

## SUPPLEMENTAL DATA

### Firefly inspired one-pot chemiluminescence system using *n*-propylphosphonic anhydride (T3P)

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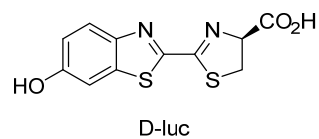
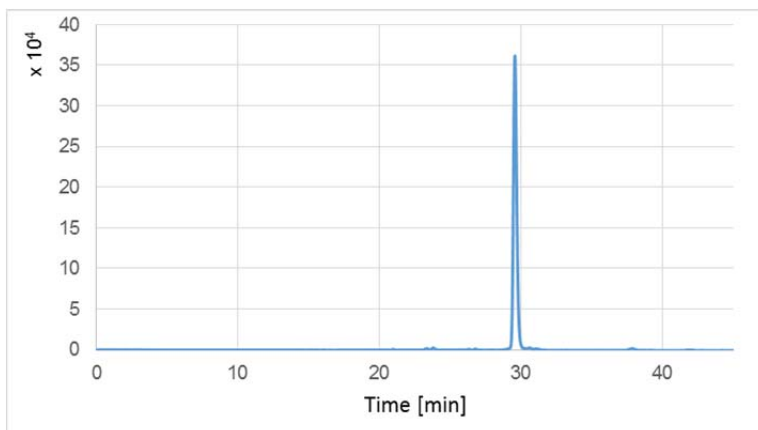
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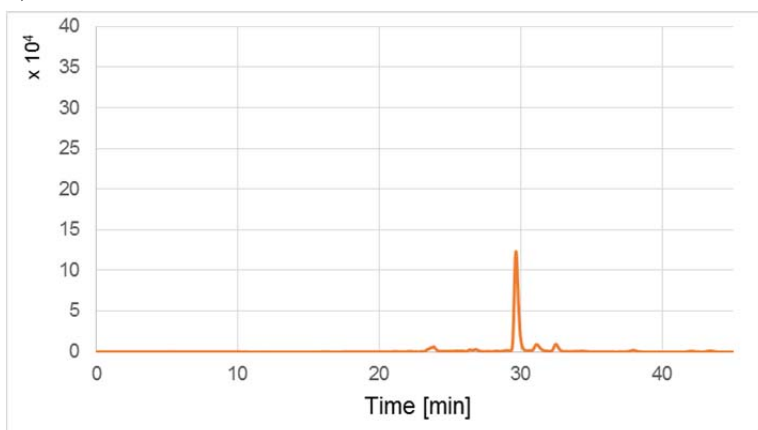
#### HPLC separation condition

- Column: Mightysil RP-18GP Aqua 250-4.6 (5 mm) (Kanto Corp., Tokyo, Japan)
- Mobile Phase: Solvent A: 0.1% TFA in water, Solvent B: 0.1% TFA in 90% acetonitrile
- Gradient: 0-5 min, 0%B; 5-15 min, 0-30%B; 15-40 min, 30%B; 40-55 min, 100%B,  
55-60 min, 0%B
- Flow rate: 0.5 mL/min.
- Temperature: 40 °C
- Detection: ex 330 nm, em 510 nm

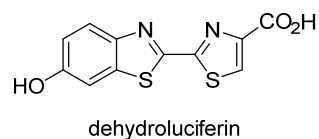
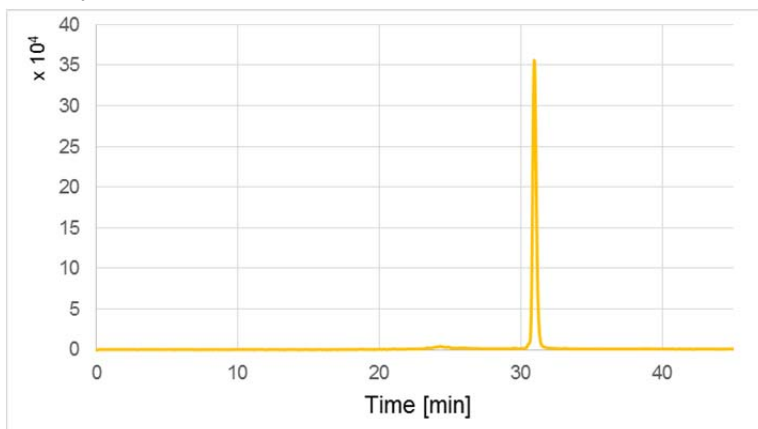
1) Before the reaction (D-luc)



2) After the T3P chemiluminescence reaction



3) dehydroluciferin



4) 2-cyano-6-hydroxybenzothiazole

