

METHOD OF DETECTING NUCLEIC ACID CLEAVAGE CONTAINED IN SINGLE CELL

ABSTRACT

The object of the present invention is to provide a novel method of
5 detecting DNA cleavage in the initial stages thereof.

The object can be achieved by a method of detecting a nucleic acid cleavage
contained in a single cell, the method comprising the following steps (1)
through (5):

(1) a step of arranging one or more cells on a support having an
10 amino group on the surface thereof;

(2) a step of covering the cell or cells, whichever is appropriate,
with a mixture of purified proteolytic enzyme having a weakly alkaline
optimum pH value and a weakly acidic solution containing a gelling agent;

(3) a step of solidifying the weakly acidic solution;

15 (4) a step of immersing the support carrying thereon the
solidified weakly acidic solution into a weakly alkaline solution containing
a condensed phosphoric acid compound, a surface active agent and a
reducing agent; and

(5) a step of separating the nucleic acid derived from the cell or
20 cells, whichever is appropriate, on the support immersed in the weakly
alkaline solution by means of pulse-field gel electrophoresis using a
solution for electrophoresis containing a condensed phosphoric acid
compound.

25 [Fig. 7]