**1,8**	67,7	**1,9**
24	0,48	94,6	**3,3**	83,6	**2,9**	94,4	**2,9**	82,4	**2,6**	97,4	**2,8**	96,3	**2,8**	94,4	**2,7**
23	0,49	62,4	**2,2**	57,1	**2,0**	58,8	**1,8**	52,8	**1,7**	56,8	**1,6**	57,7	**1,7**	57,8	**1,7**
27	0,56	91,5	**3,2**	85,1	**3,0**	85,9	**2,7**	79,4	**2,6**	88,3	**2,5**	79,6	**2,3**	76,8	**2,2**
2	0,60	111,5	**3,9**	94,2	**3,3**	107,6	**3,4**	91,2	**2,9**	118,9	**3,4**	116,2	**3,4**	112,6	**3,2**
1	0,71	121,4	**4,2**	106,1	**3,7**	123,0	**3,8**	102,4	**3,3**	162,8	**4,7**	160,5	**4,7**	168,4	**4,8**

Conclusions: **Results are generally consistent. Cephen is very sensitive to Unfractionated Heparin (UFH) in plasma, and clotting time prolongation is significative from 0.1 IU/ml. This sensitivity is lower for Low Molecular Weight Heparin (LMWH). Heparin sensitivity is variable for the various APTT reagents marketed. It also can present slight variations from lot to lot for a same reagent. Heparin sensitivity must be checked by the laboratory in the actual conditions of testing, and for the lot used. The same plasma heparin concentration can produce variable prolongations of the APTT and of the clotting time ratio Patient/Normal Control; especially for patients in intensive care units or resuscitation.**

Good sensitivity to heparins (UFH or LMWH) ; can be variable depending on the reagent and lot used; the activation time can be adjusted depending on the reagent, instrument and current laboratory practice. Anti Xa assays remain the method of choice for monitoring heparin treatment.

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INTERNAL EVALUATION of Cephen reagent sensitivity to FVIII:c and FIX deficiency, by recovery study of a normal plasma pool into a FVIII:C or FIX deficient plasma, using the STA-R instrument :

Oct 2007; STAR		Cephen LS lot 2	Cephen LS lot 1	Cephen lot 2	cephen lot 1	CK Prest (KC10)	Stago PTT automate
		aPTT (sec)	aPTT (sec)	aPTT (sec)	aPTT (sec)	aPTT (sec)	aPTT (sec)
Sensitivity to FVIII:C	Plasma Pool « 100% »	31,2	32,2	32,3	34,8	33,2	32,3
	« 30% »	36,9	37,2	36,9	40,1	41,6	40,1
	« 20% »	39,4	40,8	40,7	43,3	45,3	43,7
	« 10% »	43,4	45,3	44,5	47,5	51,8	48,1
	« 5% »	49,1	50,8	52,7	55,1	58,5	55,6
	FVIII:C def plasma <1%	93	93,8	111,1	127,6	101,2	102,5
	Haemoph.A (0,8%FVIII:C)	63	65,6	65,3	72,1	na	71,8
	Haemoph.A (36%FVIII:C)	44,4	na	41,2	43,3	na	49,7
Sensitivity to FIX	Plasma Pool « 100% »	31,2	32,2	32,3	34,8	33,2	32,3
	« 30% »	35,7	36,4	34,2	36,1	38,9	39,1
	« 20% »	38,1	39,1	36,4	38,4	42	42,1
	« 10% »	41,1	42,1	39,9	42,1	50,2	46,1
	"5%"	45,6	46,9	44,5	46,9	54	52
	FIX def plasma <1%	132,3	138,2	151,5	184,1	123,7	147,9
	Haemoph.B (8,6% FIX)	62,9	na	na	na	na	na
	Haemoph.B (2,9% FIX)	67,6	na	62,4	na	na	67,7

