Fig.1

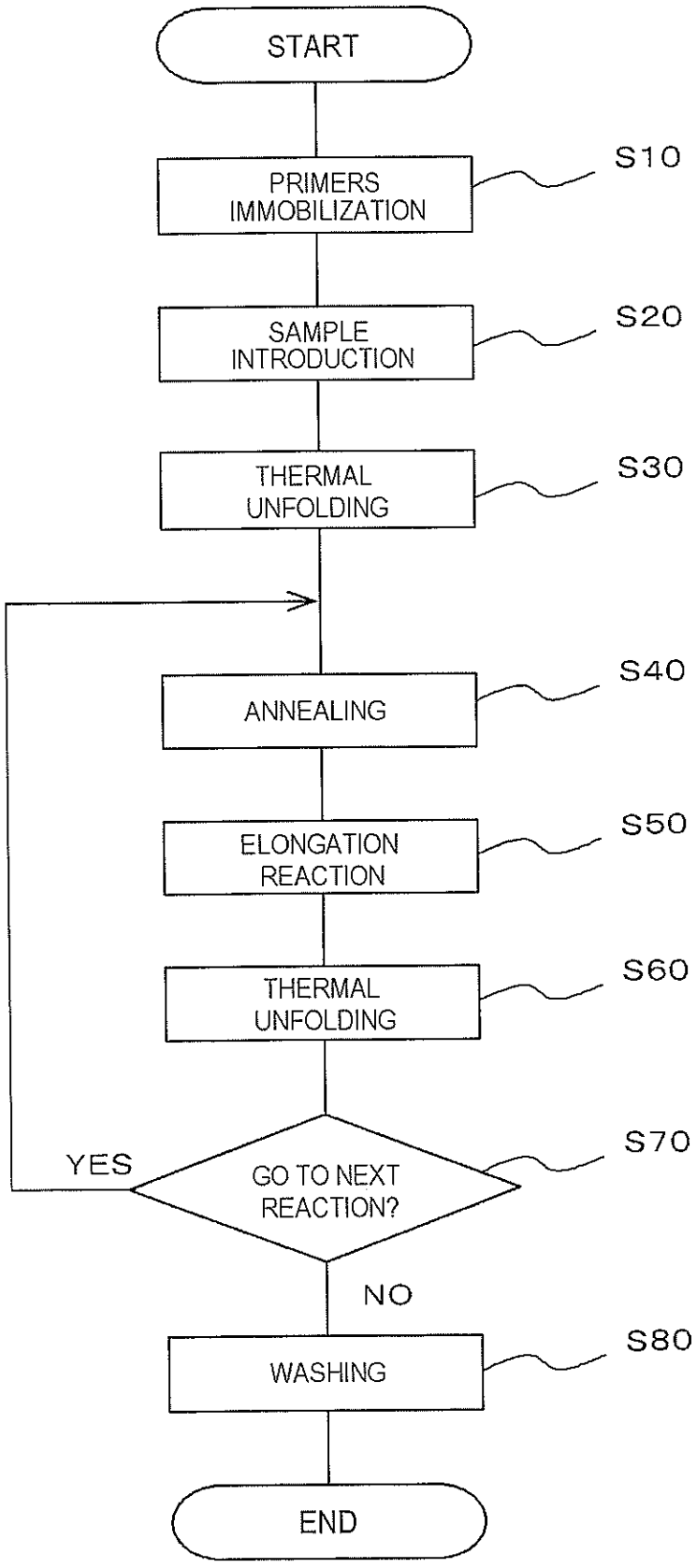

START
PRIMERS IMMOBILIZATION
S10
SAMPLE INTRODUCTION
S20
THERMAL UNFOLDING
S30
ANNEALING
S40
ELONGATION REACTION
S50
THERMAL UNFOLDING
S60
GO TO NEXT REACTION?
S70
YES
NO
WASHING
S80
END

