

Base Case (\$ Mil.)

ATTORNEYS' EYES ONLY - RESTRICTED

US Market (kits)	92	90
Sexually Trans. Dis.	2	2
Retroviruses	-	-
Hepatitis	-	-
Other Inf. Dis.	4	5
Total	6	9
Ex-US Market (kits)	5	7

Sexually Trans. Dis.	5	10	10	40	95	325	90	375	400	410	420	430
Retroviruses	10	20	20	50	100	140	160	160	180	190	195	200
Hepatitis	10	20	20	50	100	140	160	160	180	190	195	200
Other Inf. Dis.	10	20	20	40	80	120	160	160	200	220	240	260
Total	35	70	70	180	360	495	585	585	670	710	740	770
Roche %	48	90	90	90	85	80	75	75	1070	1120	1160	1200
Roche \$ (ex-US)	20	70	70	165	305	390	440	440	465	490	515	540
Roche \$ (US)	5	10	10	85	175	260	280	280	285	290	295	300
Roche \$ (Total)	25	80	80	250	480	650	720	720	750	780	810	840
RBL (Services)												
Inf Dis												
Genetic												
Oncogene												
Forensic												

Scenario	89	90	91	92	93	94	95	96	97	98	99	00	01
US	0	0	0	5	10	85	175	260	280	285	290	295	300
X-US	0	0	0	20	70	165	305	390	440	465	490	515	540
Total	0	0	0	25	80	250	480	650	720	750	780	810	840
Realistic	0	0	0	15	50	165	320	430	475	500	515	535	555
Pessimistic	0	0	0	10	25	80	160	215	240	250	260	270	280
US	0	20	20	55	85	180	260	300	310	320	325	330	340
X-US	0	60	80	160	300	420	460	530	535	555	580	590	600
Total	0	80	100	215	385	600	720	830	845	875	905	920	940
Realistic	0	15	50	140	255	400	475	550	560	580	600	610	630
Pessimistic	0	5	25	70	130	200	240	275	280	290	300	305	310
US	0	0	0	3	5	30	70	110	140	150	160	165	170
X-US	0	0	0	7	35	90	150	200	220	230	240	250	260
Total	0	0	0	10	40	120	220	310	360	380	400	415	430
Realistic	0	0	0	5	25	80	145	205	240	250	265	275	285
Pessimistic	0	0	0	4	15	40	75	100	120	125	130	135	140

Gen-Probe Scenarios
(\$ M./Month)

Optimistic

Base Case (1)

US
X-US
Total

Realistic
Pessimistic

Test Case (2)

US
X-US
Total

Realistic
Pessimistic

Competitive Case (3)

US
X-US
Total

Realistic
Pessimistic

- (1) neither Roche nor Kodak acquires Gen-Probe technology
- (2) Roche acquires Gen-Probe technology
- (3) Kodak acquires Gen-Probe technology

ATTORNEYS' EYES ONLY - RESTRICTED

Gen-Probe Scenarios (\$ Million)				99	00	01
Base Case ⁽¹⁾	US	0	0	290	295	300
	X-US	0	0	490	515	540
	Total	0	0	780	810	840
Test Case ⁽²⁾	US	0	0	325	330	340
	X-US	0	0	580	590	600
	Total	0	0	905	920	940
Competitive Case ⁽³⁾	US	0	0	160	165	170
	X-US	0	0	240	250	260
	Total	0	0	400	415	430

ATTORNEYS' EYES ONLY - RESTRICTED

Base Case⁽¹⁾

US
X-US
Total

Test Case⁽²⁾

US
X-US
Total

Competitive Case⁽³⁾

US
X-US
Total

(1) neither Roche nor Kodak acquires Gen-Probe technology
 (2) Roche acquires Gen-Probe technology
 (3) Kodak acquires Gen-Probe technology

4/6/89

Gen-Probe Scenarios
(\$ million)

	89	90	91	92	93	94	95	96	97	98	99	00	01
Base Case ⁽¹⁾													
US	0	0	0	5	10	85	175	260	280	285	290	295	300
X-US	0	0	0	20	70	165	305	390	440	465	490	515	540
Total	0	0	0	25	80	250	480	650	720	750	780	810	840
Test Case ⁽²⁾													
US	0	0	20	55	85	180	260	300	310	320	325	330	340
X-US	0	20	60	160	300	420	460	530	535	555	580	590	600
Total	0	20	80	215	385	600	720	830	845	875	905	920	940
Competitive Case ⁽³⁾													
US	0	0	0	3	5	30	70	110	140	150	160	165	170
X-US	0	0	0	7	35	90	150	200	220	230	240	250	260
Total	0	0	0	10	40	120	220	310	360	380	400	415	430

