



Chemiluminescence (CL) Application Note

Measurement of ATP from Microorganism Extraction

Method

[1] To 600ul of ATP standard solution ($10^{-13} \sim 10^{-19}$ mol/ml) in a stainless steel dish was added 100ul of CL reagent after 100 seconds. Concentrations were measured by CLD-100 at 24°C for 400 seconds and the standard curve calculated.

[2] 100ul of microorganism ($\sim 10^5$), NRP reagent and buffer was mixed and the chemiluminescence was measured by CLD-100 at 24°C for 400 seconds.

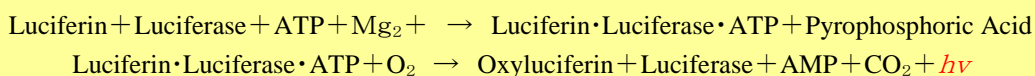


Fig.1 Reaction of Luciferin - Luciferase

Reagent

ATP (Orientalkobo)

CL reagent : LUMIT (LUMAC)

ATP extraction reagent : NRB (LUMAC)

Buffer : HEPES BUFFER (IRVINE SCIENTIFIC)

Detector: CLD100

Result

ATP : 1×10^{-12} mol/ml

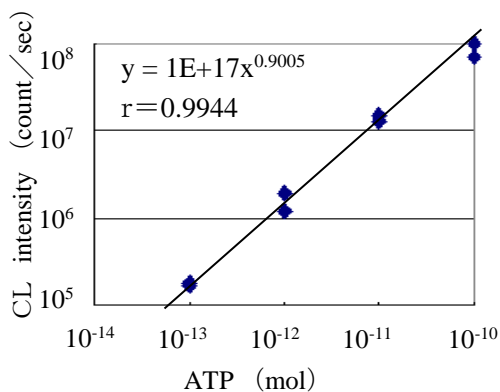


Fig.2 Standard curve of ATP

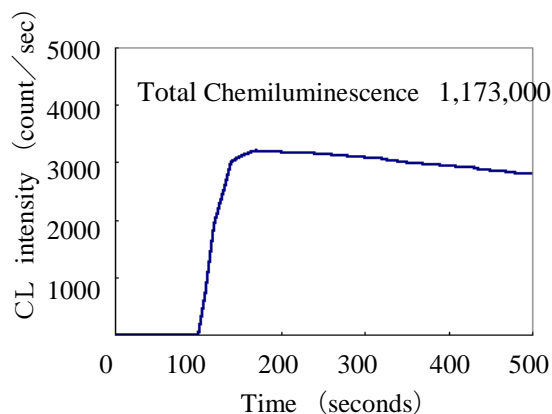


Fig.3 Time-course of chemiluminescence of sample

Reference

「Seibutuhakkou to kagaku hakkou」

