

## **COMPARATIVE STUDY OF OPERABILITY BETWEEN NEWLY DESIGNED SIMPLE LIMS FOR SMALL LABORATORY, SIMPDOC AND EXISTING LIMS**

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The method of DNA extraction was carried out using phenol-chloroform method for long time. After that, the silica-membrane method using chaotropic salt contributed to reduce influence on human body and reduce extraction time. Furthermore, DNA auto extraction instrument using the magnetic particles allowed simultaneously DNA extraction from many specimens. Besides, multiplex PCR method had led to improve power of discrimination for human identification at the criminal investigation and paternity test and so on. And the multi-capillary electrophoresis method enabled analysis of genotype from many specimens and in a short time. Processing ability of DNA typing has improved greatly due to advancement of technology, as stated above. On the other hands, it has become necessary to treat large amounts of specimens accurately, especially in the human identification of the victims of the tsunami and terrorism and so on.

The LIMS (Laboratory Information Management System) is very powerful tool in the laboratory which treat many specimens. Because all specimens are managed by unique barcode. In generally, the LIMS is designed to manage each specimen in independent authorized department such as acceptance, order, analysis, approval, judgment, and so on. Therefore, it is difficult to introduce the LIMS to small laboratory which treat many specimens.

In this study, we compared operability of SimpDoc which was newly designed for small laboratory and STARLIMS which was designed for large laboratory.