



<b>Title</b>	<b>MassARRAY Compact System</b>
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<b>Reference</b>	Technology Review Report, 005/08. <a href="http://medicaldev.moh.gov.my/uploads/massarray.pdf">http://medicaldev.moh.gov.my/uploads/massarray.pdf</a>

## Aim

To determine effectiveness in terms of reliability, accuracy, sensitivity, specificity, and cost effectiveness of MassARRAY as a technique for gene analysis.

## Conclusions and results

Retrievable, fair-level evidence showed that using MassARRAY as an assay to detect gene variants and genotyping materials is effective in terms of accuracy, sensitivity, specificity, and high sample throughput levels, and cost effective compared to the other conventional genotyping methods.

## Recommendations

- MassARRAY Compact System may be the best choice for a core facility due to its expensive consumables.
- MassARRAY Compact System provides high-throughput SNP genotyping for identifying specific genes for diseases, eg, myocardial infarction, prostate cancer, human papilloma virus, diabetes, and drug-resistant malaria.

## Training

- Training should be provided for those who use array technologies in their own laboratory.
- Training should cover RNA/DNA preparations, probe generation and purification, hybridizations, and scanning. Additional sessions should include bioinformatics and microarray data analysis.

## Methods

A search of electronic databases included PubMed, Ovid search engine, full text journals covered by MEDLINE, CINAHL, and HTA databases, FDA website, and Google search engine for published reports. Additional articles were identified from reviewing bibliographies in retrieved articles. No limitations were placed on the search.

The search strategy included the following terms, alone or in various combinations: Mass Array, effectiveness, accuracy, sensitivity, specificity, cost effectiveness, cost, mass spectrometry, cancer, MassARRAY MALDI-TOF MS methods and genotyping, and genotyping methods. All relevant literature was systematically reviewed, and the evidence was graded according to the modified Oxford scale.