

Address: 10 Biopolis Road Immunos Singapore

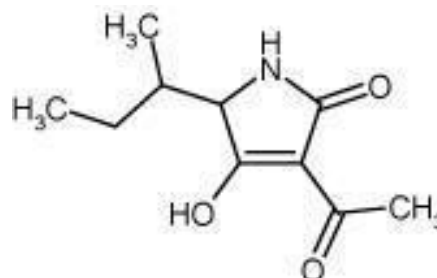
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## Certificate of Analysis

**Product Name:** Tenuazonic acid

**Product Numbers** MSS1032  
**Lot Number:** **2J1A05**  
**Production Date:** **05/11/2020**  
**Expiration date:** **11/2023**  
**Molecular Formula:** C<sub>10</sub>H<sub>15</sub>NO<sub>3</sub>  
**Molecular weight:** 197.3 for free acid form  
**Cas number:** 610-88-8  
**Merck index:** 14,9149  
**Source:** Alternaria sp.  
**Purity (TLC):** >99%  
**Purity(HPLC):** >99%  
**Appearance:** Syrupy.  
**Melting point:** 152° C (Predicted).  
**Solubility:** Clear colorless solution at 10mg/ml CH<sub>2</sub>Cl<sub>2</sub>  
**Long term storage:** -20°C or less, protect from light.  
**Hazard:** TOXIC if swallowed, irritating



### Product Description:

Tenuazonic acid is an antineoplastic, mycotoxic compound extracted from *Alternaria alternata* exhibiting antiviral, antibacterial and antitumor activity. Tenuazonic acid inhibits protein synthesis by suppression at the ribosome. Tenuazonic acid was shown to inhibit TPA induced ornithine decarboxylase (ODC) activity in a mouse model, and in turn suppressed mouse skin tumor promotion.

### Warning:

This product is not intended or approved for human, diagnostics or veterinary use. Use of this product for human or animal testing is extremely hazardous and may result in disease, severe injury, or death.

### Material safety data:

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet.

This product meets the requirement of the specification.

Inspected by

  
Quality System Specialist

# ***Certification Report***

**Intended Use:** The product covered by this Certificate is designed for Calibration or for use in Quality Control procedures for the specified chemical compounds listed on the reverse side. This product can be used for Identification and/or Quantification. This product can also be used as a Reference Material to validate analytical procedures.

**Raw Materials:** Reference Standards are prepared from the highest quality starting materials with defined purities. All analytes and solvents are obtained from pre-qualified vendors and then analyzed or evaluated according to ISO 9001 requirements prior to use.

**Manufacturing:** These products manufactures under an ISO 9001 certified quality system. Balances used in the manufacturing process are calibrated regularly. All weights are traceable through the National Institute of Standards and Technology(NIST).

**Homogeneity Assessment:** Homogeneity of the finished product is assessed by analyzing sample batches or by other methods consistent with the intended use of the product and by procedures that comply with the ISO 9001 Quality System.

**Stability Assessment:** Pribolab Pet Ltd. guarantees the stability of this solution through the expiration date stated on the label. When handled and stored according to the conditions stated on the label. To ensure a uniform solution, mix the contents of the sealed container thoroughly prior to use. Care should be taken not to contaminate the contents of the original container.

**Analytical Quality Control:** Products are tested by validated analytical methods covered under the company's ISO 9001 Quality System.

**Uncertainty Statistics and Confidence Limits:** The maximum Uncertainty stated on the face of this certificate has been calculated in accordance with the EURACHEM/CITAC Guide-Quantifying Uncertainty in Analytical Measurement-Second Edition. The Uncertainty given is the Expanded Combined Uncertainty and represents an estimated Standard Deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is  $U$  which is  $U_c(y) \cdot K$ , where  $K$  is the coverage factor at the 95% confidence level ( $K=2$ ). The Expanded Uncertainty is based on the combination of uncertainties associated with each individual operation involved in the preparation of the product.

**Legal Notice and Limit of Liability:** This product is for research use only. No warranty for any particular application is expressed or implied. Due to their hazardous nature, they should be handled by trained personnel. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.