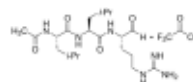


## Certificate of Analysis

Product Name:

Leupeptin trifluoroacetate salt - ≥90% (HPLC), microbial

**Product Number:** L2023  
**Batch Number:** SLBR0076V  
**Brand:** SIGMA  
**CAS Number:** 147385-61-3  
**MDL Number:** MFCD00133458  
**Formula:** C<sub>20</sub>H<sub>38</sub>N<sub>6</sub>O<sub>4</sub> · xC<sub>2</sub>HF<sub>3</sub>O<sub>2</sub>  
**Formula Weight:** 426.55 g/mol  
**Storage Temperature:** Store at -20 °C  
**Quality Release Date:** 28 APR 2016



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless to Faint Yellow	Colorless
Solubility (Turbidity)	Clear	Clear
50 mg/mL H <sub>2</sub> O		
Water (by Karl Fischer)	≤ 12 %	2 %
Peptide Content	≥ 55 %	71 %
By Amino acid Analysis		
IONX-HPLC	≤ 45 %	22 %
Ion Exchange HPLC with conductivity Detection		
As trifluoroacetate		
Purity (HPLC)	≥ 90 %	98 %
Leupeptin gives multiple peaks on HPLC due to equilibria among three forms in solution. Purity determined using 3 main peaks		
Note	-----	-----
Formula and formula weight are for the free base		

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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## Certificate of Analysis

Product Number: L2023  
Batch Number: SLBR0076V



Rodney Burbach, Manager  
Analytical Services  
St. Louis, Missouri US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at [Sigma-Aldrich.com](http://Sigma-Aldrich.com). For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.