

1/21
FIG. 1A

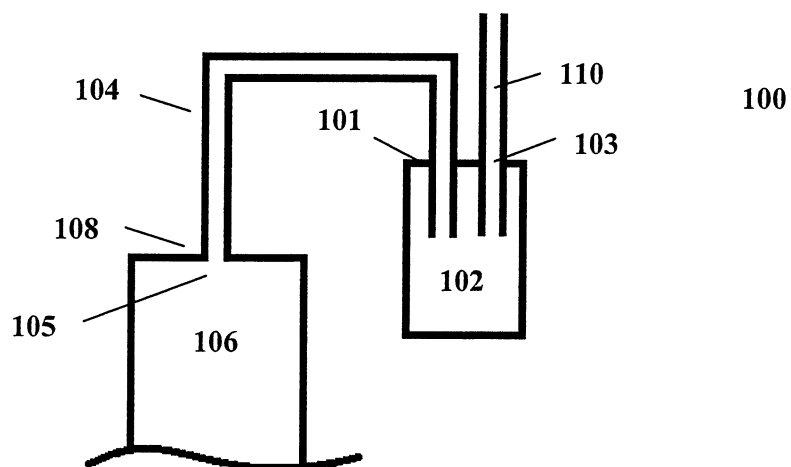


FIG. 1B

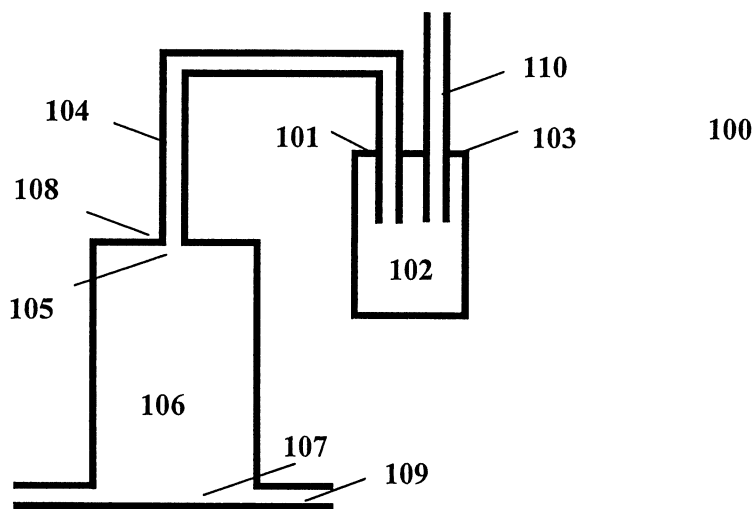
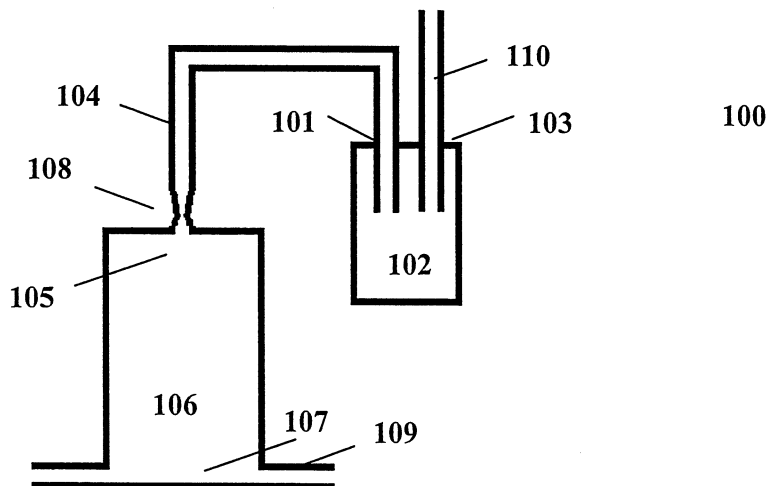


FIG. 1C



2/21
FIG. 1D

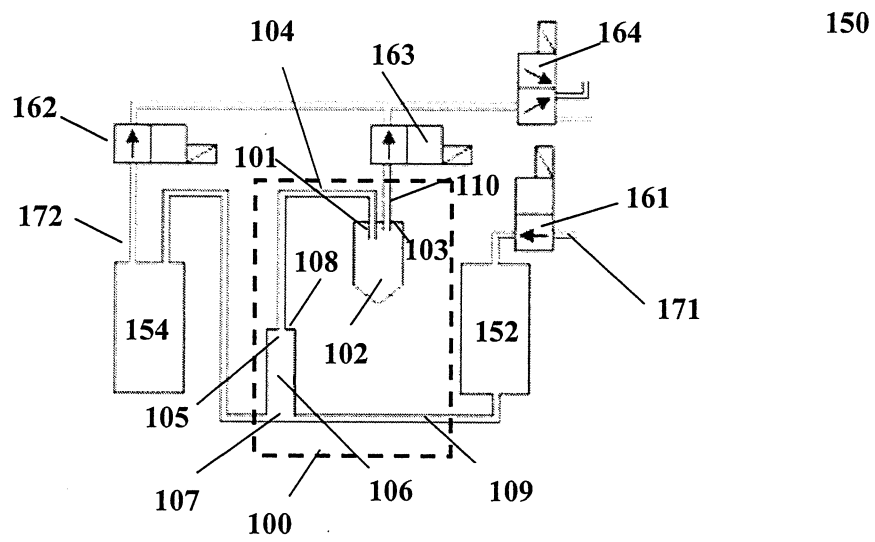


FIG. 1E

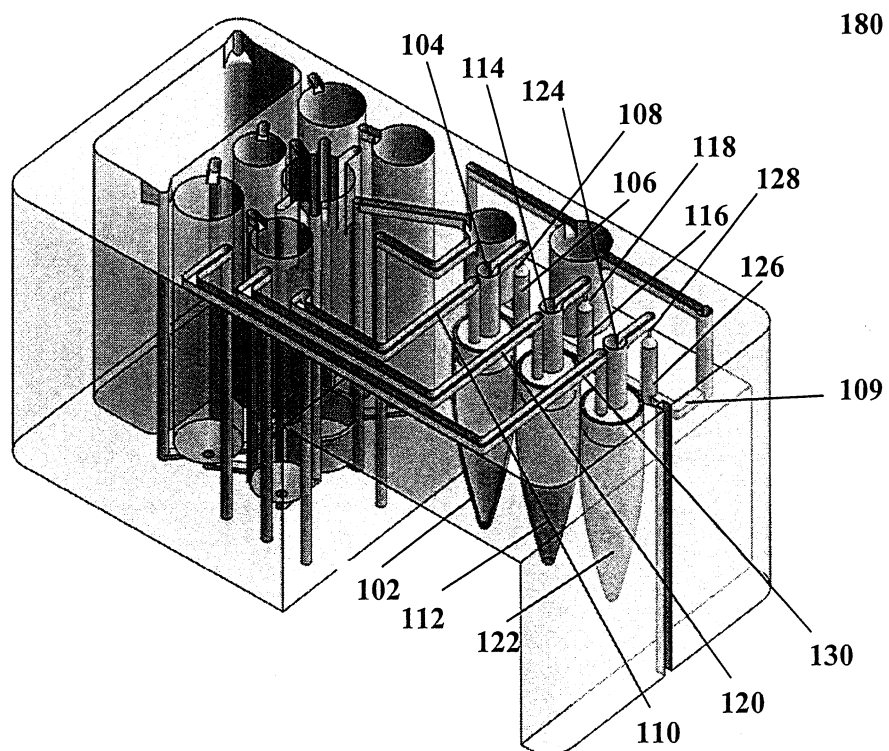


FIG. 1F

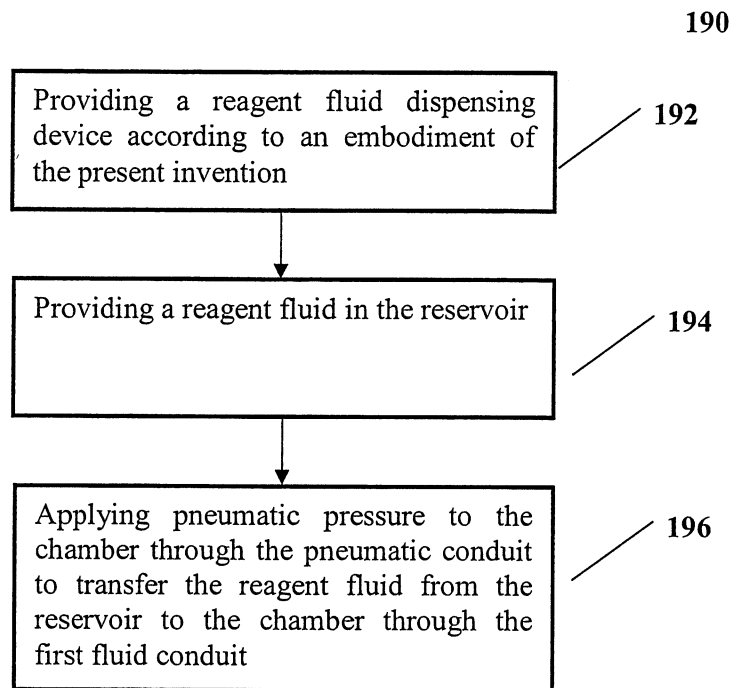
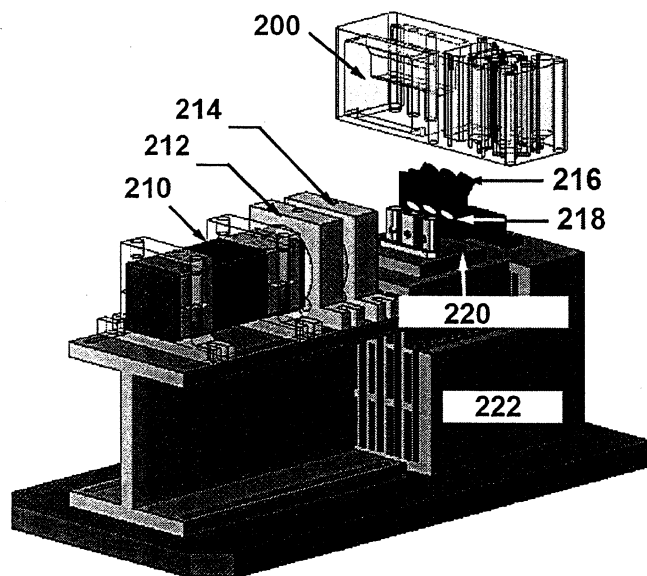


