



**K alchem International, Inc**  
Compounding Chemicals You Can Trust

<b>PRODUCT:</b>	<b>NITROFURAZONE, USP</b>	<b>EXPIRATION DATE:</b>	<b>08/2024</b>
<b>FINISHED LOT NO:</b>	<b>3009/90327</b>	<b>MFG DATE:</b>	<b>09/2019</b>
<b>CAS#</b>	<b>59-87-0</b>	<b>SPECIFICATIONS:</b>	<b>USP</b>

## Certificate of Analysis

<b>TEST CRITERIA</b>	<b>SPECIFICATIONS</b>	<b>RESULTS</b>
<b>APPEARANCE</b>	<b>Yellow or brownish-yellow crystalline powder.</b>	<b>Complies</b>
<b>IDENTIFICATION</b> <b>Infrared Absorption</b> <b>Ultraviolet Absorption</b>	<b>Matches with USP Nitrofurazone RS</b> <b>Ratio: A<sub>306</sub>/A<sub>375</sub> does not exceed 0.25.</b>	<b>Complies</b> <b>0.23</b>
<b>*IDENTIFICATION</b> <b>ID B</b>	<b>UV Absorption</b>	<b>Conforms</b>
<b>pH</b>	<b>Between 5.0 and 7.5</b>	<b>6.3</b>
<b>LOSS ON DRYING</b>	<b>Not more than 0.5%</b>	<b>0.07%</b>
<b>RESIDUE ON IGNITION</b>	<b>Not more than 0.1%</b>	<b>0.00%</b>

<b>RELATED SUBSTANCES (HPLC)</b>		
<b>Nitrofurazone related compound A</b>	<b>Not more than 0.5%</b>	<b>&lt;0.01%</b>
<b>Nitrofurfural diacetate</b>	<b>Not more than 0.5%</b>	<b>&lt;0.01%</b>
<b>Unspecified impurities</b>	<b>Not more than 0.1%</b>	<b>Max &lt;0.04%</b>
<b>Total impurities</b>	<b>Not more than 2.0%</b>	<b>&lt;0.04%</b>
<b>Residual solvents by (HS-GC)</b>		
<b>Methanol</b>	<b>NMT 500 ppm</b>	<b>&lt;2ppm</b>
<b>Methyl Acetate</b>	<b>NMT 500 ppm</b>	<b>8ppm</b>
<b>ASSAY (UV)</b>	<b>Between 98.0% and 102.0% on dried substance.</b>	<b>100.1%</b>
<b>*ASSAY</b>	<b>Between 98.0% and 102.0% on dried substance.</b>	<b>98.5%</b>
<b>0.01%: DL for impurity A</b>	<b>0.02%: QL for impurity A</b>	
<b>0.01%: DL for impurity B</b>	<b>0.02%: QL for impurity B</b>	
<b>0.01%: DL for Nitrofurazone</b>	<b>0.04%: QL for Nitrofurazone</b>	
<b>2ppm: DL for Methanol</b>	<b>7 ppm: QL for Methanol</b>	
<b>1 ppm: DL for Methyl acetate</b>	<b>1 ppm: QL for Methyl acetate</b>	

Note: the product meets the requirements of the current USP monograph for Nitrofurazone.

\*Kalchem Independent testing results.

DATE OF RELEASE: 01/16/20 ANALYSIS # ETX-191203-0042

APPROVED BY/ DATE: \_\_\_\_\_

Kalyn R Tabor, Quality Control