





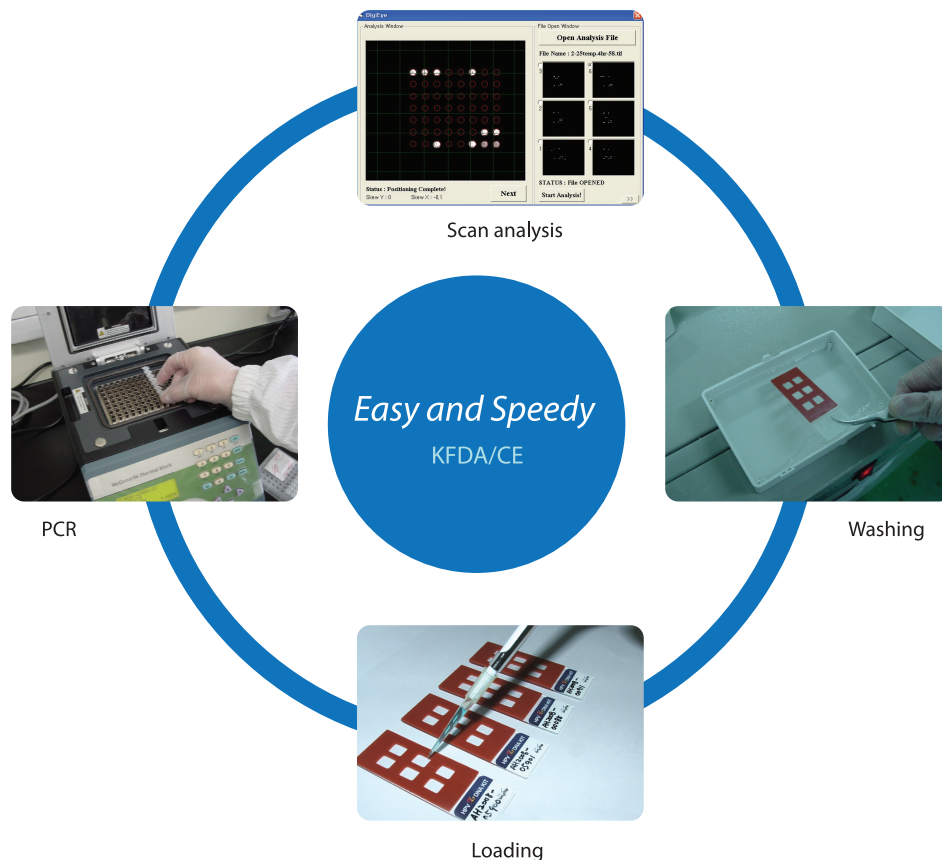
BMT-Br-02-2010-R0

BMT HPV 9G  
**DNA**  
**KIT**

Biometrix Technology, Inc



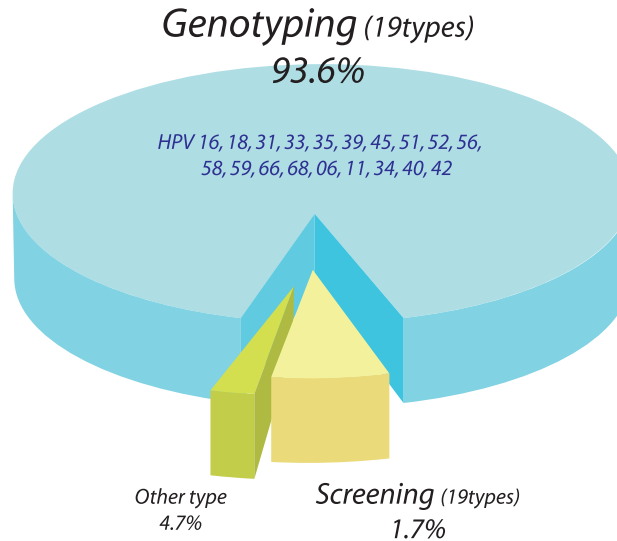
BMT 9G DNA Chip guarantees the most accurate and precise results in genotyping HPV virus because BMT 9G DNA Chip is the only DNA Chip which can be hybridized and washed at room temperature (25°C) to give the final data. It is long awaited top-of-the-line technology in the DNA Chip filed.