Fig.2

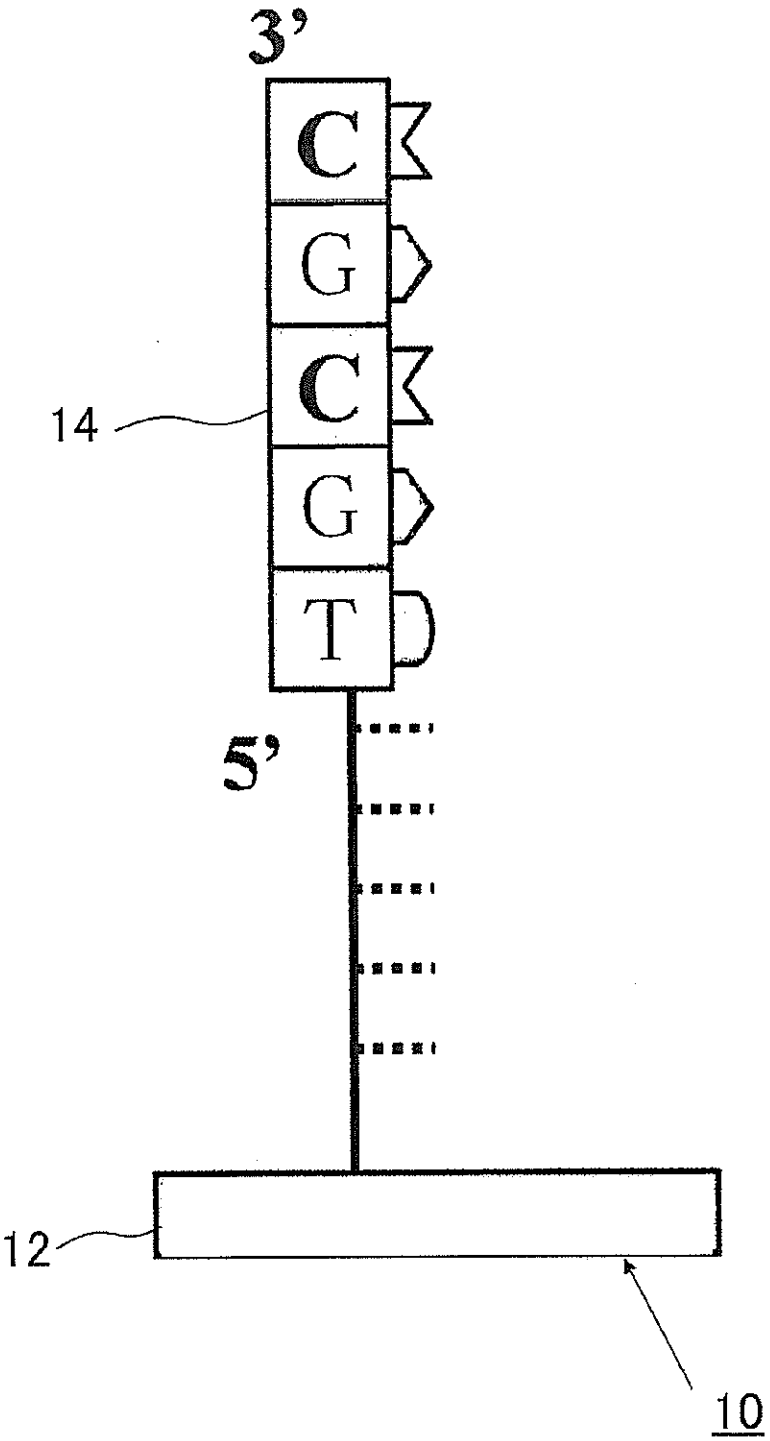


Fig.3

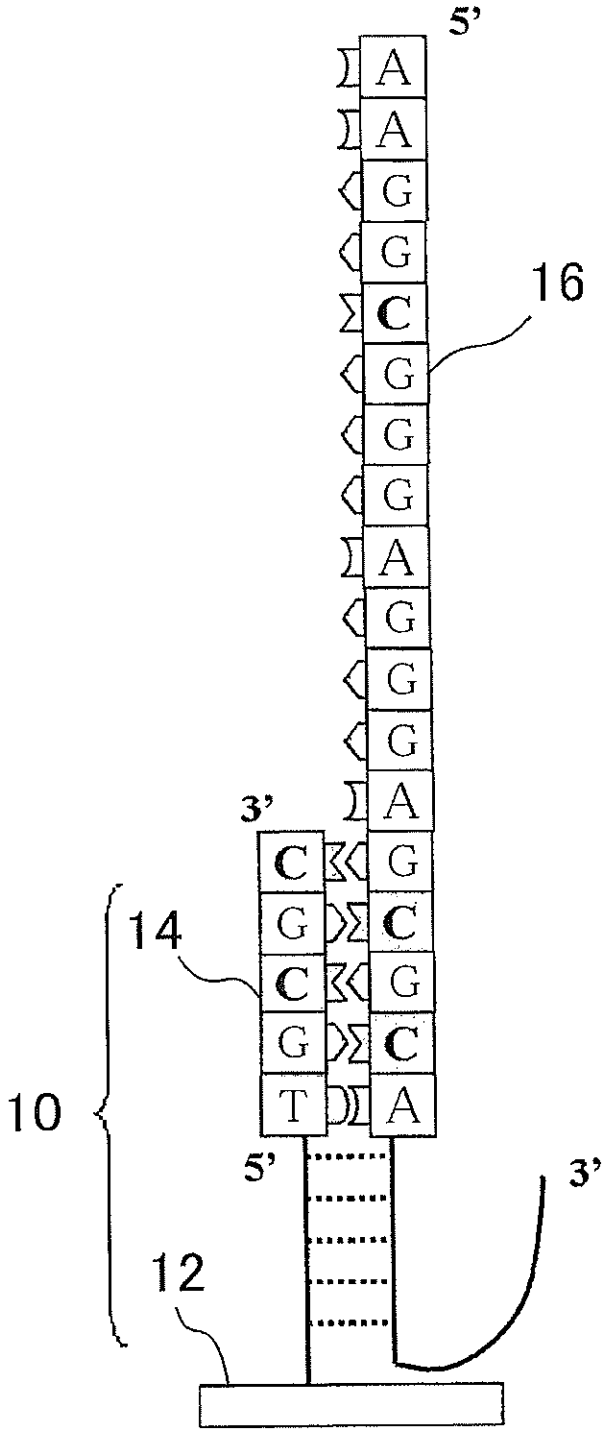