Feb 2009; STAR		Cephen 90901	Cephen lot 080326B	Cephen lot 071205F (after 12 months at 2-8 C)
		aPTT (sec)	aPTT (sec)	aPTT (sec)
Sensitivity to FVIII:C	Plasma Pool « 100% »	29.9	30.5	30.1
	« 30% »	35.8	36.9	36.1
	« 20% »	38.7	39.7	39.2
	« 10% »	45.2	45.7	45.0
	FVIII:C def plasma <1%	94.7	100.7	98.8
Sensitivity to FIX	Plasma Pool « 100% »	29.8	30.7	30.4
	« 30% »	36.7	36.1	35.7
	« 20% »	39.7	39.1	38.5
	« 10% »	45.0	44.3	43.5
	FIX def plasma <1%	132.7	132.6	134.8

Conclusion: Sensitivity to FVIII:C and FIX < 20%; good sensitivity to plasmas with severe FVIII:C or FIX deficiency.

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INTERNAL EVALUATION of Cephen reagent sensitivity to FXI, FXII, FV, FX, FII, Prekallicrein and High Molecular Weight Kininogen, by recovery study of a normal plasma pool into a corresponding Factor deficient plasma :

Oct 2007		Cephen LS lot 2	Cephen LS lot 1	Cephen lot 2	Cephen lot 1	CK Prest	Stago PTT automate
		aPTT (sec)	aPTT (sec)	aPTT (sec)	aPTT (sec)	aPTT (sec)	aPTT (sec)
Sensitivity to FXI	Plasma Pool « 100% »	32.2	34.1	32.9	33.3	35	33.6
	« 30% »	41.5	52.4	50.4	44.1	53.3	45.5
	« 20% »	54.2	58.8	57.7	47.9	57.1	51.6
	« 10% »	67.4	72.2	70.3	56.7	68.6	59.7
	« 5% »	87.8	86.2	83.3	66.5	78.8	68.9
	FXI def plasma <1%	261.0	358.0	268.2	165	177.3	121.7
Sensitivity to FXII	Plasma Pool « 100% »	32.2	34.1	30.2	33.3	35	33.6
	« 30% »	44.6	50.8	40.1	41.5	46.7	45.5
	« 20% »	49.4	57.6	43.1	45.2	50.6	51.0
	« 10% »	63.1	66.9	50.7	52.9	56.9	61.6
	"5%"	69.8	80.9	59.3	64.0	63.9	74.9
	FXII def plasma <1%	>580.2	>532.2	<440.3	>406.9	307.3	352.0
Sensitivity to Prekallicrein	Plasma Pool « 100% »	29,1	30,5	29,7	31,7	33,2	na
	"5%"	29	29,7	30	32,2	36,8	na
	PK def plasma <1%	74,8	87,6	97,8	92,4	104,9	na
Sensitivity to HMWK	Plasma Pool « 100% »	29,1	30,5	29,7	31,7	33,2	na
	"5%"	40,3	41,3	46,6	49,5	44,2	na
	HMWKdef plasma <1%	268,5	254,4	>372	>404	191	na
Sensitivity to FX	Plasma Pool « 100% »	31.2	32.2	32.3	34.8	33.2	32.3
	« 30% »	35.6	36.4	34.8	37.2	37.6	40.7
	« 20% »	37.7	39.3	37.3	39	39.1	43.9
	« 10% »	41.9	43	41.3	44	43.4	48.3
	"5%"	46.9	48.7	46.8	49.5	50.2	54.7
	FX def plasma <1%	178.6	191.9	219.3	264.1	189.2	175.7
Sensitivity to FV	Plasma Pool « 100% »	31.2	32.2	32.3	34.8	33.2	32.3
	« 30% »	36.6	37.8	35.7	38.1	40.0	38
	« 20% »	39	40.4	38.4	41	43.7	40.3
	« 10% »	44.8	46.1	44	47.3	51.6	45.5
	"5%"	52	53.8	52.9	56.3	63.1	54.5
	FV def plasma <1%	201.2	194.4	235.3	260.5	230.4	225.6
Sensitivity to FII	Plasma Pool « 100% »	31.2	32.2	32.3	34.8	33.2	32.3
	« 30% »	32.2	33.1	32.4	34.2	34.1	36.8
	« 20% »	34.2	34.9	34.1	35.7	36.3	38.7
	« 10% »	37.5	38.6	37.6	39.5	40.9	41.8
	"5%"	41.5	43.1	41.9	44.5	46.6	47.4
	FII def plasma <1%	>500	>500	>500	>500	>449.1	317.4