FIG. 2A



4/21
FIG. 2B

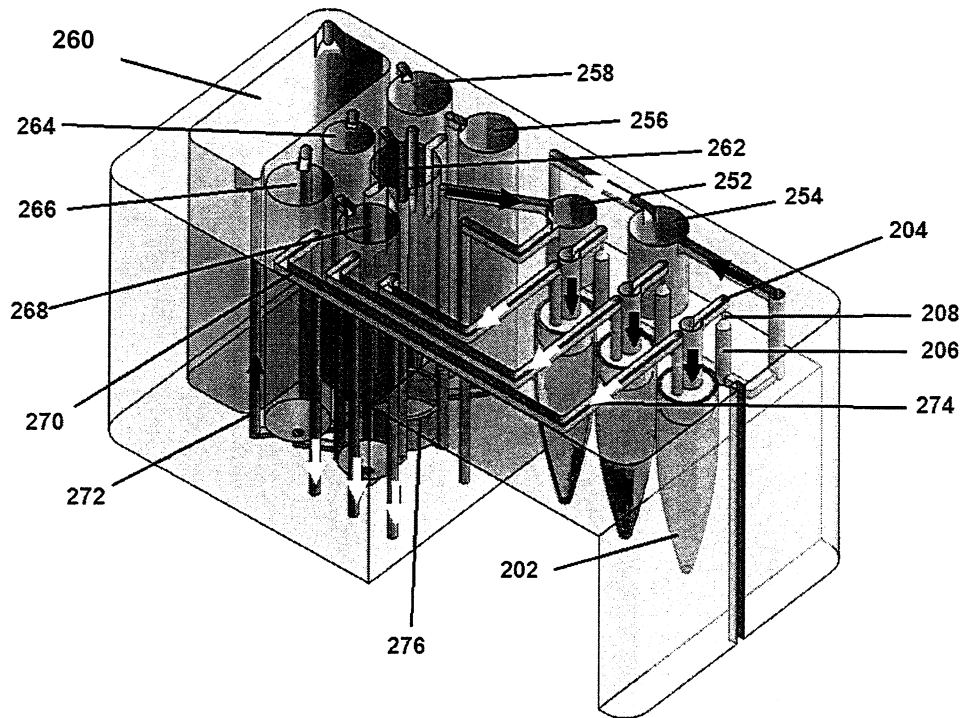


FIG. 2C

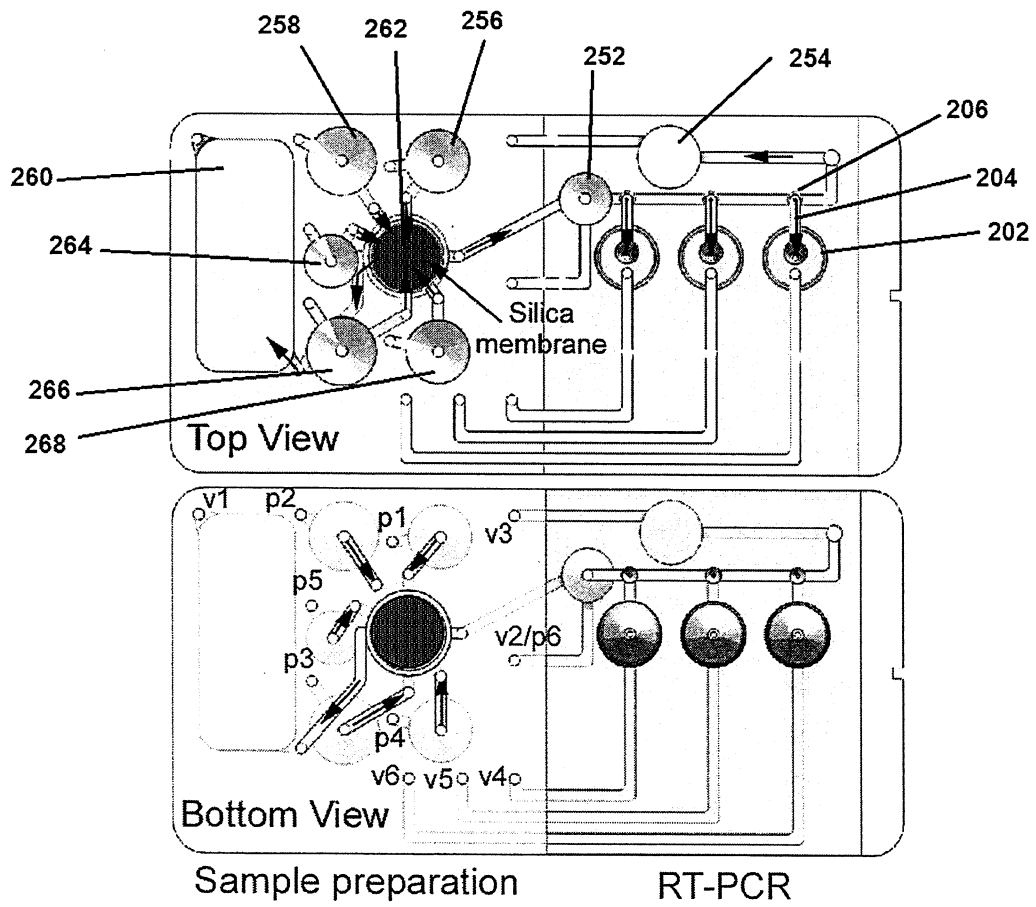
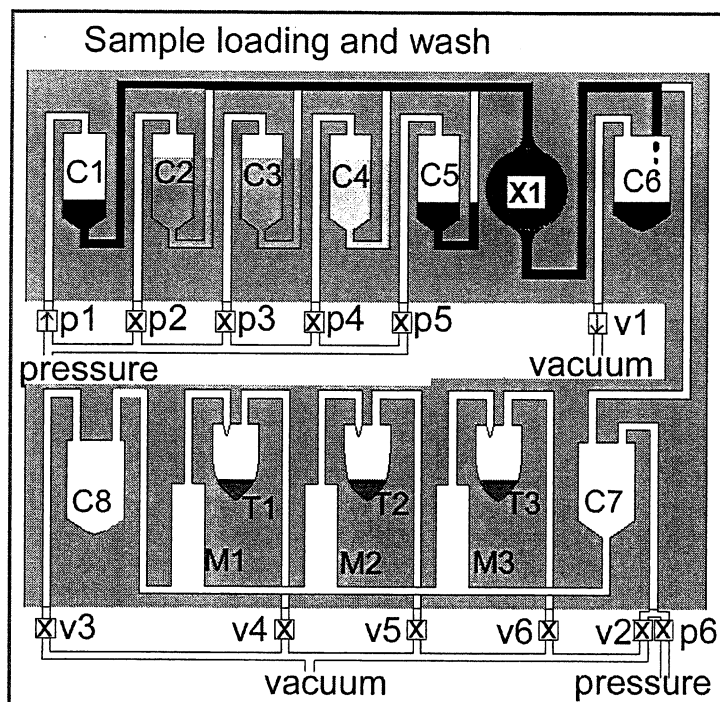


FIG. 3A

(I)



(II)

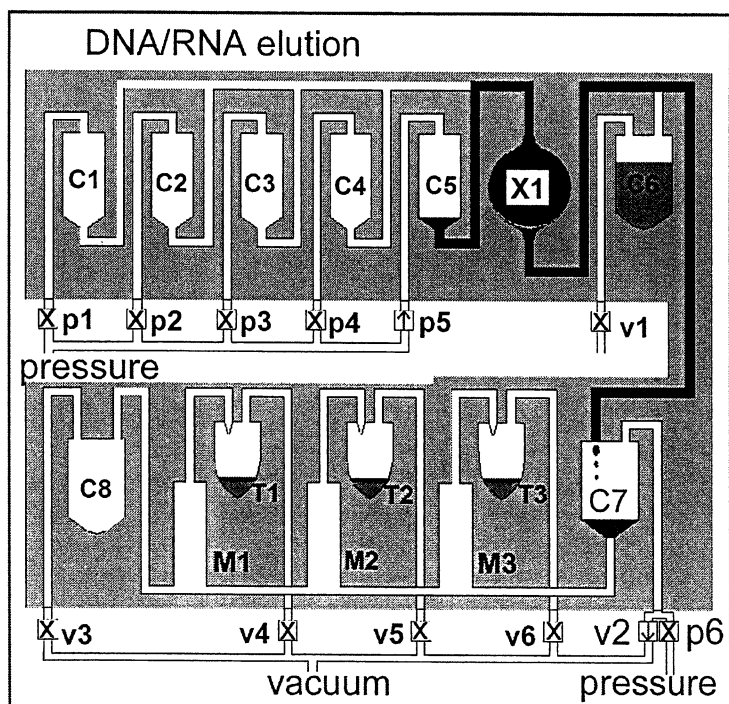
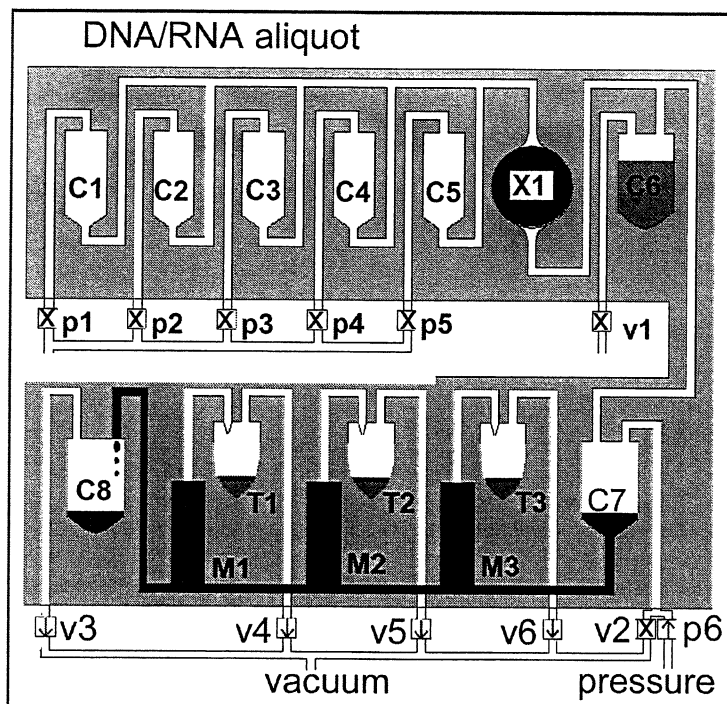


FIG. 3A (cont.)