Fig.4

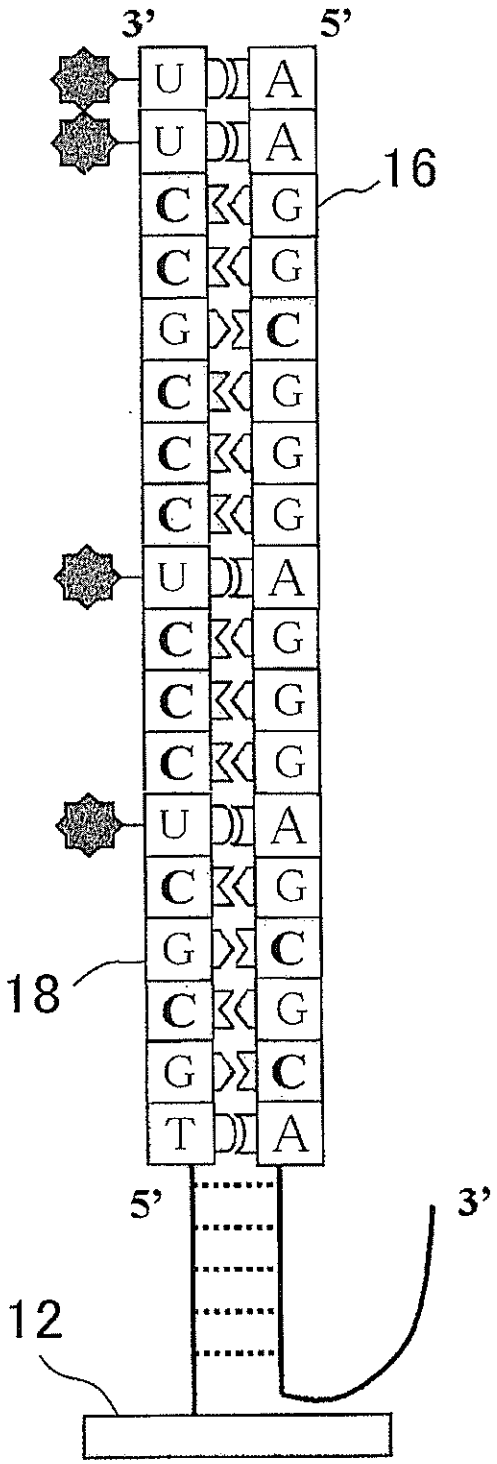


Fig.5

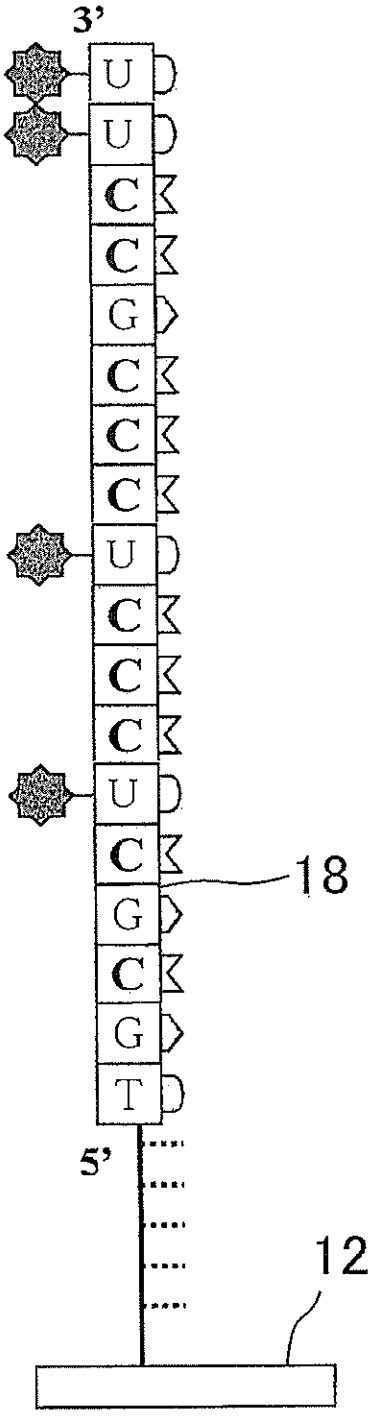