Conclusion: Sensitivity of Cephen reagents to FXI and FXII< 20%, only sensitive to severe PK deficiencies (<1%) and HMWK low levels (<5%, Cephen LS is less sensitive than Cephen), low sensitivity to FX, FV and FII deficiencies (high prolongation of APTT occured only for very low levels <5%) for 3 min incubation time.

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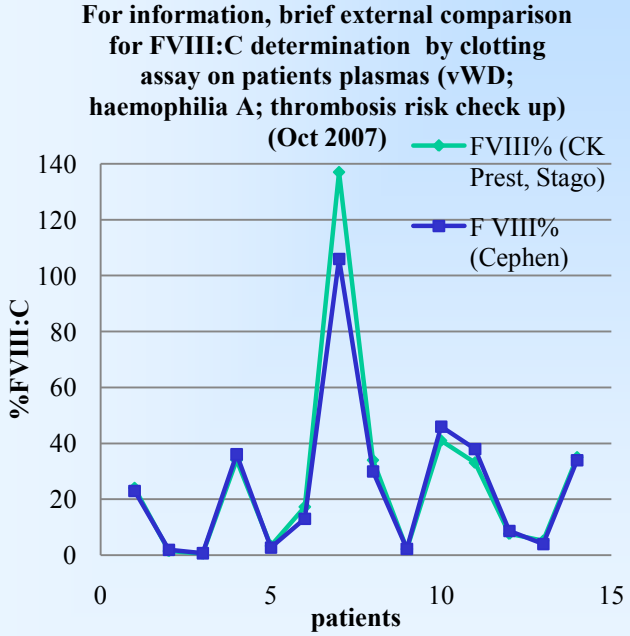
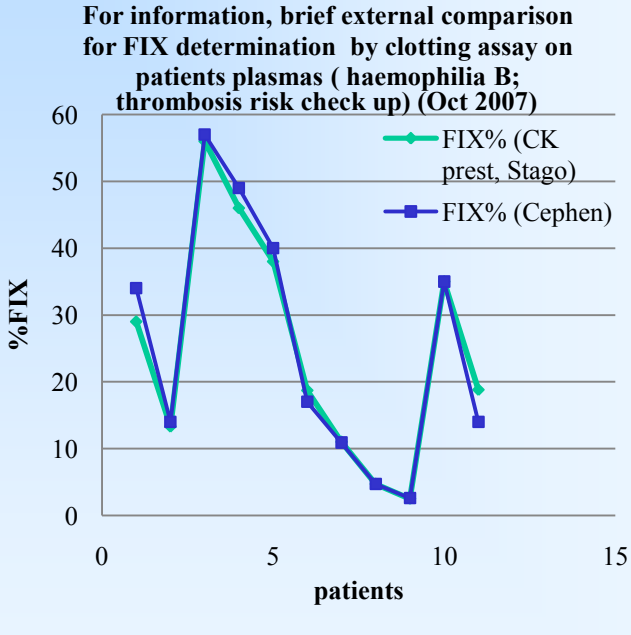
Informative internal testing of Cephen reagent (Jan 2008): calibration curve in an APTT based clotting assay for FVIII:c or FIX determination:

aPTT based clotting assay for FVIII:C (STAR)		
Reagent	Cephen (LR) 071205F	CK prest (Stago) 100334
%VIII:C	CT (sec)	CT sec)
78	67,2	68,4
39	77,5	76,9
20	87	84,2
10	97,1	93,3
5	107,6	100,1
r2	0,998	0,997

aPTT based clotting assay for FIX (STAR)		
Reagent	Cephen (LR) 071205F	CK prest (Stago) 100334
%IX	CT (sec)	CT sec)
100	55,9	62,3
50	62,3	70
25	70,1	77,7
13	78,8	88
6	88,6	97,2
r2	1	0,999