Slide 1 : BMT HPV 9G DNA KIT is easy to handle and fast to get data.

1. HPV DNAs are extracted and amplified via PCR
2. PCR products mixed with hybridization solution are loaded on 9G DNA Chip
3. 9G Chip was hybridized and washed at 25°C
4. Scan the Chip and automatic data analysis

## Genotyping 93.6% of HPV



Screening types : 53, 54, 69, 73, 03, 10, 26, 27, 32, 43, 44, 55, 57, 61, 62, 67, 70, 72, 74

\* HPV Hi-risk types are underline.

Slide 2 : Number of HPV types by genotyping and screening

1. Most abundant 14 high-risk types and 5 low-risk HPV types which covers 93.6% of cancer cases are genotyped
2. Other 19 low-risk HPV types which covers 1.7% of cancer cases are screened
3. BMT HPV 9G DNA Chip provides informations of 95.3% HPVs detected on cancer cases

# Proportion(%) of HPV Types

\* HPV Hi-risk types are underline.

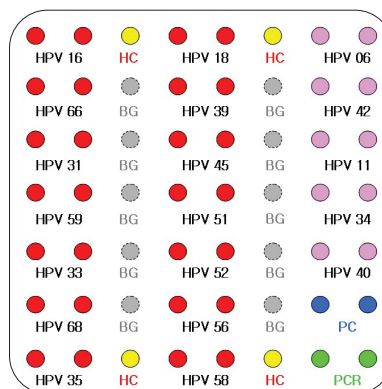
HPV	GSK	Merck
16	53.5%	54.5%
18	17.2%	11.3%
31	2.9%	3.8%
33	2.6%	2.1%
35	1.4%	1.3%
39	0.7%	0.8%
45	6.7%	5.2%
51	1.0%	0.8%
52	2.3%	2.3%
56	1.2%	1.1%
58	2.2%	1.7%
59	1.3%	1.1%
66		0.2%
68	0.6%	
59		
73	0.5%	0.5%
82	0.3%	0.3%
06		0.1%
11		0.1%
Other	1.2%	
X	4.4%	4.6%
Total detection of HPV using BMT HPV 9G DNA KIT	95.3%	95.1%

: Genotyping 19 Types in BMT HPV 9G DNA KIT  
 : Screening 19 Types in BMT HPV 9G DNA KIT

Slide 3 : Merck and GSK report on the proportion of HPV types detected on cancer cases.

BMT HPV 9G DNA Chip detects over 95% HPVs detected on cancer cases

## ■ Coverage (%) of HPV Types



HC : Hybridization Control  
BG : Background

HPV Type : HPV Genotyping spot (HPV 19types)  
PCR : HPV Screening spot (HPV Other 19 types)

PC : PCR Internal Control

Genotyping (19types)	
High Risk	Low Risk
16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68	06, 11, 34, 40, 42
Detecting HPV 93.6%	
Screening (19types)	
High Risk	Low Risk
	03, 10, 26, 27, 32, 43, 44, 53, 54, 55, 57, 61, 62, 67, 69, 70, 71, 73, 74
Detecting HPV 1.7%	
Total Detection of HPV is 95.3% based on GSK report	

Slide 4 : Merck and GSK report on the proportion of HPV types detected on cancer cases.