(III)



(IV)

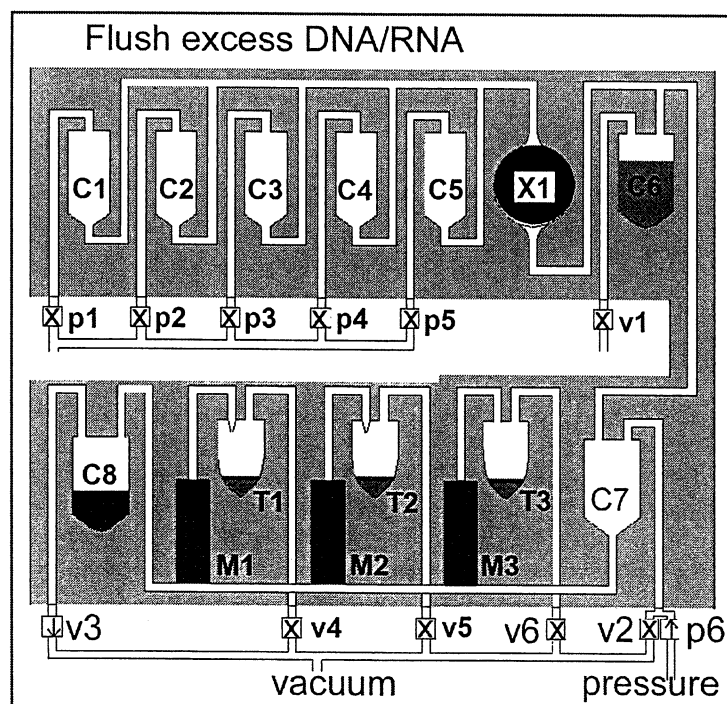
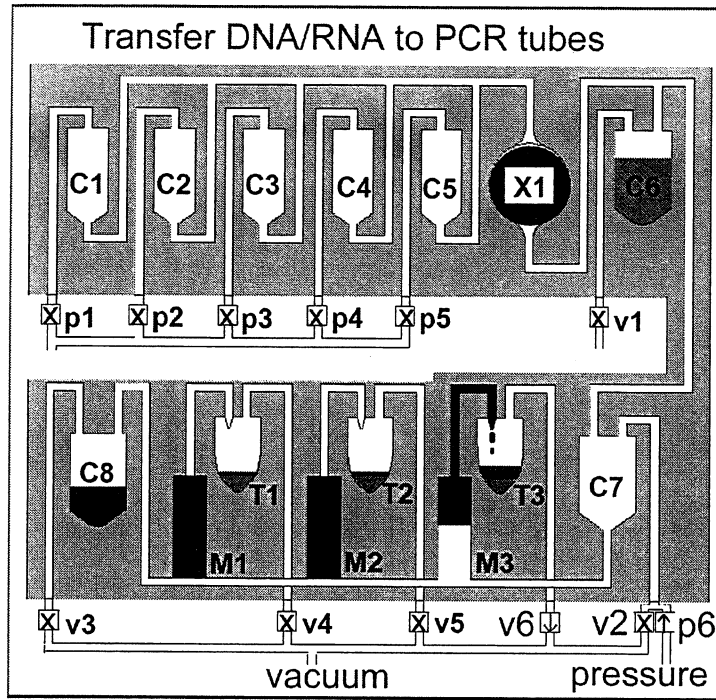


FIG. 3A (cont.)

(V)



(VI)

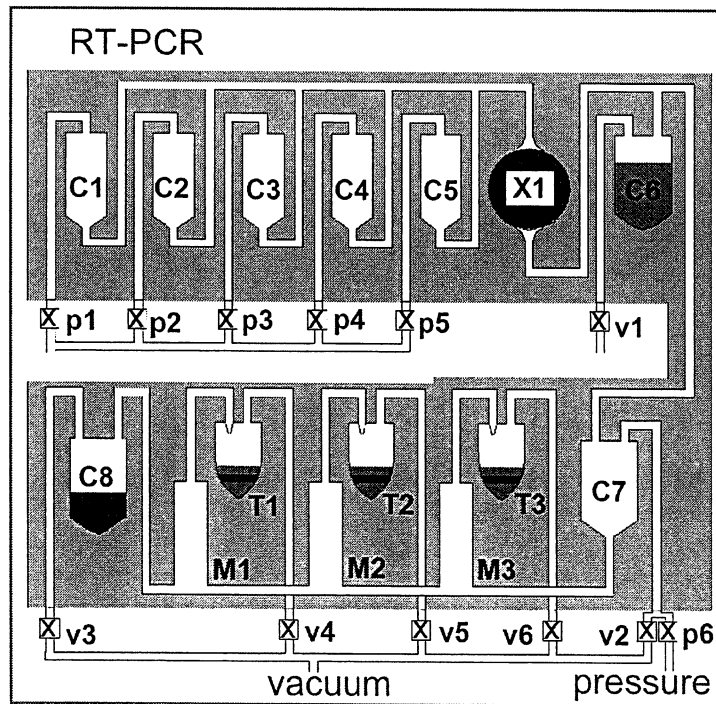
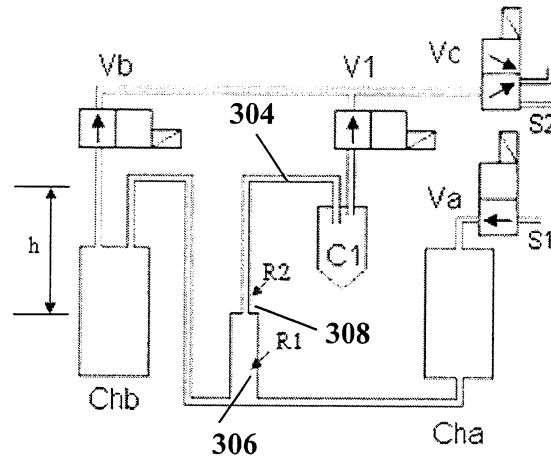


FIG. 3B



$$\Delta P = 4\sigma \cos(\theta_c) \left[\frac{1}{R_1} - \frac{1}{R_2} \right]$$