Informative external testing of Cephen reagent for FVIII:C or FIX determination (Oct 07):





Conclusion: Results were generally consistent with both reagents tested. However each laboratory should verify and validate the suitability of using each reagent and lot in the exact working conditions and for the specific application.

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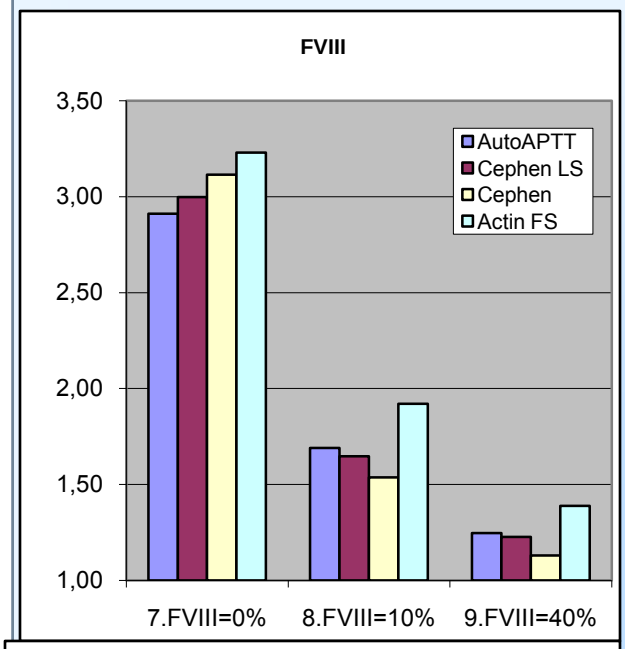
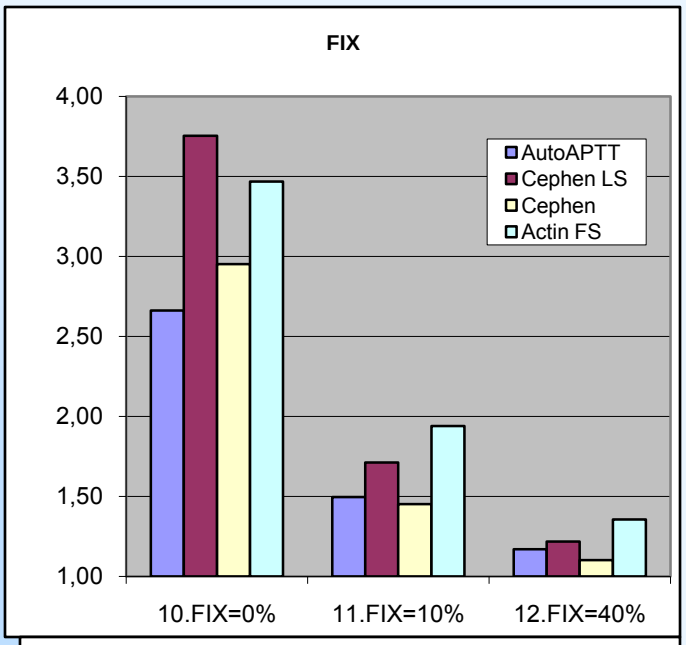
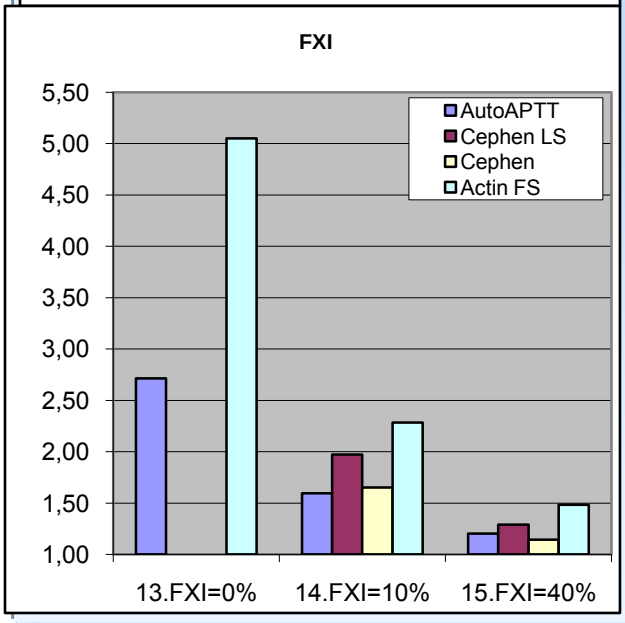
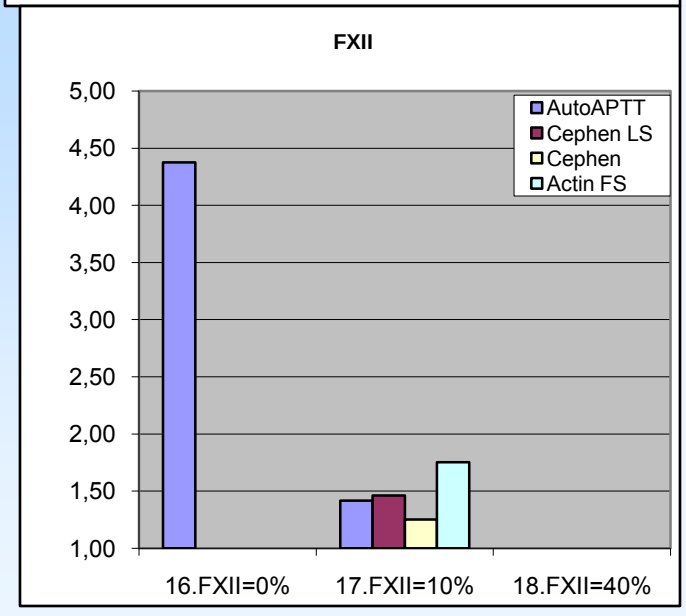
CEPHEN / CEPHEN LS (aPTT reagent) technical file (#ACK511K/ACK512K/ACK515K-L; ACK521K/ACK522K)