BMT HPV 9G DNA Chip detects over 95% HPVs detected on cancer cases



# Detection Limits and Specification

HPV	Detection limit
16	$10^1$ copies
18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68	$10^2$ copies
53, 54, 69, 73	$10^3$ copies
06, 11, 34, 40, 42	$10^2$ copies
03, 10, 26, 27, 32, 43, 44, 55, 57, 61, 62, 67, 70, 71, 74	$10^3$ copies

 : HPV Hi-Risk Type  
 : HPV Low-Risk Type

## - Hybridization Temperature and Time

25°C /30min

## - Washing Temperature and Time

Step I : 25°C /5min

Step II : 25°C /5min

## - Results are automatically decided by BMT Digieye software and/or Scanner software.

Analysis time 1min

Scanners needed

## - Nanostorage scanner, Perkin-Elmer scanner, Exon scanner, Capitalbio scanner And other scanners

can be standardized using BMT standard slides.

## - Expiration date

6 Month at room temperature

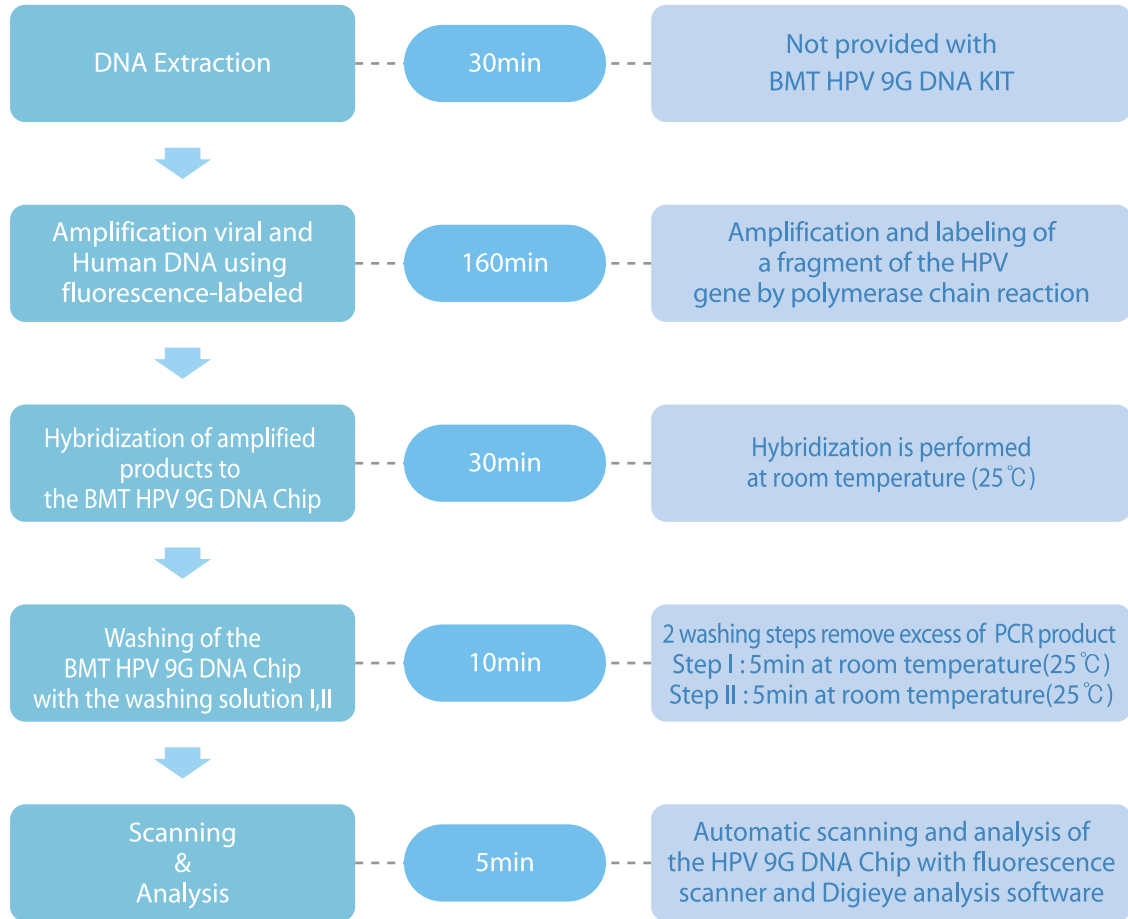
12 Month at refrigerator(4°C )