FIG. 3C

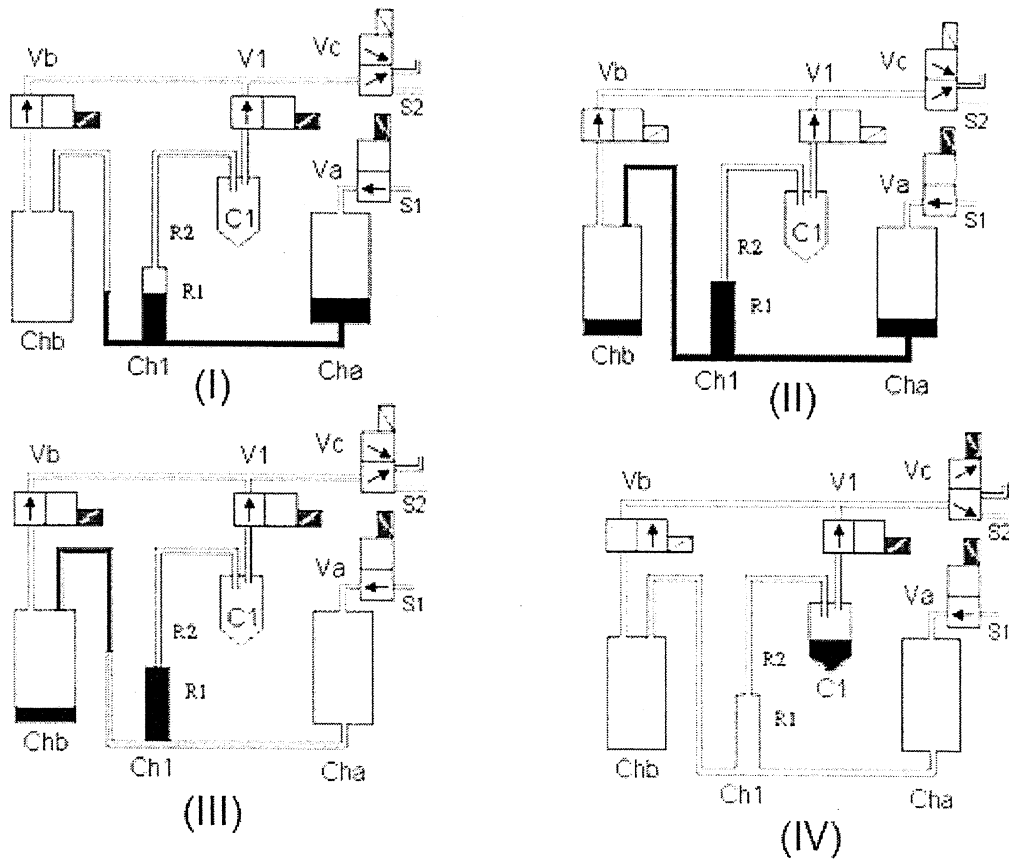


FIG. 3D

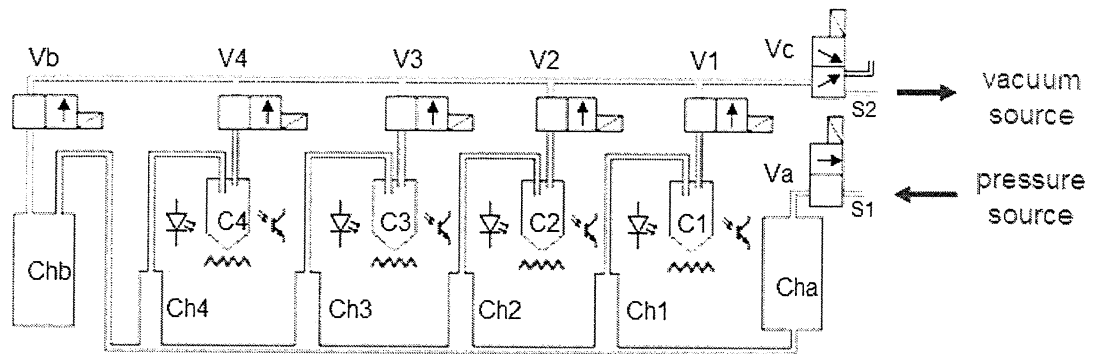


FIG. 4A

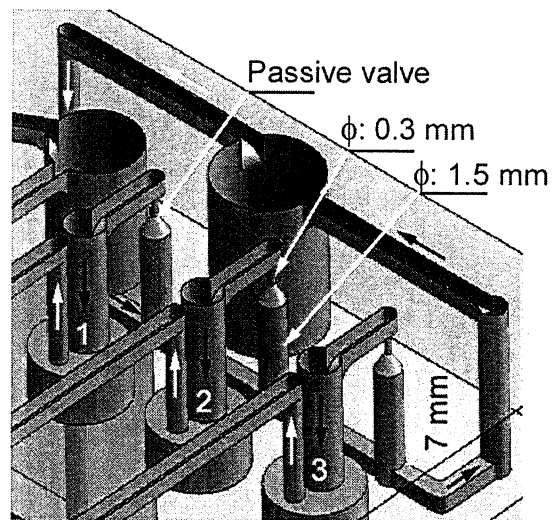


FIG. 4B

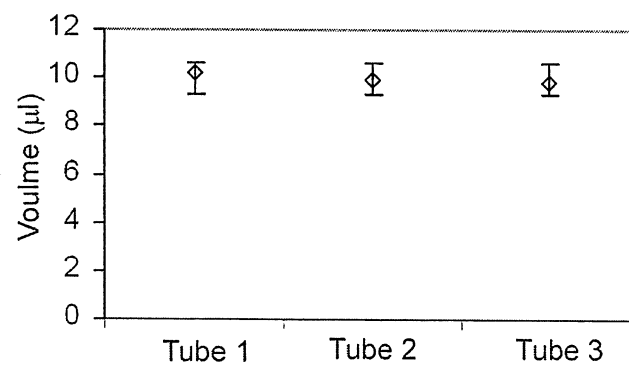


FIG. 5A

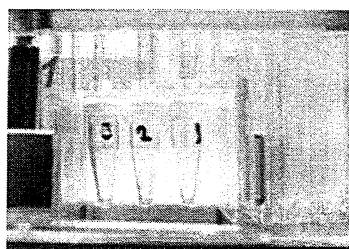


FIG. 5B

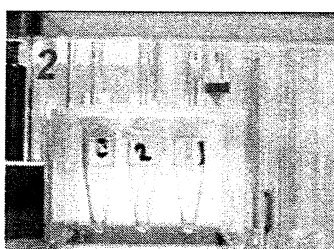


FIG. 5C

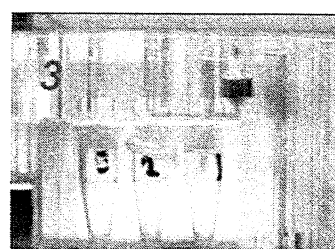


FIG. 5D

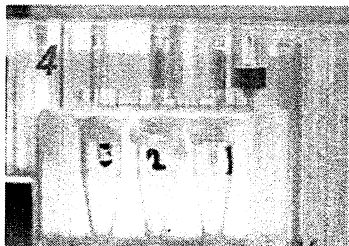


FIG. 5E