Fig.6

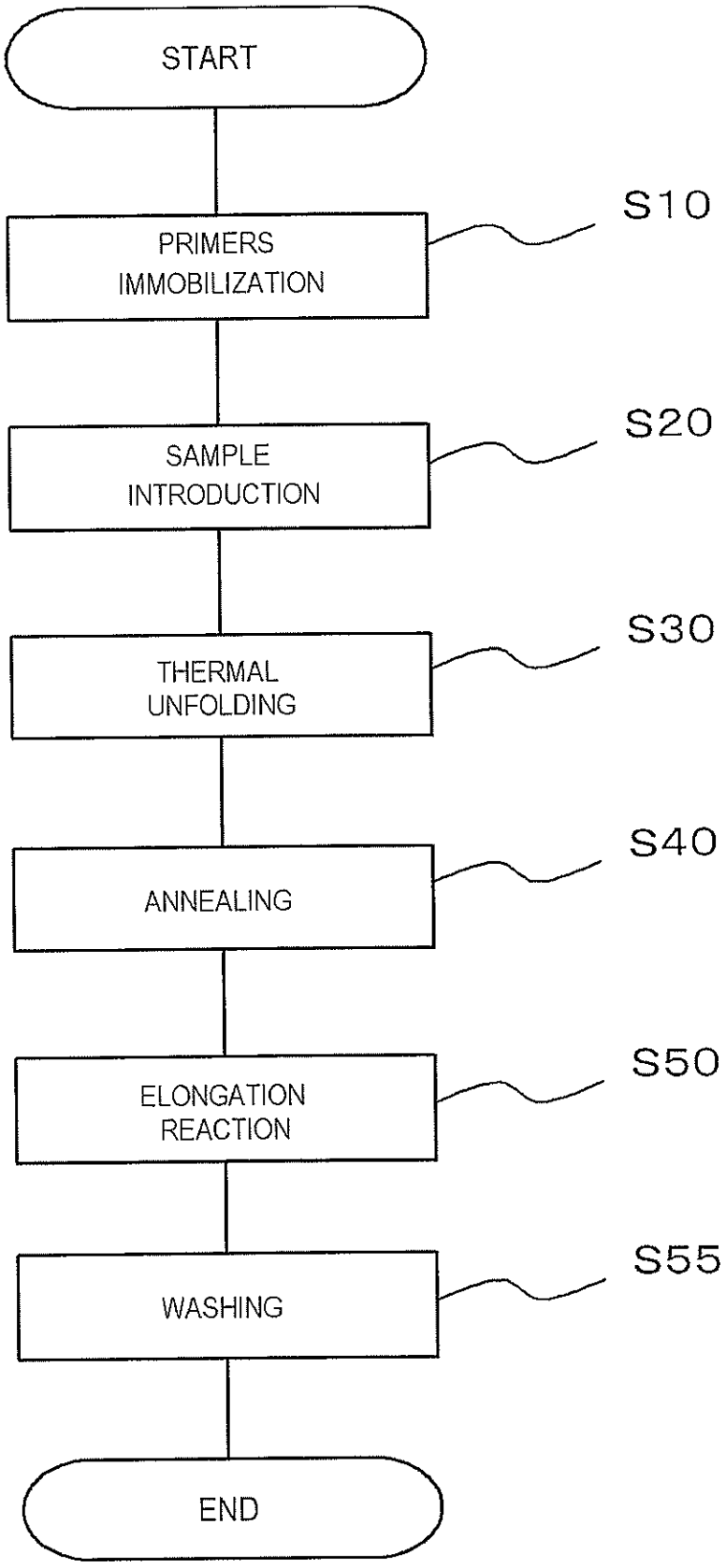

START
PRIMERS IMMOBILIZATION
S10
SAMPLE INTRODUCTION
S20
THERMAL UNFOLDING
S30
ANNEALING
S40
ELONGATION REACTION
S50
WASHING
S55
END

