

## CL spectra of oxidized Polyphenol (Catechin)

1999

### Introduction

Catechins are a type of polyphenol and show high antioxidant ability. As a result they are valued as a food supplement. It is important to monitor the absorption, antioxidant ability and concentration of polyphenols in the human body. Using our chemiluminescence (CL) technology, polyphenols can be detected at very low levels. CL mechanism of oxidized polyphenol was shown in Fig.1. Polyphenols have a specific wavelength max of CL. Therefore spectrum of CL can be a evidence of existence of polyphenol

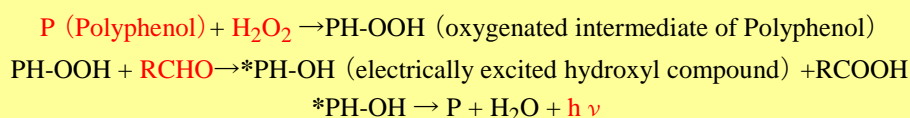


Fig.1 CL mechanism of oxidized Polyphenol

### Methods

Mix sample and reagent A in 20mm diameter stainless steel dish. Start measurement and add reagent B after 60 seconds (Fig.2).

Meas. Time: 10 min

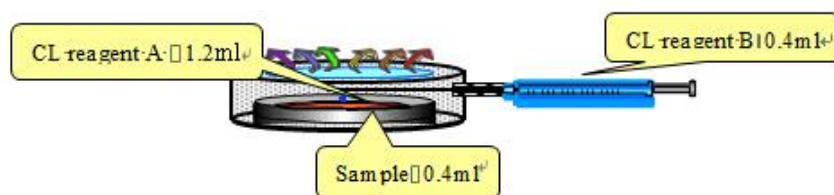


Fig.2 method

### Reagent

CL reagent A : 8.0M acetaldehyde in 50mM phosphate buffer at pH 7.4, containing 108mg HRP/L

CL reagent B : 8.8M H<sub>2</sub>O<sub>2</sub>

**System: CLA-SP2, CLS-ST3**

### Result

Chemiluminescence was detected at peak wavelength 630nm (Fig.3). The peak height of the CL intensity was shown to be dependent on concentration of polyphenol. The detection limit was around 0.5ng/100ul. Our CLA system allows polyphenols to be detected at much lower levels than any existing technology

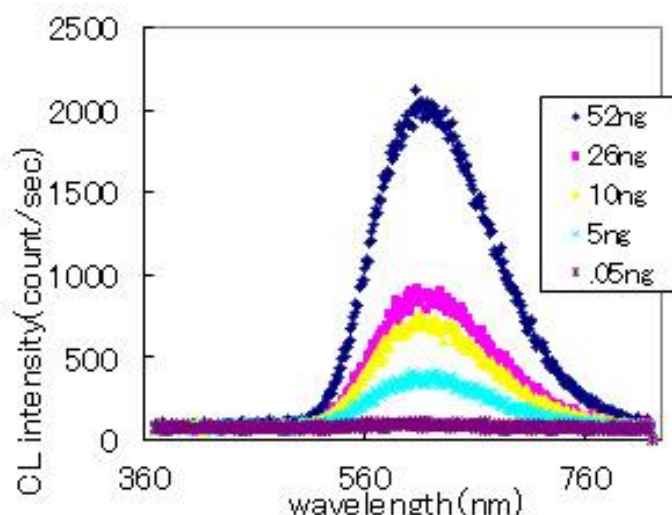


Fig.3 CL spectra of oxidized Catechin