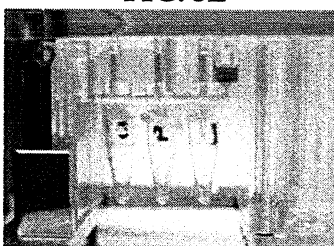


FIG. 5F

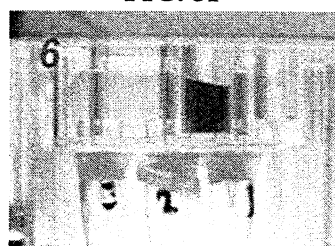


FIG. 5G

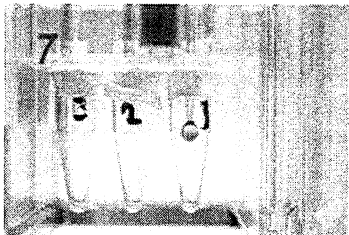


FIG. 5H

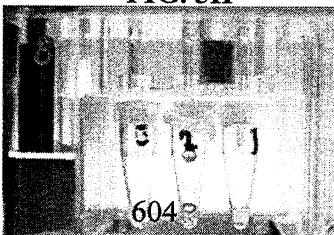


FIG. 5I



FIG. 6

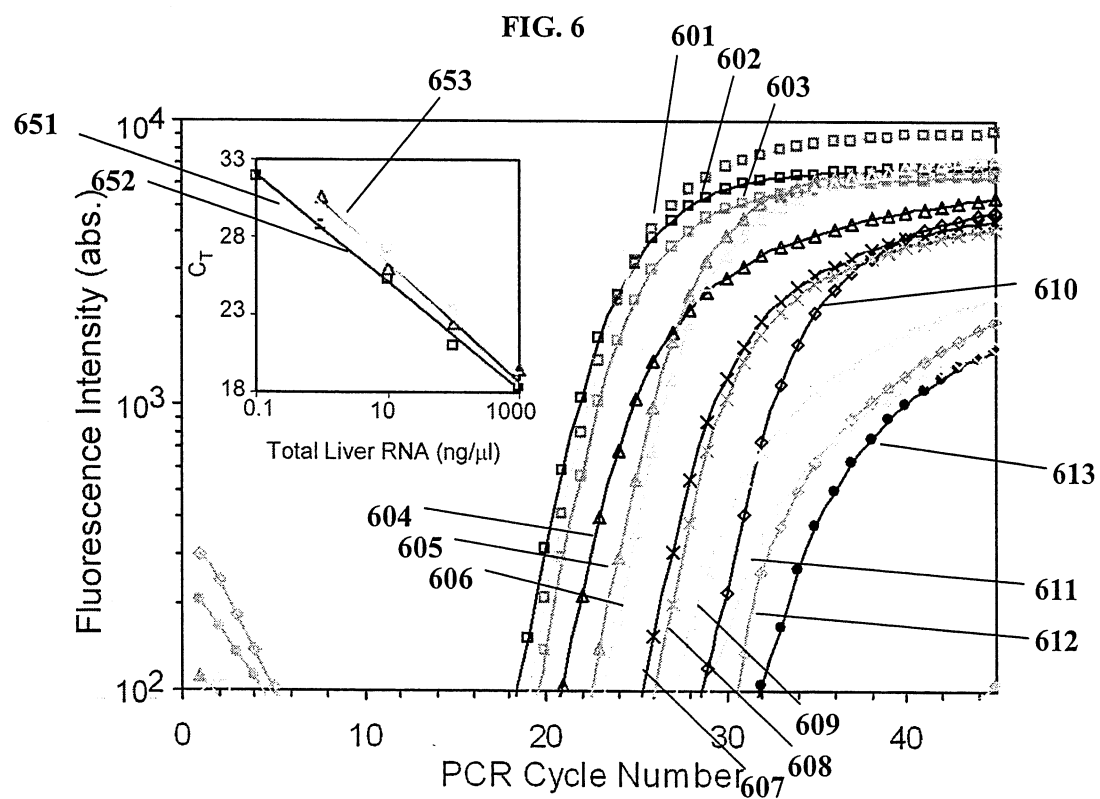


FIG. 7A

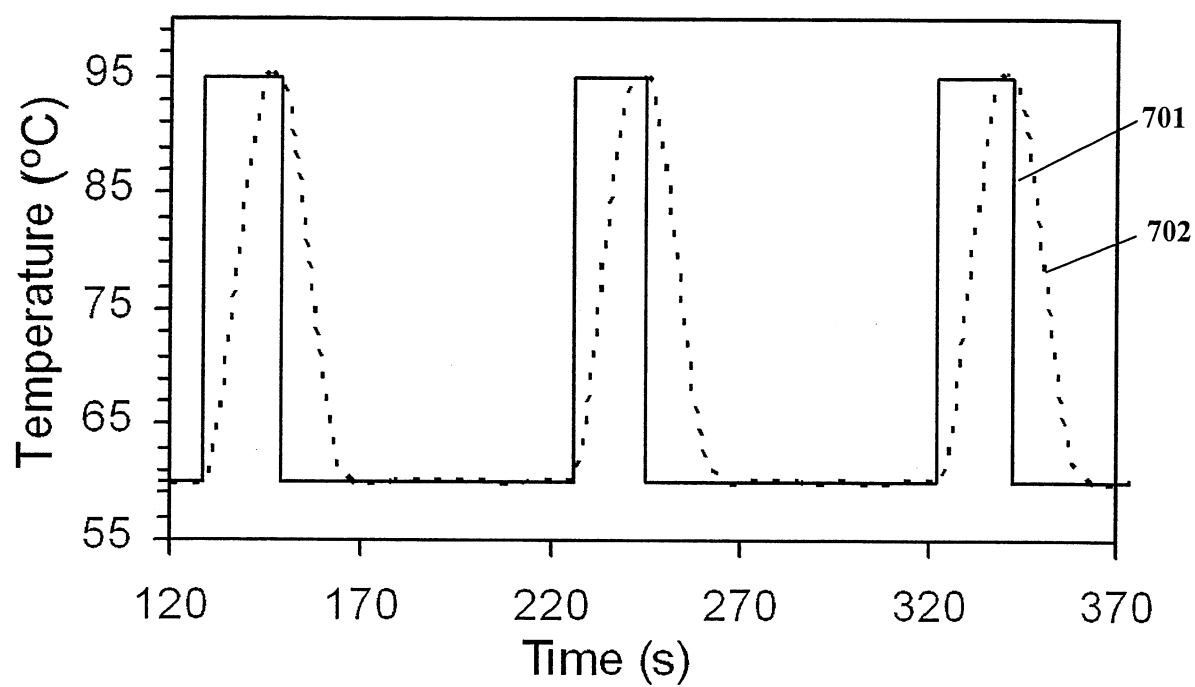
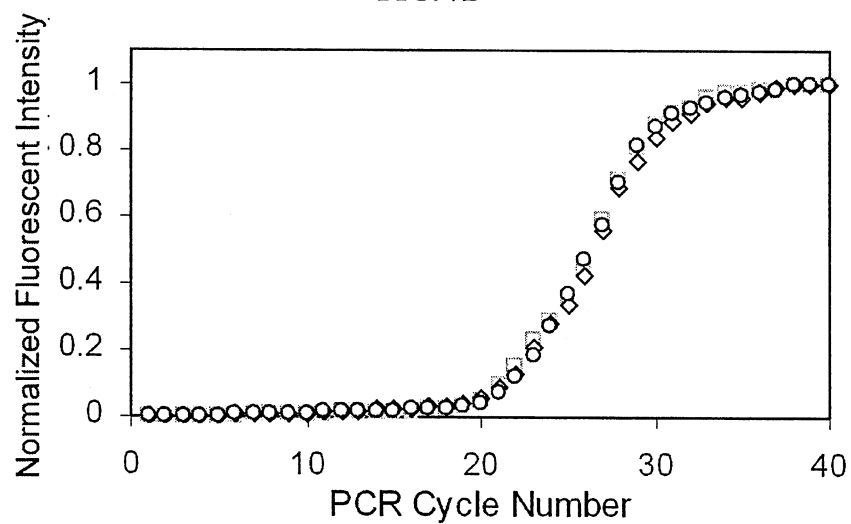


FIG. 7B



12/21

FIG. 8

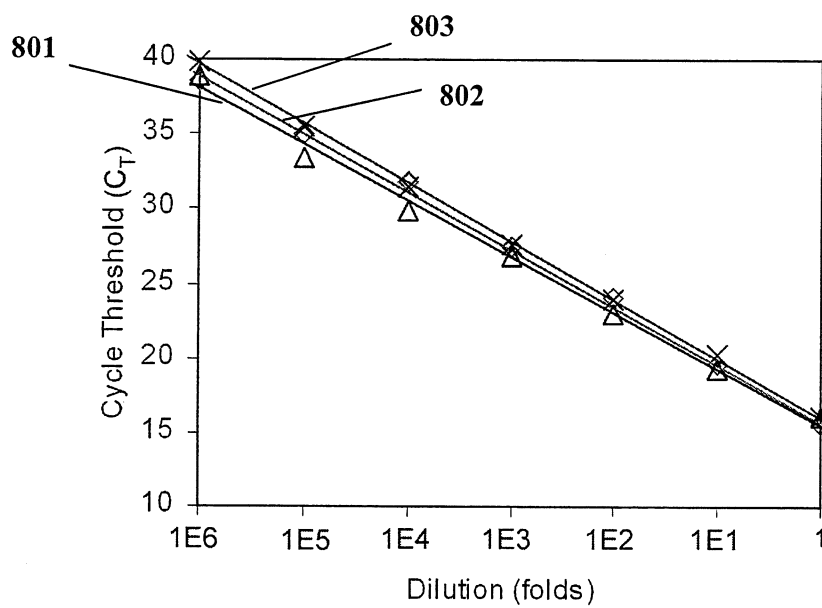
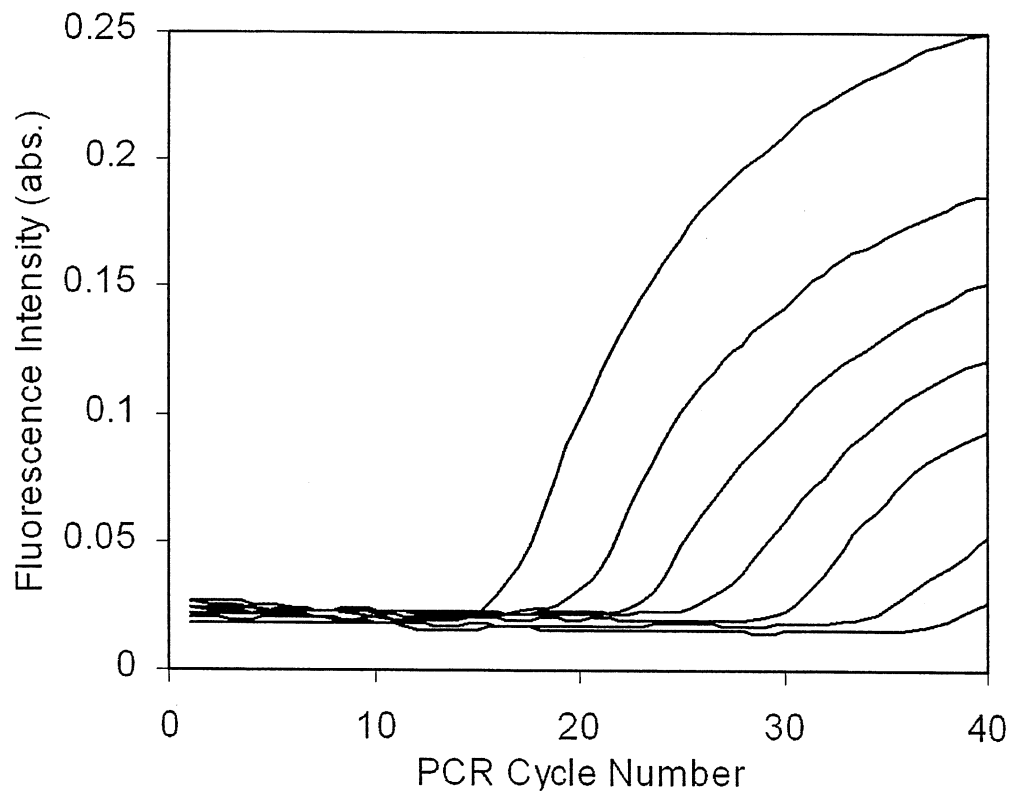