Fig.7

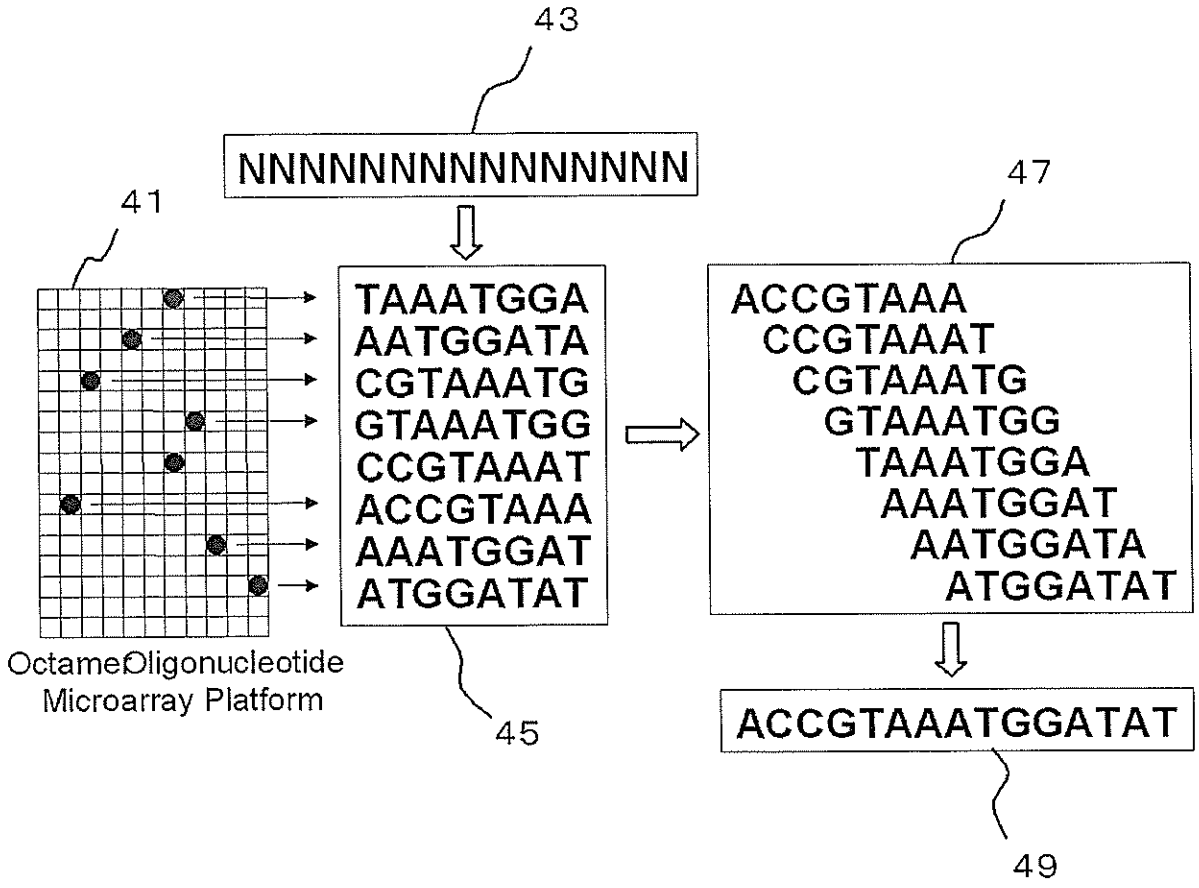

43
NNNNNNNNNNNNNNN
41
47
TAAATGGA
AATGGATA
CGTAAATG
GTAAATGG
CCGTAAAT
ACCGTAAA
AAATGGAT
ATGGATAT
ACCGTAAA
CCGTAAAT
CGTAAATG
GTAAATGG
TAAATGGA
AAATGGAT
AATGGATA
ATGGATAT
Octamer Oligonucleotide
Microarray Platform
45
ACCGTAAATGGATAT
49

