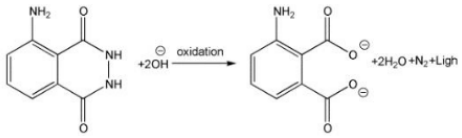
Chemiluminescence Substrate -Luminol (TBP0232)

Catalog	Unit Size
TBP0232-100 mg	100 mg
TBP0232-500 mg	500 mg
TBP0232-1g	1 g
TBP0232-10g	10 g

Description

Luminol, a chemiluminescent substrate, is readily oxidized under alkaline conditions, releasing energy as visible light. The reaction occurs in various media, including water, protic solvents, and inert aprotic solvents like DMSO or DMF. In inert aprotic solvents, molecular oxygen and a strong base are sufficient to induce emission at ~485 nm. In aqueous systems, chemiluminescence requires a strong base, oxygen (or hydrogen peroxide), and an additional oxidant such as hypochlorite or perborate, producing light at ~425 nm. The emitted light originates from the excited-state oxidation product, 3-aminophthalate (3-AP).



This product is suitable for chemiluminescence analysis and has a wide range of applications, including:

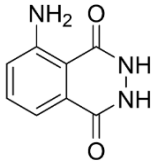
1. Micro-determination of glucose and glucose oxidase concentrations via enzymatic chemiluminescence reactions.
2. Use as a po ly(ADP-ribose) polymerase (PARP) inhibitor.
3. Generating different fluorescence colors with various sensitizers to demonstrate chemiluminescence phenomena.
4. Forensic detection of trace amounts of blood at crime scenes.
5. Biochemical detection of metal ions such as copper or iron, as well as chemicals like cyanide.

Specifications

CAS No.: 521-31-3

Appearance: White to off-whtie powder

Chemical structure:



Chemical formula: $C_8H_7N_3O_2$

Molecular weight: 177.16

Purity: ≥99 %(HPLC)

Storage: Luminol is sensitive to light and heat and should be kept in a cool, dark place. Store at 2–8 °C in a sealed, dry container protected from light. Stable for up to 24 months under recommended conditions.

For research use only.