FIG. 9A



13/21
FIG. 9B

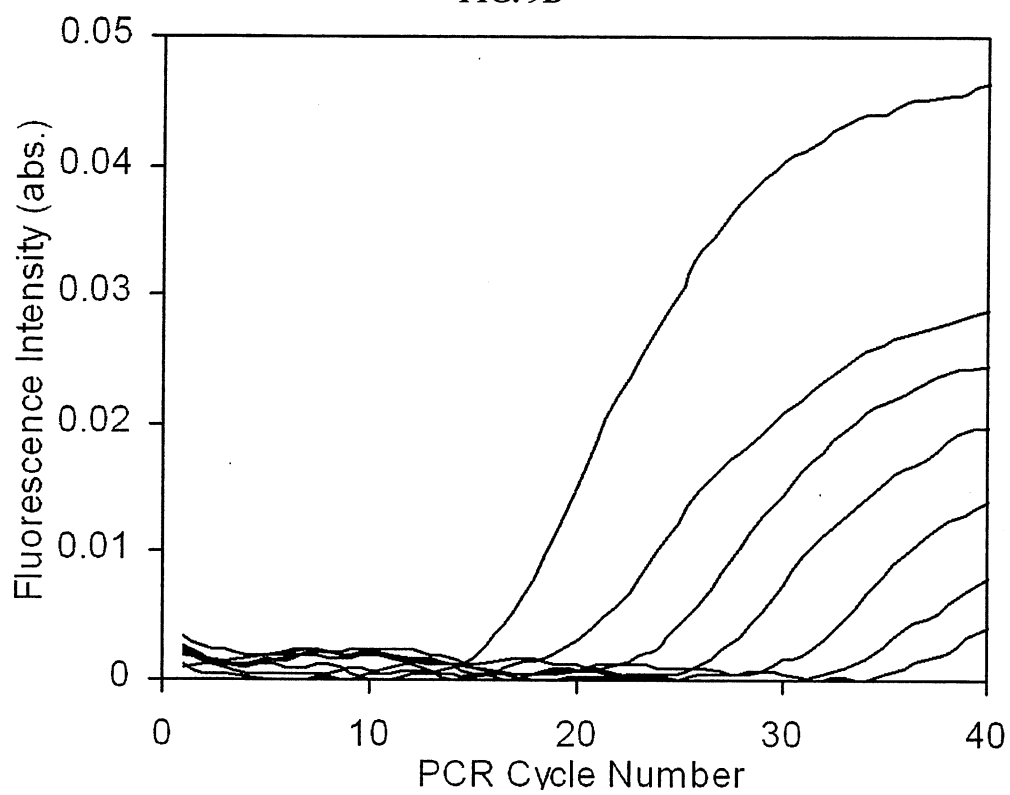


FIG. 9C

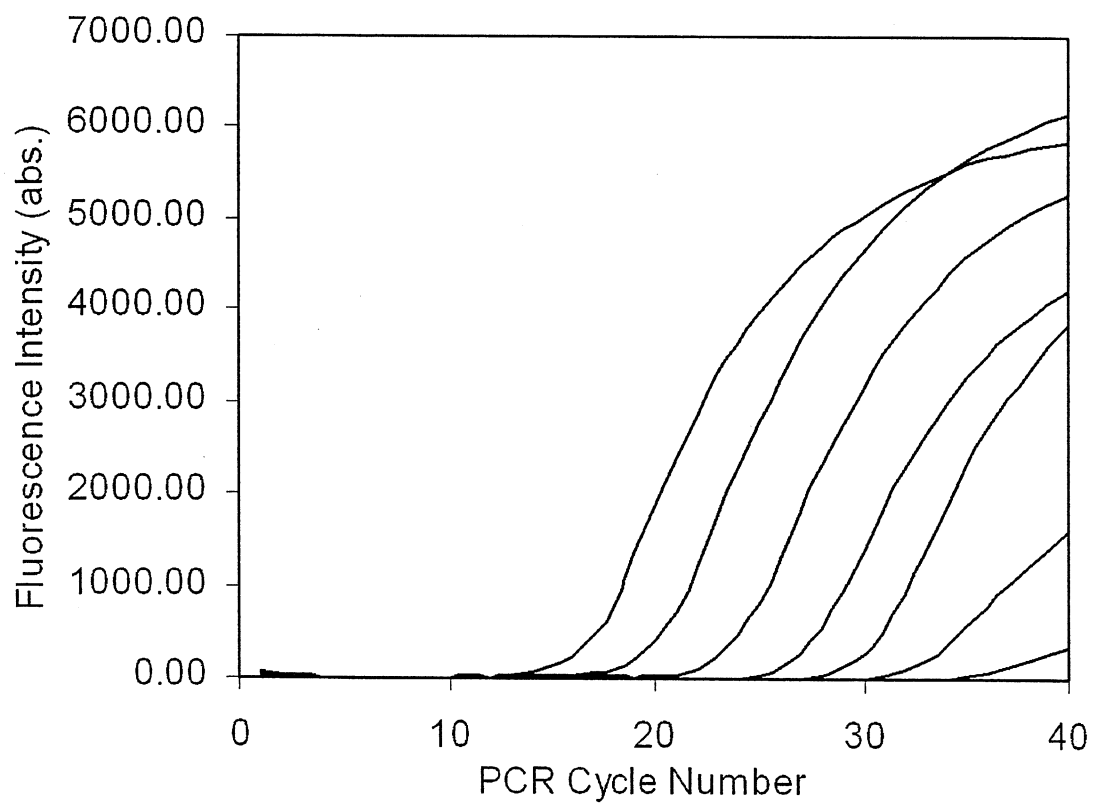


FIG. 10

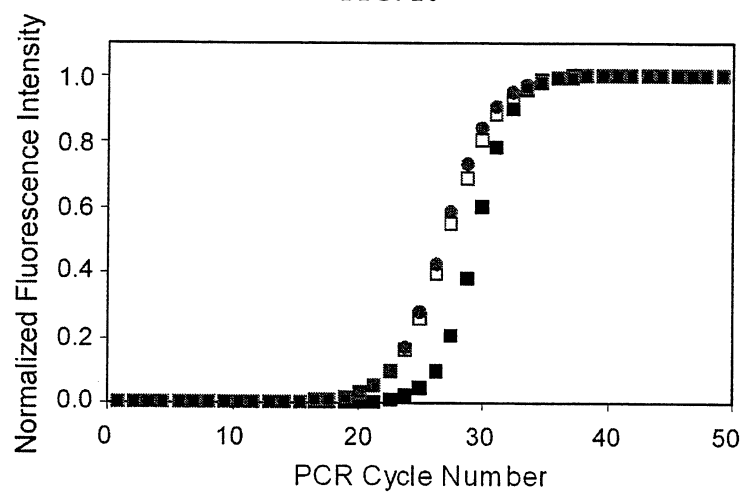


FIG. 11

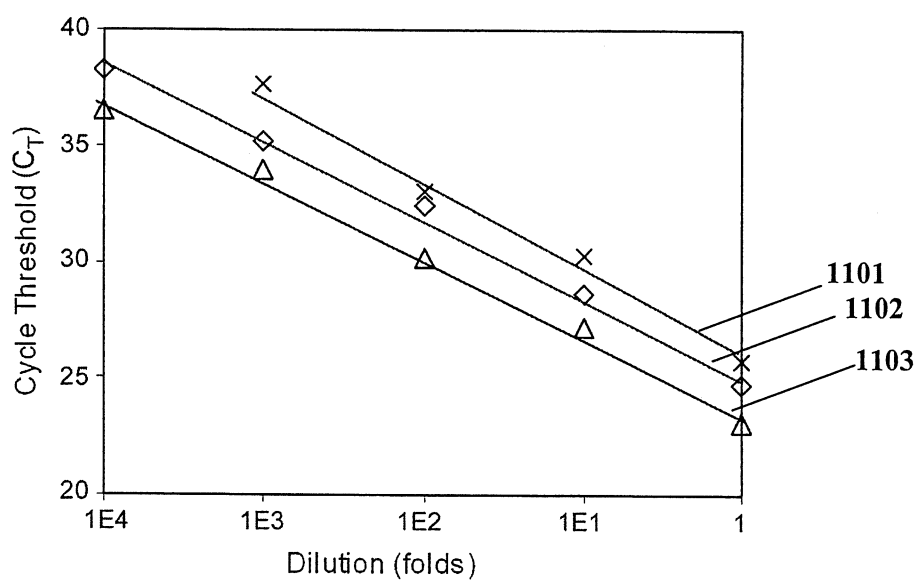


FIG. 12

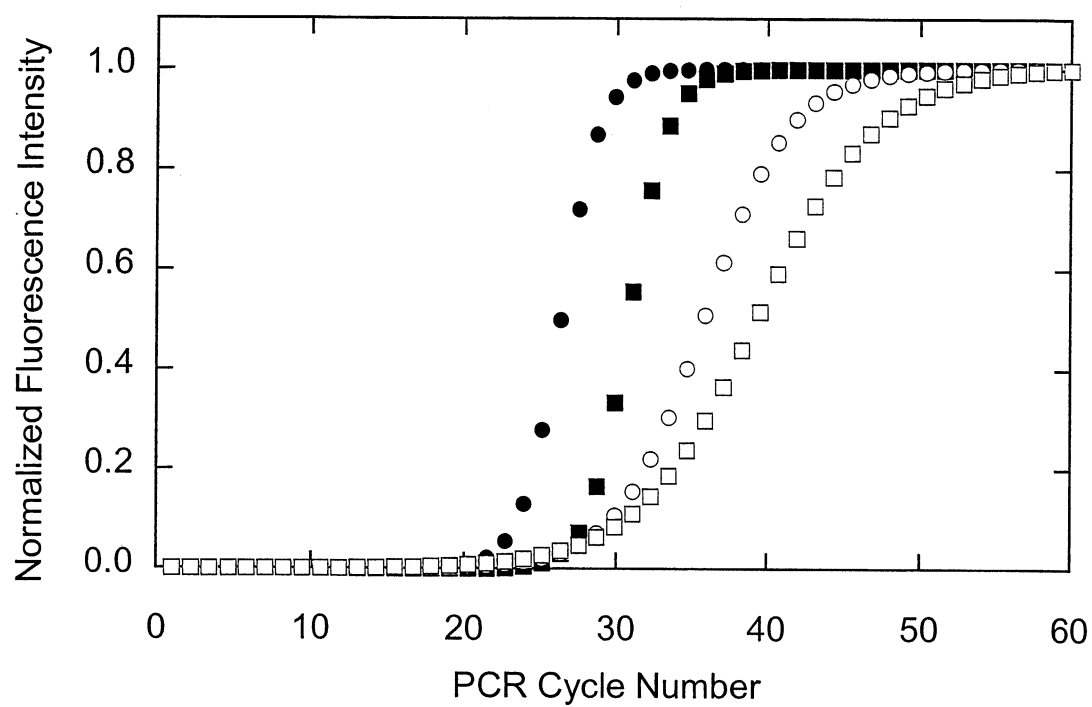


FIG. 13A

Amount of DNA used (ng)	Original DNA	Ct for Spin	Ct for MicroKit
1000	24.73	27.11	27.87
100	31.03	31.8	31.23
10	32.32	34.06	35.11
1	36.25	37.97	36.61
0.1	38.08	39.09	38.47
0.01	Not Shown	39.66	38.06