Fig.8

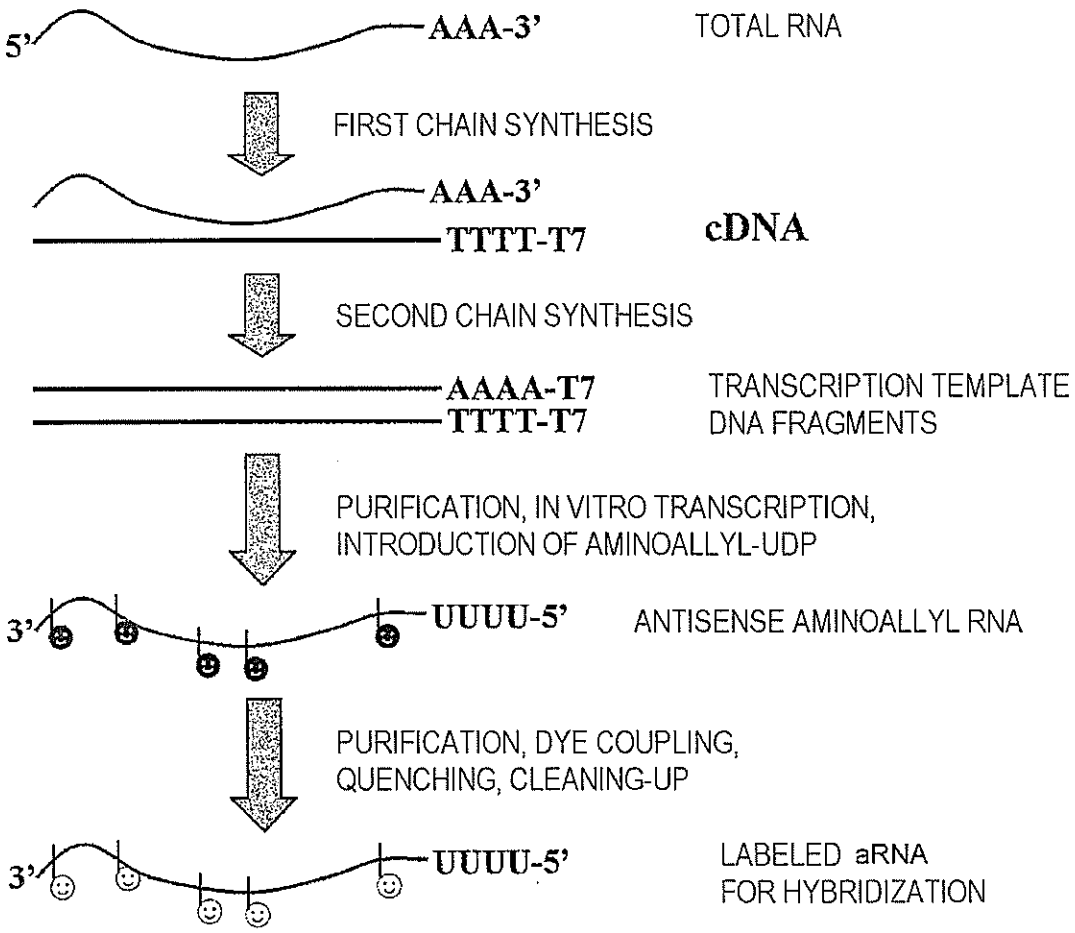

5'
AAA-3'
TOTAL RNA
FIRST CHAIN SYNTHESIS
AAA-3'
TTTT-T7
cDNA
SECOND CHAIN SYNTHESIS
AAAA-T7
TTTT-T7
TRANSCRIPTION TEMPLATE
DNA FRAGMENTS
PURIFICATION, IN VITRO TRANSCRIPTION,
INTRODUCTION OF AMINOALLYL-UDP
3'
UUUU-5'
ANTISENSE AMINOALLYL RNA
PURIFICATION, DYE COUPLING,
QUENCHING, CLEANING-UP
3'
UUUU-5'
LABELED aRNA
FOR HYBRIDIZATION

