

## Certificate of Analysis

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**Product Name:** Ebselen

**Catalog No.:** 5245

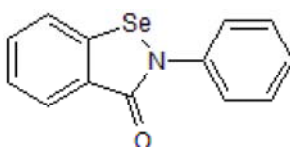
**Batch No.:** 1

CAS Number: 60940-34-3

IUPAC Name: 2-Phenyl-1,2-benzisoselenazol-3(2H)-one

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>13</sub>H<sub>9</sub>N<sub>1</sub>O<sub>1</sub>Se  
**Batch Molecular Weight:** 274.18  
**Physical Appearance:** Off White solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.6% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	56.95	3.31	5.11
Found	56.96	3.28	5.32

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Catalog No.:** 5245

**1**

CAS Number: 60940-34-3

IUPAC Name: 2-Phenyl-1,2-benzisoselenazol-3(2H)-one

**Description:**

Ebselen is a glutathione peroxidase mimic; peroxynitrite scavenger. Inhibits ferroptosis. Also inhibits lipoxygenase, cyclooxygenase, nitric oxide synthase, protein kinase C and H<sup>+</sup>/K<sup>+</sup>-ATPase activity. Inhibits the hepatic carcinogenic effects of aflatoxin B<sub>1</sub>. Antioxidant and anti-inflammatory. Selectively inhibits G<sub>q</sub> protein signaling and enhances differentiation of brown adipocytes. Inhibits SARS-CoV-2 M<sup>pro</sup> in vitro (IC<sub>50</sub> = 0.67 μM in FRET assay)

**Physical and Chemical Properties:**

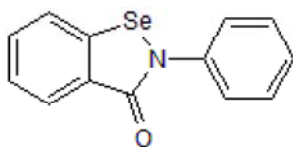
Batch Molecular Formula: C<sub>13</sub>H<sub>9</sub>NOSe

Batch Molecular Weight: 274.18

Physical Appearance: Off White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**References:**

**Jin et al** (2020) Structure of M<sup>pro</sup> from SARS-CoV-2 and discovery of its inhibitors. *Nature*. **582** 289. PMID: 32272481.

**Kuschak et al** (2019) Cell-permeable high-affinity tracers for G<sub>q</sub> proteins provide structural insights, reveal distinct binding kinetics, and identify small molecule inhibitors. *Br.J.Pharmacol.* **177** 1898. PMID: 31881095.

**Xie et al** (2016) Ferroptosis: process and function. *Cell Death Differ.* **23** 369. PMID: 26794443.

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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