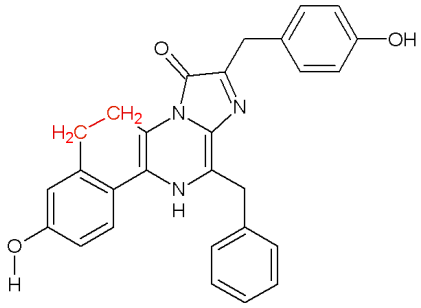
Manual for e-Coelenterazine

Cat.# 355 e-COELENTERAZINE CAS# 114496-02-5 MW 449.50

IUPAC name: Benz[f]imidazo[1,2-a]quinoxalin-3(6H)-one,5,11-dihydro-8-hydroxy-2-[(4-hydroxyphenyl)methyl]-12-(phenylmethyl)



General Notes: e-Coelenterazine (e-CTZ) is a synthetic derivative of Coelenterazine with an additional ethyl group, forming an additional ring system. First described by Shimomura 1989. **Optimal for use with Renilla Luciferase.**

Storage and Shelf-Life: It is best stored as completely dry powder under Argon in air-tight O-ring plastic tubes at -20°C or for longer storage at -80°C, protected from light. Oxygen and moisture will lead to auto-oxidation of e-CTZ over time, reducing its overall activity.

Dilution: Please prepare fresh working solutions immediately before use for ALL luminometer assays or experiments.

1. Dissolve lyophilized e-CTZ in NanoFuel Solvent (Cat. #399) or in acidified, degassed ethanol as a 1 mg/ml solution
2. Use this stock solution to make an aqueous solution (e.g. 100µM for luminometer assays)
3. Store Ethanol dissolved e-CTZ at -80°C, do not store the aqueous working solution (it will degrade by oxidation)

Differences compared to native Coelenterazine:

	Renilla Luciferase			*Oplophorus* Luciferase			Aequorin		
	Initial Intensity (%)	Total light (%)	Emission peak (nm)	Initial Intensity (%)	Total light (%)	Emission peak (nm)	Initial Intensity (%)	Total light (%)	Emission peak (nm)
CTZ	100	100	475	100	100	454	100	100	465
e-CTZ	**750**	137	418/475	82	54	459	0.8	50	405/465

Source: **Inouye** S, **Shimomura** O. Biochem Biophys Res Commun 233, 349-353 (**1997**)

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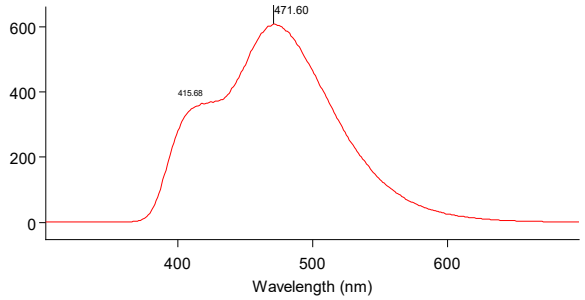
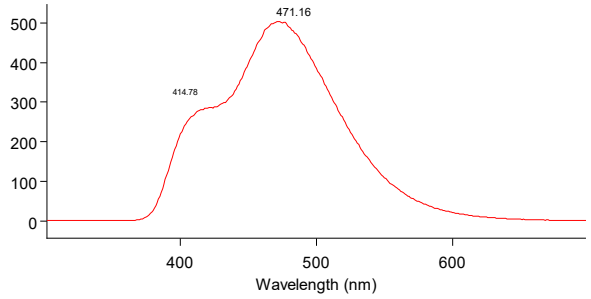
Properties of Nanolight™ eCTZ Cat. #355

A. Emission spectrum with:

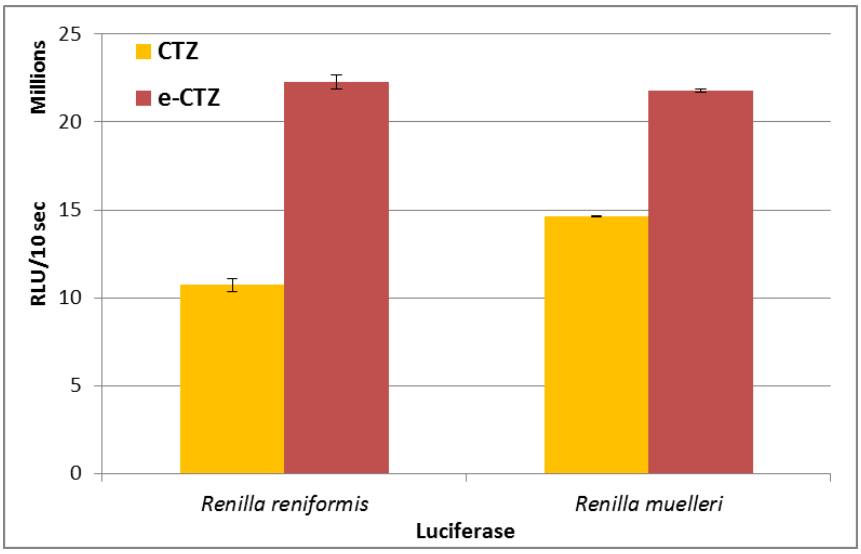
1. *Renilla muelleri* Luciferase



2. *Renilla reniformis* Luciferase



B. Comparison of luminescent intensity integrated over 10 sec.:



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