## Slide 5 : Detection limit

1. The copies mean the number of DNA strands detectible. The limits for each types are denoted in the table above. Type 16 can be detected when only 10 virus are present
2. BMT HPV 9G DNA Chip can provide the final results in short hybridization time (30min) and subsequent washing (10min) at 25°C
3. The final results are analyzed automatically based on the BMT's Digieye software



## Brief User Manual



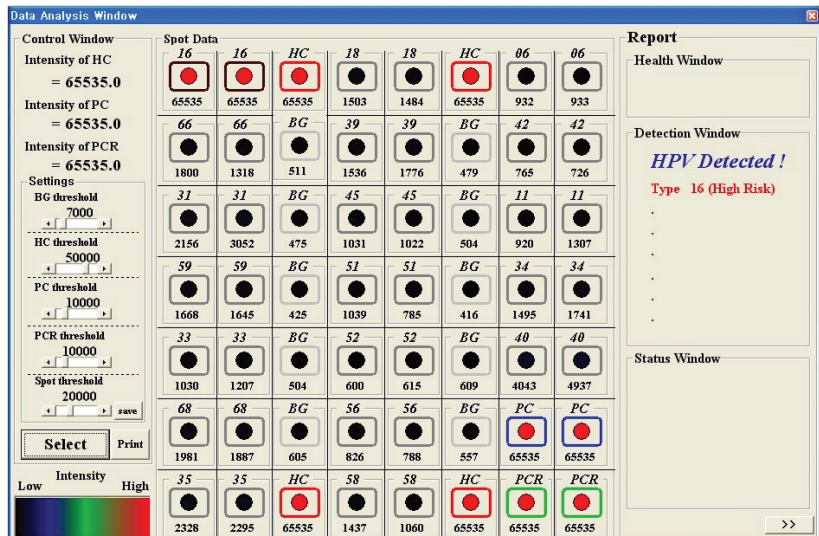
Slide 6: Brief User Manual

HPV final results can be obtained by the simple and easy methods above

# Components and Analysis software

Process steps	Components	Comment
PCR Amplification	DNA extraction kit	Not provided
	PCR kit	Provided
	PCR machine	Not provided
Genotyping	DNA chips	Provided
	Hybridization buffer Washing buffer	Provided
	Scanner (BMT standard slide will be provided)	Not provided Available scanner <i>Nanostorage scanner, Perkin-Elmer scanner, Exon scanner, Capitalbio scanner, And other scanners</i>
	"Digieye" (analysis software)	Provided

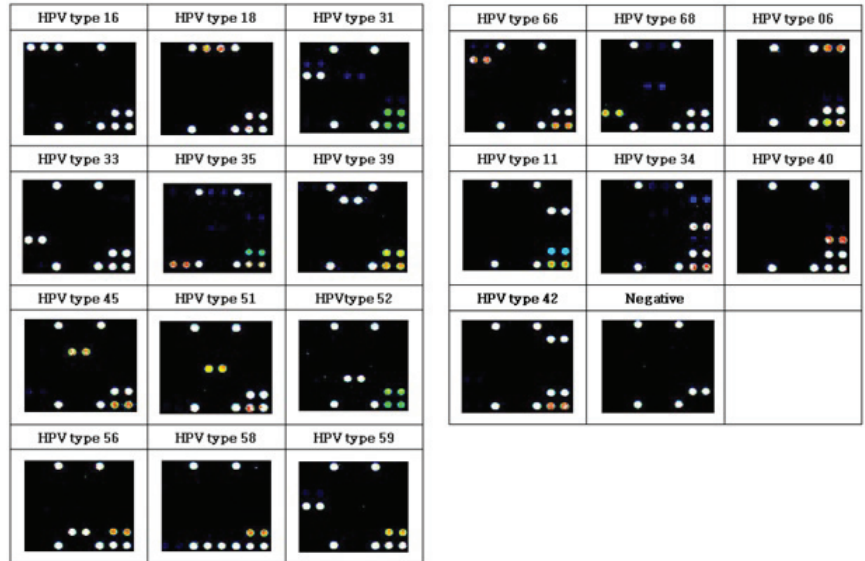
## • Final Results by "Digieye"