FIG. 13B

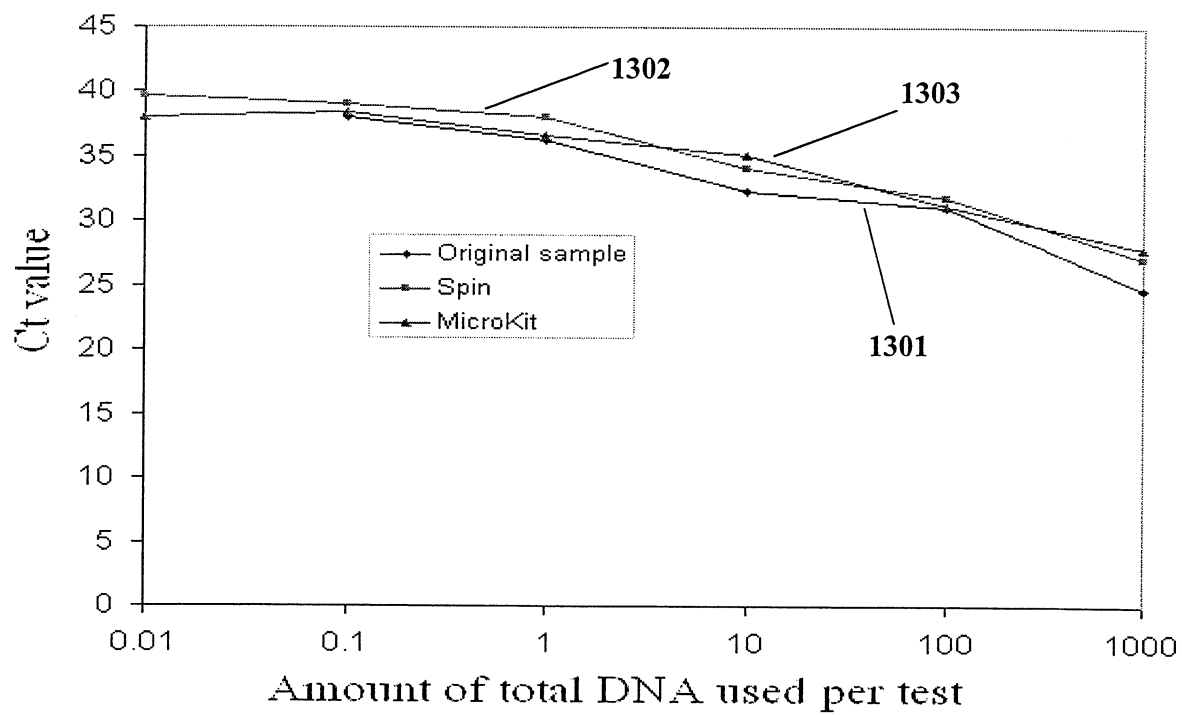


FIG. 14A

FIG. 14B

FIG. 14C

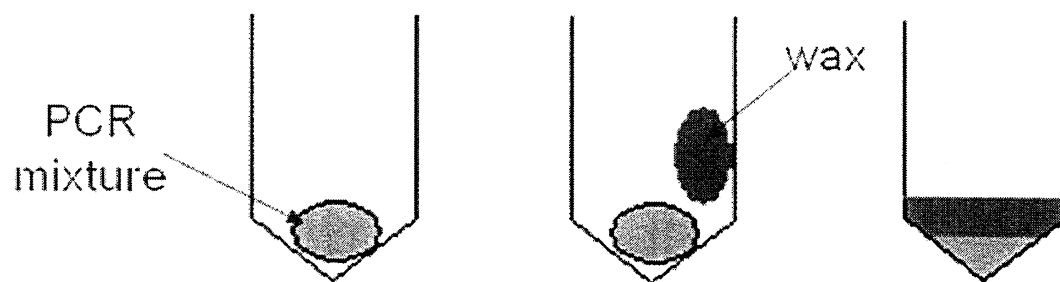


FIG. 14D

FIG. 14E

FIG. 14F

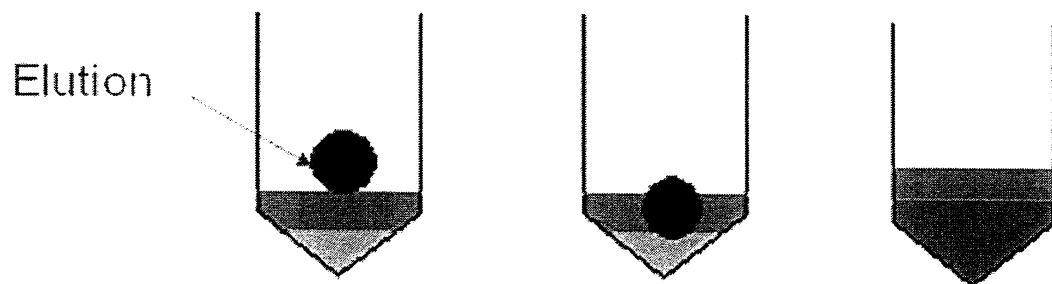
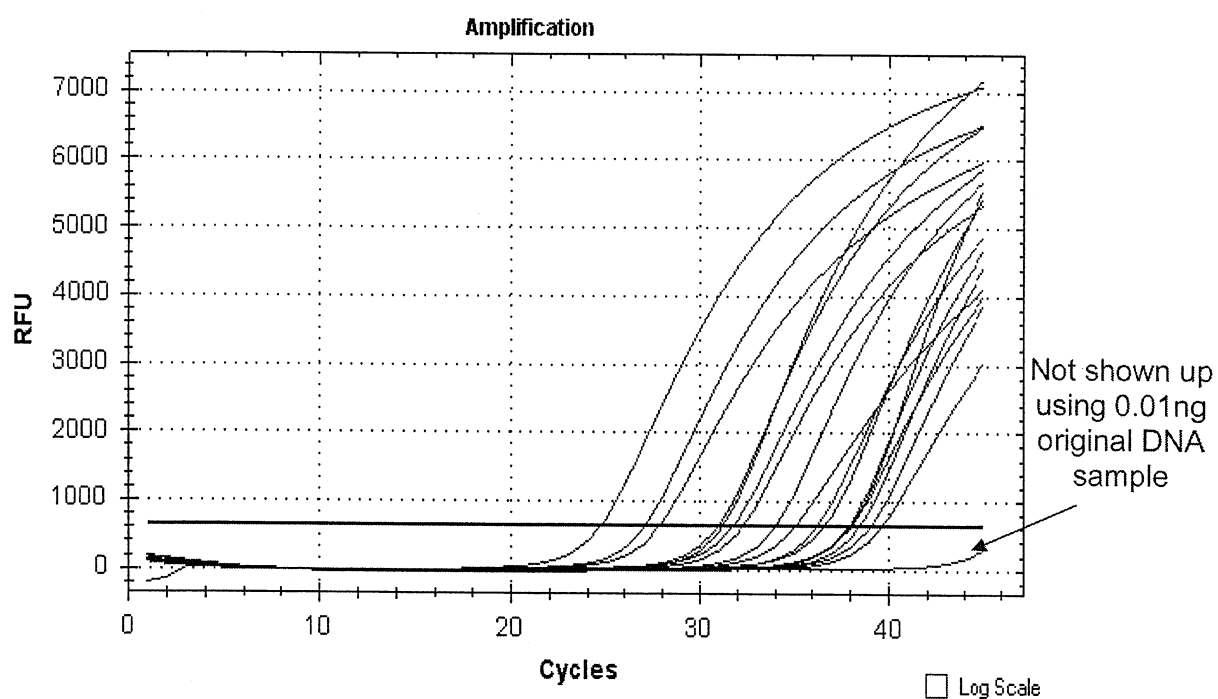


FIG. 15

Table 1

Primer/Probe	Sequence (5'-3')	Region (bp)
<i>Influenza A</i>		
Forward	AGATGAGTCTTCTAACCGAGGTCG (SEQ ID NO: 1)	25-48
Reverse	TGCAAAAACATCTTCAAGTCTCTG (SEQ ID NO: 2)	101-124
Probe	(FAM)-TCAGGCCCCCTCAAAGCCGA-(TAMRA) (SEQ ID NO: 3)	64-83
<i>Seasonal H1N1</i>		
Forward	AACATGTTACCCAGGGCATTTCGC (SEQ ID NO: 4)	347-370
Reverse	GTGGTTGGGCCATGAGCTTTCTTT (SEQ ID NO: 5)	438-461
Probe	(FAM)-GAGGAACTGAGGGAGCAATTGAGTTCAG-(TAMRA) (SEQ ID NO: 6)	378-405

FIG. 16



Current RNA Detection limit: 1ng

FIG. 17A

Amount of gene per test (ng)	Original sample Ct	Spin Column Ct	MicroKit Ct
1000	20.65	21.75	21.21
100	23.32	24.82	25.41
10	27.80	28.35	30.69
1	31.25	34	33.49
0.1	35.95	Not show	Not show
0.01	Not show	Not show	Not show

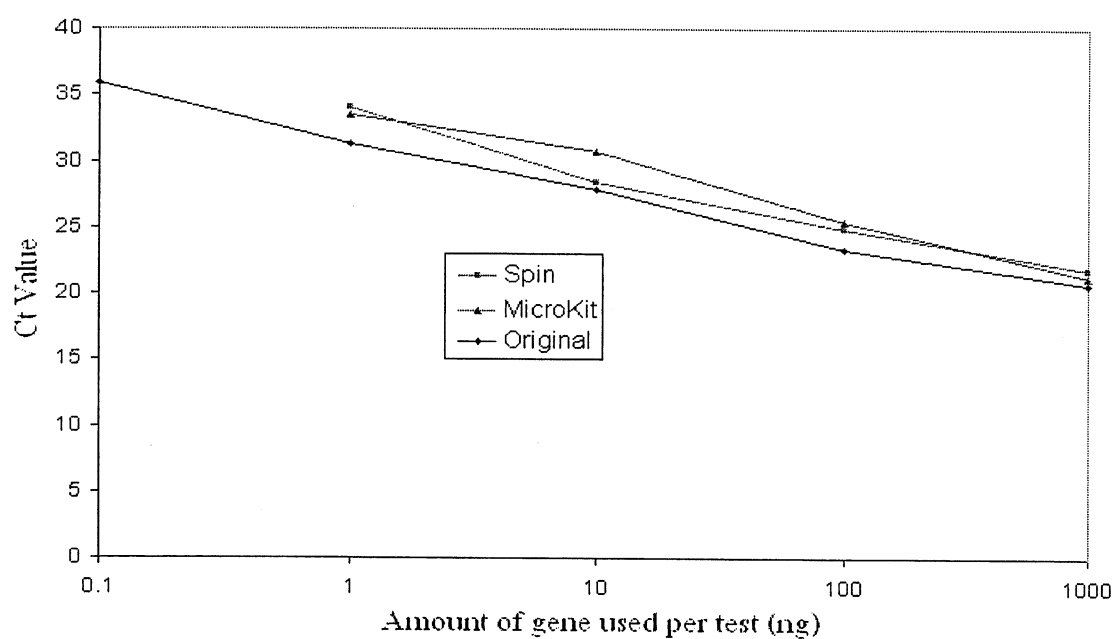
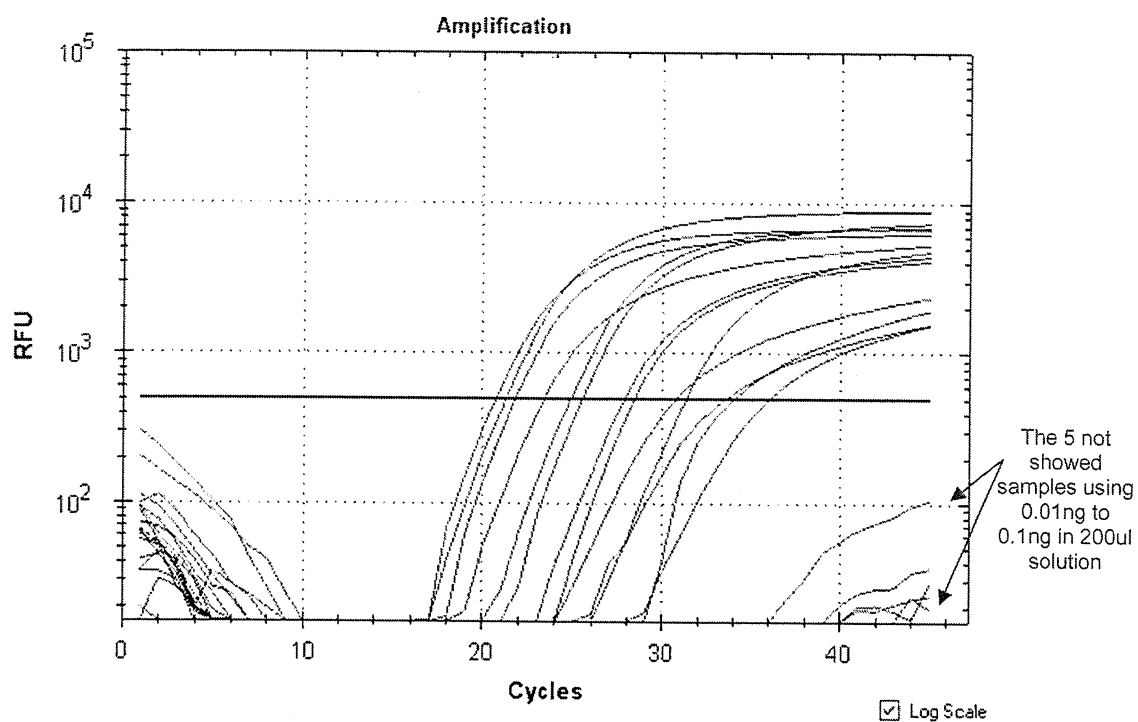
FIG. 17B