Preliminary external evaluation of Cephen and Cephen LS (Aug 2007): sensitivity FVIII, FIX, FXI, FXII expressed as ratios and compared with other commercial reagents :









EXTERNAL EVALUATION of Cephen reagent (Nov 2007, lot 070622B):

Reproducibility on Stago controls (n=10)	Coag Norm	Coag Path
aPTT (Sec)	30,99	50,03
SD %	0,33	0,56
CV %	1,07	1,11

Normal samples (N=42)	**APTT ES (Helena Biosciences)**	**Cephen**
Mean aPTT Ratio	0,89	0,91
SD	0,09	0,10
Min-Max	0,73-1,11	0,77-1,14

Haemophilia A patients (FVIII:C 0.6% and 0.9%) : no coagulation
Haemophilia B patient (FIX 1.3%) : ratio 1.94
Von Willebrand disease patient (FVIII 40%): ratio 1.38

Conclusion: Reproducibility performances are satisfactory; patients with severe FVIII:C or FIX deficiency are detected.

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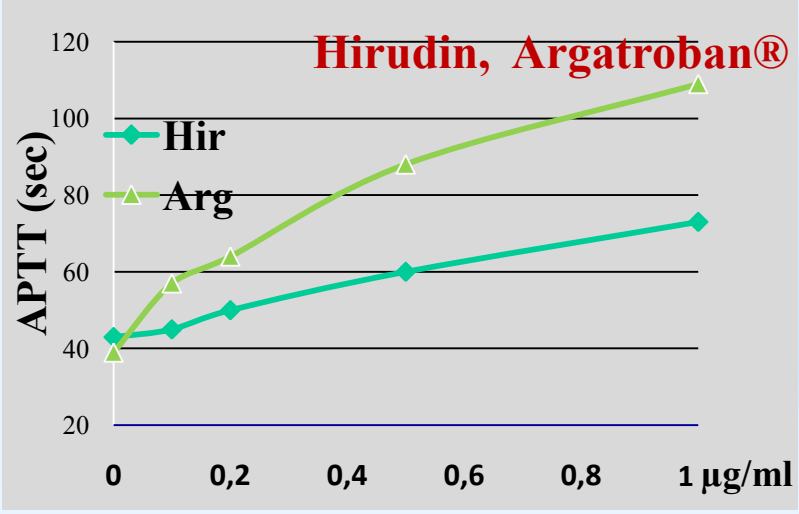
Example of sensitivity to Hirudin and Argatroban® (spiked into normal plasma) :



Sensitivity to High levels of Fibrinogen: Tested by addition of purified human fibrinogen into a normal plasma. The effect remains minimal below about 10mg/ml, then the APTT is prolonged with increasing fibrinogen concentration.

Example of sensitivity to pathological samples, dicumarol treated (VKA/AVK) or circulating autoantibodies (ACC) or Lupus anticoagulant (LA):

aPTT(sec)	Cephen LS 070622C	Cephen 070622B	CK Prest	STA-PTT automate
AVK 1	45.3	50.2	50.8	46.4
AVK 2	88.3	78.2	65.4	96.8
AVK3	62.1	62.1	63.2	63.4
AVK 4	89.9	84.9	78.3	92
AVK 5	47.9	50.4	57.6	51.7
AVK 6	53.2	59.4	63.4	na
AVK 7	52.9	46.4	51.5	
AVK 8	na	51.7	57.3	
AVK 9	43.6	48.3	48.6	
AVK 10	69.6	68.4	58.1	

	Cephen LS lot 2	Cephen LS lot 1	Stago PTT automate
ACC1	74.2	81.7	73.3
ACC2	50.1	51.4	56.3
ACC3	56.7	59.4	59.9
ACC4	54.7	59.3	49.4
ACC5	47.1	49.3	49.3
LA6 MA 3124	275	219.2	na
LA7 LT 9136	173.1	187.6	na
LA9	76.9	74.9	74.8
LA10	160.1	142.3	136.4

APTT was prolonged with Cephen and Cephen LS for these dicumarol treated patients, and comparable to results with Stago reagents. In the same way the sensitivity of Cephen LS to LA and ACC is comparable to Stago aPTT automate reagent on these samples.