## Data Images by Scanner

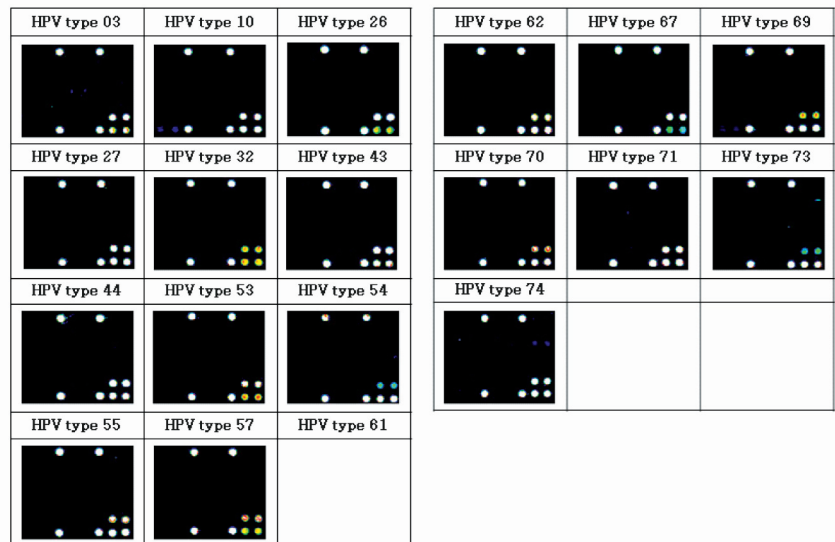
### • Genotyping results

(14 High-Risk and  
5 Low-Risk Types)



### • Screening results

(19 Low-Risk Types)



**HPV DNA chip analysis Report**

크로기 관련	0000.0000 점판	카드/검량표 사	00000000	000
수원자명	000	점 수번호	080815WB0001	
주원번호	F / 80세	크로/보고문자	2008-08-15	2008-08-15
검사항목	HPV DNA chip	제회일자/기관		

**Scanned Image**

**관측물 색**

- HPV 16 (Red)
- HPV 18 (Orange)
- HPV 33 (Yellow)
- HPV 39 (Light Green)
- HPV 42 (Green)
- HPV 31 (Dark Green)
- HPV 45 (Teal)
- HPV 11 (Blue)
- HPV 58 (Purple)
- HPV 51 (Pink)
- HPV 24 (Light Blue)
- HPV 35 (Grey)
- HPV 32 (Dark Grey)
- HPV 68 (Black)
- PC (White)
- NC (Light Yellow)
- HPV 55 (Brown)
- HPV 59 (Dark Brown)
- PCB (Dark Purple)

**전국 관리 Image**

Data Analysis Window

Control Window

Intensity of NC = 65535.0

Intensity of PC = 45777.4

Intensity of PCR = 65535.0

Settings

BG threshold 1000

NC threshold 50000

PC threshold 10000

PCR threshold 30000

Spectral threshold 20000

Select Intensity

Low High

Report Health Window

Detection Window

**HPV Detected !**

Type : 16 (High Risk)

Status Window

??

다음의 HPV type에 20000 미만의 신호가 검출이 될 수 있습니다.

- HPV type 34인 데 HPV type 11
- HPV type 88인 데 HPV type 58
- HPV type 35인 데 HPV type 51

**결과서 관련 보고서 구분 결과결과**

Each clinics and diagnostic labs should have their own reports forms to fill in the results shown above and short explanations. If you need our basic form please let us know