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RMS 78284

- (1) neither Roche nor Kodak acquires Gen-Probe technology
- (2) Roche acquires Gen-Probe technology
- (3) Kodak acquires Gen-Probe technology

Est. U.S. Market
\$ (million)

	92	93	94	95	96	97	98	99	00	01
Sexually Trans. Dis.	13	42	80	105 106	105 106	105 106	105 85	66	52	39
Retroviruses	-	20	50	85	95	95	90 95	60	30	20
Hepatitis	-	13	33	65	75	75	75 75	50	25	13
Other Int. Dis.	10	20	40	70	80	90	100	80 105	50 110	40 115
Genetic Disorders	-	-	5	10	20	45	80	100	100	100
Cancer	-	-	-	2	4	10	20	30	40	50
Tissue Typing	-	2	4	6	10	20	25	30	30	30
Total	23	97	212	344	390	441	475	416	327	292

Est RDS Sales
\$ (millions)

	Case #1									
	92	93	94	95	96	97	98	99	00	01
STD	3	11	20	27	27	27	21	17	13	1
Retroviruses	-	5	13	21	24	24	23	15	8	0
Hepatitis	-	3	8	16	19	19	19	13	6	0
Other Inf. Dis.	-	-	3	5	10	18	20	23	25	2
Genetic Disorders	-	-	1	3	5	11	20	25	25	2
Cancer	-	-	-	1	2	3	5	8	10	1
Tissue Typing	-	-	1	2	3	5	6	7	7	0
Total	3	19	46	75	90	107	114	108	94	8

Assumptions:

PCR licensed to Roche, Kodak and duPont

LCR licensed to Abbott

Case #2

	92	93	94	95	96	97	98	99	00	01
S.T.D.	50x 4	14	26	35	35	35	28	22	17	10
Retroviruses	-	7	17	28	31	31	30	20	10	5
Hepatitis	-	4	11	21	25	25	25	17	8	4
Other Inf. Dis.	-	-	4	7	13	23	26	30	33	26
Genetic Disorders	-	-	2	4	7	15	26	33	33	30
Cancer	-	-	-	1	2	3	7	10	13	17
Tissue Typing	-	-	1	2	3	7	9	10	10	10
Total	4	25	61	98	116	139	151	142	124	110

Assumptions:

PCR licensed to Roche and Kodak only
 LCR licensed to Abbott

Case # 3

	92	93	94	95	96	97	98	99	00	01
S.T.D.	3	8	14	21	21	21	17	13	10	8
Retroviruses	-	3	8	13	14	14	14	9	5	3
Hepatitis	-	2	5	10	11	11	11	8	4	2
Other Inf. Dis.	-	-	3	5	10	18	20	23	25	2
Genetic Disorders	-	-	1	3	5	11	20	25	25	2
Cancer	-	-	-	1	2	3	5	8	10	1
Tissue Typing	-	-	1	2	3	5	6	7	7	
Total	3	13	34	55	66	83	93	93	86	7

Assumptions:

PCR licensed to Roche, Kodak and Abbott

LCR licensed to duPont

RDS Product Menu

HIV I

HTLV I

HBV

HPV (groups?)

Blood cultures (25mm, US incl spirals)

- + - bacteria ?
- bacteria vs virus ?
- gm + - ?

Borrelia

Mycobacterium tub.

Chlamydia

GC

HSV ?

Diarrhea ?

- Rotavirus
- ETCE
- Sal
- Shig

Respiratory ?

- RSV
- Flu
- Adeno

EBV ?

CMV ?

Pneumocystis ?