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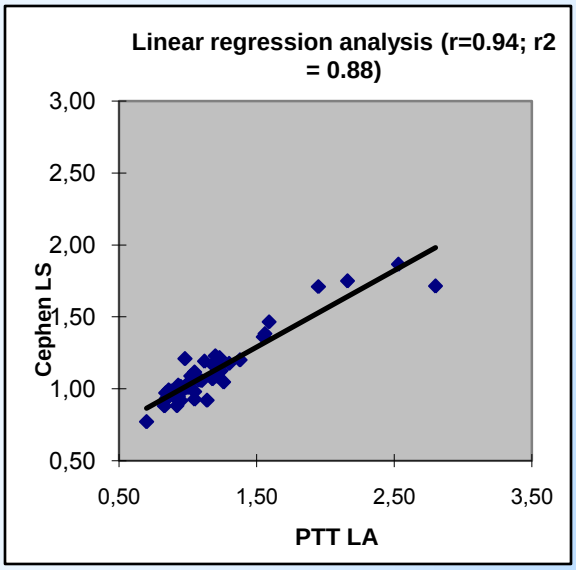
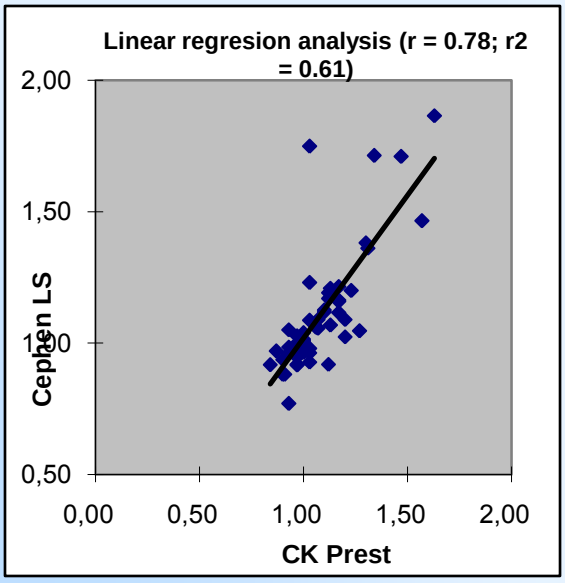
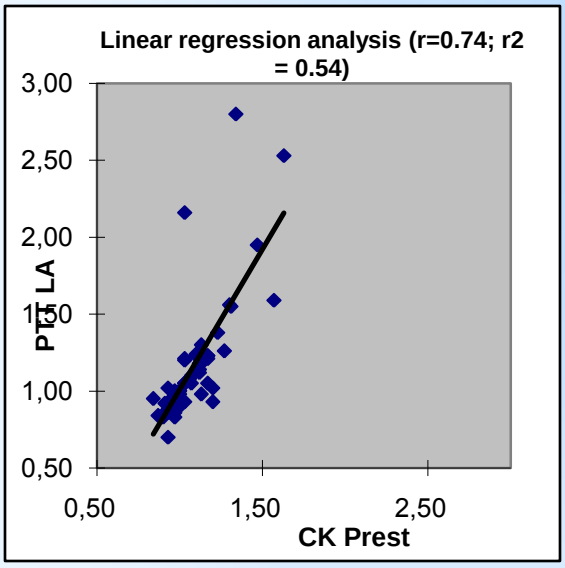
PRELIMINARY EXTERNAL EVALUATION of Cephen LS reagent (Jan 2008, lot 070622C):

Normal samples (N=31)	Cephen LS
Mean aPTT (sec)	33.5
SD	2.2
Min-Max	30.1-39.6
Ratio Normal (mean+3SD)/mean)	*<1.20*







Conclusion: For this preliminary study, 31 normal samples were tested to define the normal range and expected ratio.
51 patients samples addressed for Lupus anticoagulant (LA) screening (in a thrombosis risk check up or obstetrics context) were assayed: results were generally consistent,
with intermediate sensitivity of Cephen LS reagent between CK Prest and PTT LA reagents (results detailed here below for 6 LA positive samples).

Patient	CKPREST M/T	PTTLA M/T	CEPHEN LUPUS M/T	TTD	PTTLA ROSSNER	DRVV
ratio normal M/T	<1,20*	<1,30*	<1,20*	<1,15	<15	
5	1,30	1,56	1,38	1,37	25	POS
9	1,63	2,53	1,87	2,87	45,1	POS
48	1,31	1,55	1,36	1,27	27,1	POS
49	1,47	1,95	1,71	2,23	45,4	
50	*1,03*	2,16	1,75	*1,13*	25,1	POS
54	1,34	2,80	1,71	1,15	28	POS

*defined as: (mean APTT+3SD)/mean APTT for 30 healthy donors

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