Fig.9

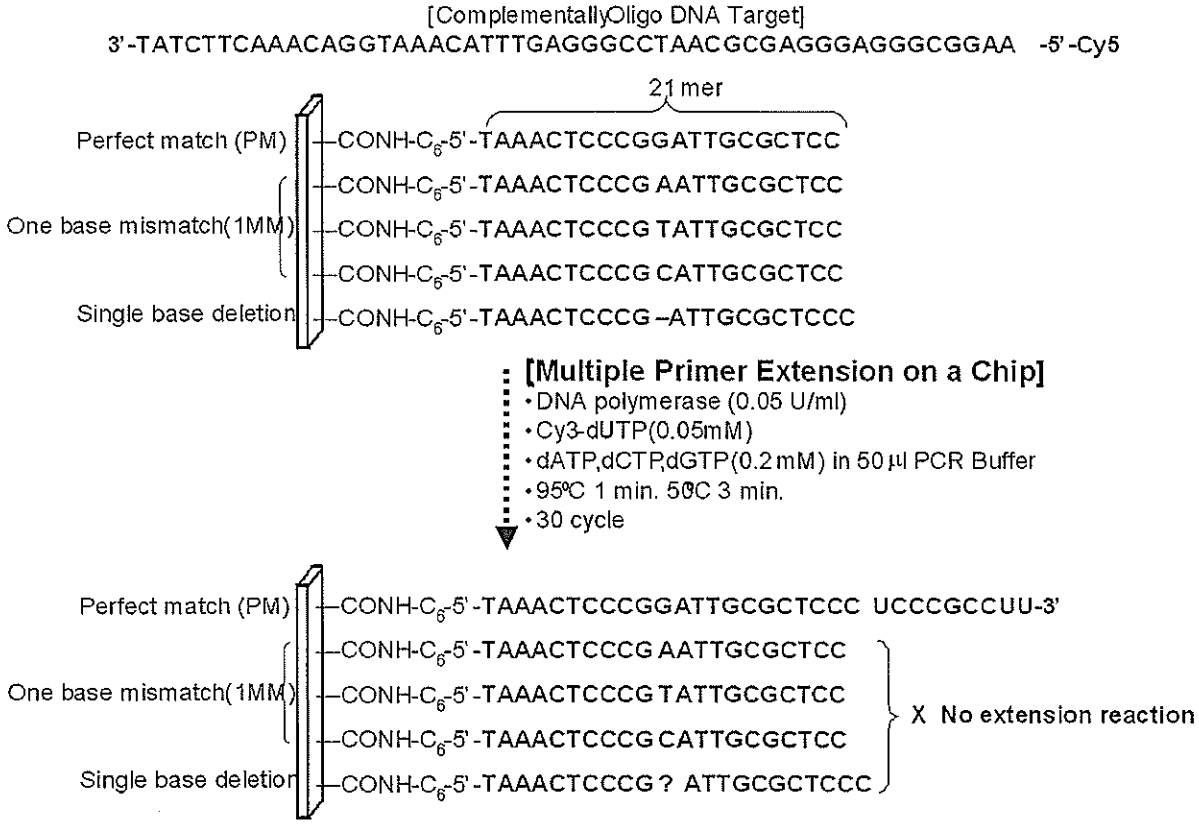

[ComplementallyOligo DNA Target]
3'-TATCTTCAAACAGGTAAACATTTGAGGGCCTAACGCGAGGGAGGGCGGAA -5'-Cy5
21 mer
Perfect match (PM)
One base mismatch(1MM)
Single base deletion
CONH-C6-5'-TAAACTCCCGGATTGCGCTCC
CONH-C6-5'-TAAACTCCCG AATTGCGCTCC
CONH-C6-5'-TAAACTCCCG TATTGCGCTCC
CONH-C6-5'-TAAACTCCCG CATTGCGCTCC
CONH-C6-5'-TAAACTCCCG –ATTGCGCTCCC
[Multiple Primer Extension on a Chip]
• DNA polymerase (0.05 U/ml)
• Cy3-dUTP(0.05mM)
• dATP,dCTP,dGTP(0.2 mM) in 50 μl PCR Buffer
• 95℃ 1 min. 50℃ 3 min.
• 30 cycle
Perfect match (PM)
One base mismatch(1MM)
Single base deletion
CONH-C6-5'-TAAACTCCCGGATTGCGCTCCC UCCCGCCUU-3'
CONH-C6-5'-TAAACTCCCG AATTGCGCTCC
CONH-C6-5'-TAAACTCCCG TATTGCGCTCC
CONH-C6-5'-TAAACTCCCG CATTGCGCTCC
CONH-C6-5'-TAAACTCCCG ? ATTGCGCTCCC
X No extension reaction

Fig.10


[ComplementallyOligo DNA Target]
3'-TATCTTCAAACAGGTAAACATTTGAGGGCCTAACGCGAGGGAGGGCGGAA -5'-Cy5
5'-GGTGGATA-3'
GTGGATAG
TGGATAGA
GGATAGAA
GATAGAAG
ATAGAAGT
8-mer primers
CCCGCCTT
CCGCCTT T
CGCCTT TC
GCCTT TCT
CCTT TCTC
5'-CTT TCTCC-3'
MPEC REACTION
5'-GGTGGATAGAAGTTTGTCCATTTGTAAACTCCCGGATTGCGCTCCCTCCCGCCTT TCTCC-3'