FIG. 18



Current RNA Detection limit: 1ng

FIG. 19A

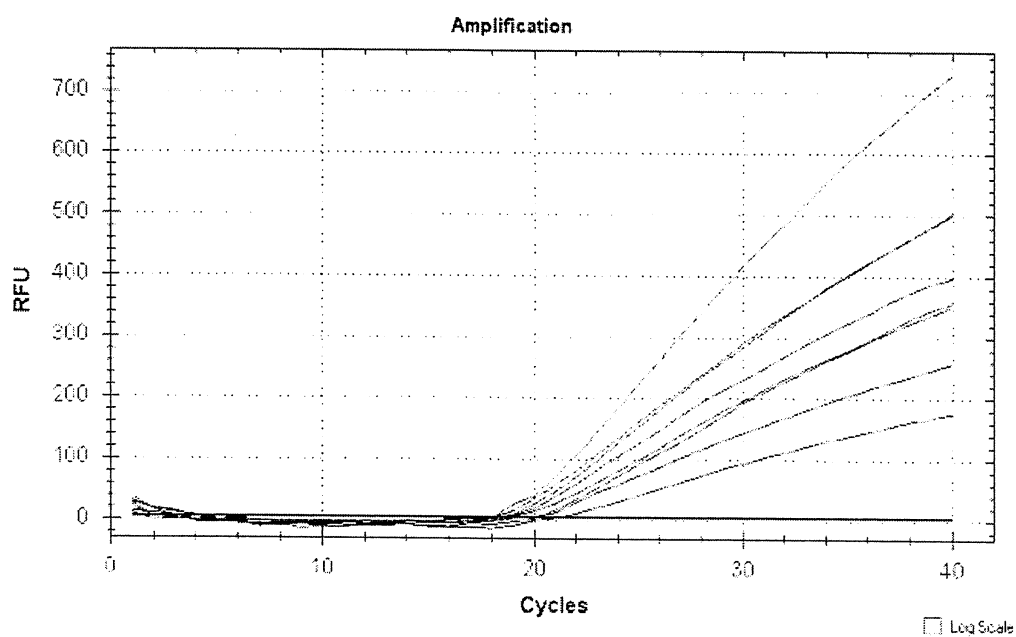


FIG. 19B

Well	Fluor	Content	Sample	Ct()
A01	HEX	Unkn	STD10	18.79
A02	HEX	Unkn	10R10Wax	20.23
A03	HEX	Unkn	10R20Wax	18.71
A04	HEX	Unkn	10R40Wax	21.28
A05	HEX	Unkn	STD20R	18.03
A06	HEX	Unkn	20R10Wax	18.14
A07	HEX	Unkn	20R20Wax	18.45
A08	HEX	Unkn	20R40Wax	19.67

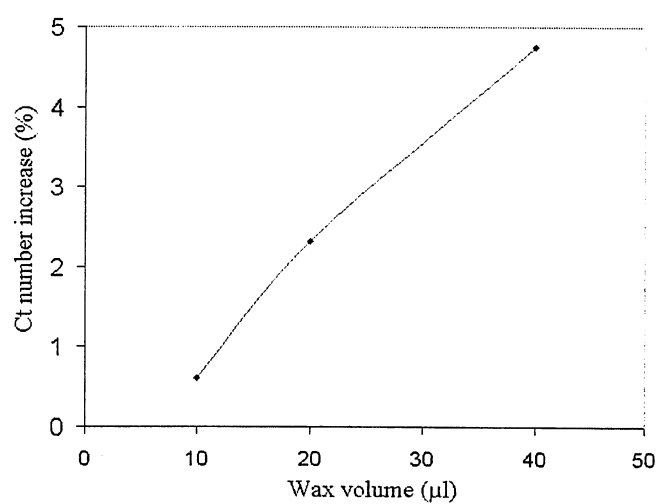
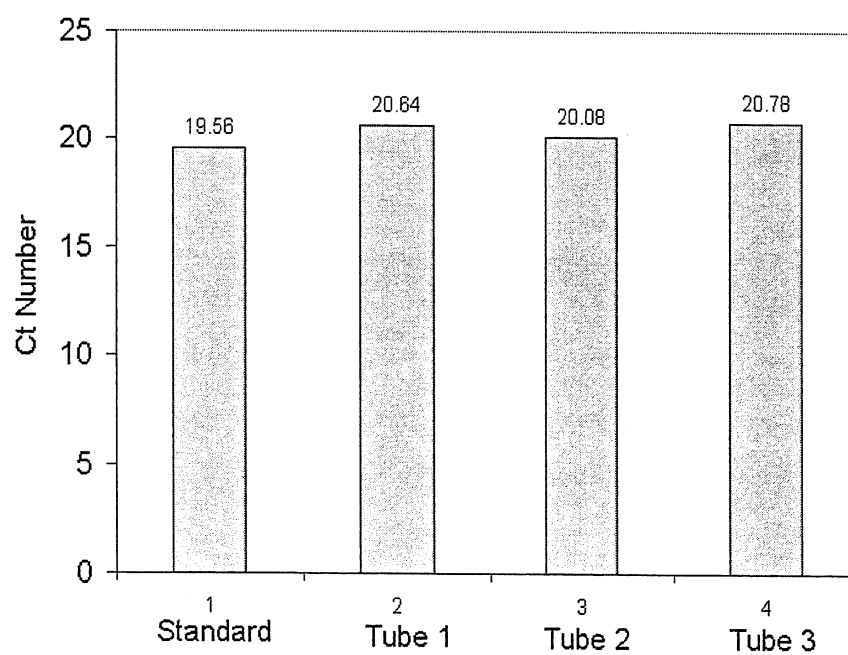
FIG. 20A**FIG. 20B****FIG. 21A**

FIG. 21B

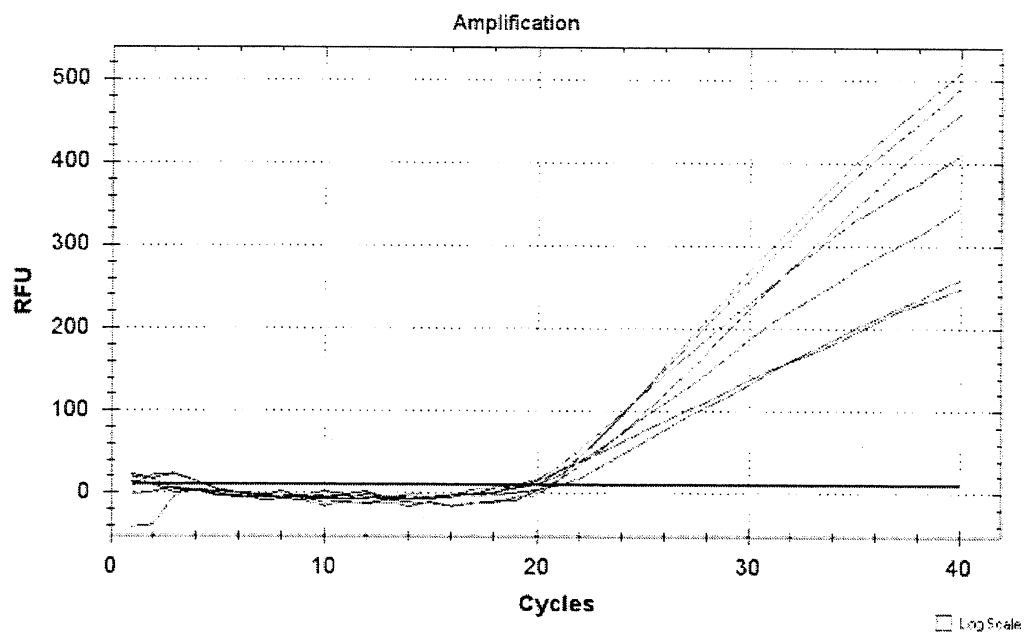


FIG. 22

Total liver RNA Loaded (ng/ μ l)	Unpurified Liver RNA (C_T)	Qiagen Spin Column (C_T)	All-in-One Extraction (C_T)
1000	18.4	19	19.5
100	20.9	23.2	22.5
10	25.3	27.2	26
1	28.7	29	30.6
0.1	31.9	— [†]	— [†]

[†] RT-PCR failed.

FIG. 23

Influenza A (Dilution Folds)	Qiagen Spin Column and Bio-Rad CFX96 (C_T)	All-in-One Extraction and Bio-Rad CFX96 (C_T)	All-in-One System (C_T)
1	23.03	24.70	25.74
10^1	27.23	28.57	30.26
10^2	30.14	32.40	33.03
10^3	33.96	35.20	37.68
10^4	36.49	38.24	— [†]

[†] RT-PCR failed.