

## Methylene blue

Cat. No. EXTZ-636

Lot. No. (See product label)

### Introduction

### Description

Methylene Blue is a synthetic compound with the chemical name tetramethylthionine chloride, characterized by its deep blue appearance. Since the late 19th century, Methylene Blue has been widely used in the medical field due to its unique redox properties and biological activity, making it an important tool for the treatment and diagnosis of various diseases. Pharmaceutical-grade Methylene Blue undergoes strict purification to ensure its safety and efficacy, making it suitable for medical use.

### Applications

1. Antidote: Used to treat methemoglobinemia by converting methemoglobin back to normal hemoglobin, restoring the blood's oxygen-carrying capacity. Employed as an adjunct treatment for cyanide and carbon monoxide poisoning.
2. Antimicrobial and Antimalarial: Exhibits antibacterial, antifungal, and antiviral activity, making it useful for treating certain infections. Historically used to treat malaria, and it remains an alternative therapy in some regions.
3. Neurodegenerative Disease Research: Currently being studied for its potential therapeutic effects in neurodegenerative diseases such as Alzheimer's disease and Parkinson's disease.
4. Surgery and Diagnostics: Used as a dye for tissue marking during surgery (e.g., lymph node localization). Utilized for diagnosing urinary tract infections and assessing kidney function.
5. Mental Health Treatment: Low doses of Methylene Blue may have antidepressant effects and improve cognitive function. This product is a raw material and must be used strictly according to dosage and indications to avoid potential risks.

### Product Information

<b>Form</b>	Powder
<b>Purity</b>	99.00%