

Monitoring cell lysis, platelet aggregation and photo- and oxidative phosphorylation

Extracellular ATP can be continuously monitored simply by adding ATP Reagent SL (Stable Light) to cells undergoing lysis. The synthesis of ATP by isolated organelles like mitochondria, chloroplasts or chromatophores can be monitored in the same way.

- Extracellular ATP can be continuously monitored in cell lysis, stimulated release of ATP, platelet aggregation, oxidative- and photophosphorylation.
- Cells and organelles can remain in the medium during the measurement.
- Wide linear range from 10^{-12} to 10^{-6} mol/L.
- Reconstituted reagent can be used for 3 months if stored in a refrigerator.

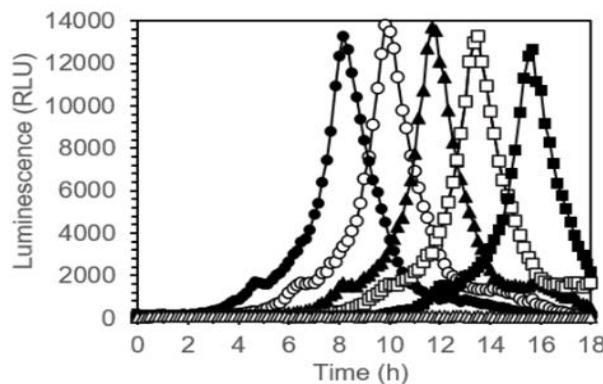


Figure 1: Extracellular ATP pattern of *Pseudomonas fluorescens* broth cultures measured online in medium containing thermostable luciferase and D-luciferin (data from reference 5). A 96-well plate was incubated at 30°C. Initial cell concentrations were as follows: 10^6 CFU/mL (closed circles), 10^5 CFU/mL (open circles), 10^4 CFU/mL (closed triangles), 10^3 CFU/mL (open squares), 10^2 CFU/mL (closed squares), 0 CFU/mL (sterile control, open triangles).

Examples of applications

1. Diagnosis of inborn metabolic errors in mitochondrial ATP production
2. Studies on photophosphorylation in chloroplasts and chromatophores
3. Studies on ATP release from cells
4. Pyrosequencing

References and more details are found in our application notes.