ATTORNEYS' EYES ONLY -
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Gen-Probe Plan

1. HPA-Based
2. AE label
3. Simple sample pre-treatment

Presumed system

1st gen (91-92)

1. Diluter for sample prep. 5

2. Rack cycler

3. Luminometer

2nd gen (93 →)

1. Integrated

automation

(batch)

30+30

30 " 1 1/2 hr

Probable assays

Est launch

	<u>US</u>	<u>ex US</u>
HBV (existing)	93	91
HIV-1 (existing)	93	91
HTLV-1	93	91
Chlamydia (existing + GP)	91	91
GC (GP)	91	91
HPV (existing)	91	91
Blood culture	91	91
TB (GP)	91	91
Legionella (GP)	91	91
Mycoplasma (GP)	91	91

Base Plan

1. MTP - based
2. ? label (Fluor. or Enz.)
3. ? sample pre-treatment

Assumed System

1. Off-line sample prep 30 min
 2. MTP cycler (4 plates) 60 min + 60 min
 3. MTP Washer
 4. MTP Reader (Fluor. or Enz.)
- Total = 2 1/2 hr

Probable assays

	Est	launch
	<u>US</u>	<u>cx US</u>
HIV 1 (existing)	95	93
HTLV 1	95	93
HBV	95	93
Chlamydia (existing)	93	93
GC	93	93
HPV (existing)	93	93
Blood culture	93	93
TB	93	93

kits

	4r 1	2	3	4	5
Retroviruses	4.5	17.5	26.0	26.0	26.0
Hepatitis	3.5	19.0	21.0	21.0	21.0
STD	6.5	13.0	26.0	40.0	40.0
Bacteremia	-	2.5	4.5	9.0	13.5
Misc	-	-	1.0	2.0	4.0
Total	14.5	47.0	78.5	98.0	104.5

Total Mkt estimate

Retrovirus -

Blood screening:

29 mil tests @ \$2.00 = \$58 mil

Therapy Monitoring:

1.2 mil AIDS/ARC ^{HIV+} @ 4 x \$2.00 = 9.6

~~new #~~ 50K new pts/yr (avg) @ 4 x 2.00 = ~~0.4e~~

Diagnosis:

10 mil tests @ \$2.00 = 20 mil

Total Retrovirus = \$88 mil

Hepatitis -

Blood screening:

29 mil tests @ 2.00 = \$58 mil

Therapy monitoring:

~~1 mil carriers @ 4 x \$2.00 = 8~~

0.2 new case @ 4 x \$2.00 = 1.6

Diagnosis:

5 mil tests @ \$2.00 = 10

Total Hepatitis = \$170 mil

STD =

Chlamydia:

15 ml tests @ \$3.00 = \$45 ml

Gonorrhea:

5 ml tests @ \$2.00 = 10

HSV:

5 ml HSV @ \$3.00 = 15

HPV:

20 ml PAPs @ \$3.00 = 60

APNG:

1 ml G.C. pos @ \$2.00 = 2

Total STD \$132

Blood Cultures:

15 ml cultures @ \$3.00 / qual screen \$45 ml

Misc (TB, Hemophyllis, Diarrhea):

10 ml @ \$2.00 \$20 ml

Total SKIM \$355 ml

1987 No. Of Tests

	(MM)
<u>RETROVIRUSES</u> : TOTAL :	39.4
BLOOD SCREENING :	29.1
DIAGNOSTIC :	10.3

THERAPY MONITORING :

CUMULATIVE TOTAL NO. OF AIDS CASES IN THE U.S. :	58,537
NO. OF NEW CASES IN 1987 :	20,000
NO. OF PATIENTS CURRENTLY ALIVE :	25,800
NO. OF PATIENTS WITH ARL :	400,000
PROJECTED # OF HIV PTS. BY 1991 :	270,000
NO. OF PEOPLE CURRENTLY INFECTED WITH HIV :	1,500,000

1987 TEST VOL.

	(MM)
Hepatitis TOTAL	102.4
Blood Screening :	70.6
Diagnostic	31.8

THERAPY

No. of NEW 'HEP A' CASES /YR	22,000
No. of NEW 'HEP B' CASES /YR	200,000
No. of CHRONIC HBV CARRIERS	1,000,000

ATTORNEYS' EYES ONLY -
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1987: No. Of TESTS

<u>STDs</u>	<u>(MM)</u>	<u>% AAG</u>
PAP SMEARS	26.0	6.0%
CHLAMYDIA	10.0	22.1%
GONORRHEA	32.0	10.1%
No. Of GC CASES / YR 3,000,000.		
Herpes.	4.1	15.0%

ATTORNEYS' EYES ONLY--
RESTRICTED

RMS 78297

1987 No. OF TESTS

	(MM)	J-AAC
No. of Blood cultures / yr.	15.3	
i.e. # of TESTS: FOR SEPTICEMIA		

Mycobacteria culture	5.5	
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Haemophilus culture	0.4	
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Rotavirus

- EIA	0.1	
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- Clumping/aggregation	0.03	
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