ONLINE ISSN : 1348-2246
PRINT ISSN : 0910-6340

Analytical Sciences
Vol. 26 (2010) , No. 8 p.913

Potential Utility of DNA Sequence Analysis of Long-term-stored Plant Leaf Fragments for Forensic Discrimination and Identification

Hitomi S. KIKKAWA[1)], Ritsuko SUGITA[1)], Rikyu MATSUKI[2)] and Shinichi SUZUKI[1)]

1) Third Department of Forensic Science, National Research Institute of Police Science
2) Biological Environment Sector, Central Research Institute of Electric Power Industry

(Received April 13, 2010)
(Accepted June 7, 2010)

This study examined the potential utility of DNA sequence analysis to discriminate and identify plant material in forensic investigations. DNA was extracted from plant leaf fragments of 11 species stored for 5 to 22 years after collection. The *trnH-psbA* intergenic spacer and 316 bp of the *rbcL* gene were successfully amplified and sequenced for all fragments except for the *trnH-psbA* spacer of one sample. All of the plant samples were discriminated in pairwise comparisons of the sequences. Using a combination of local and global genetic databases is likely to provide greater reliability in search results to identify forensic samples from sequence data.

Sci., Vol. *26*, p.913, (2010) .

doi:10.2116/analsci.26.913
JOI JST.JSTAGE/analsci/26.913