

# CERTIFICATE OF ANALYSIS

(Certificate No. KMI017088-01)

Release Date: 21/08/2024

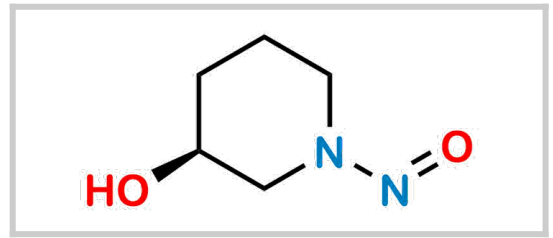
Re-test Date: 20/08/2027

## N-Nitroso Ibrutinib Impurity 1

### Identification

Chemical Name :  
(S)-1-Nitrosopiperidin-3-ol

CAT No. : KMI017088  
CAS No. : 2380680-64-6  
Molecular Formula : C<sub>5</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub>  
Molecular Weight : 130.1



### Analytical Information

Batch No.	: IBR-IMP-1-NO-073-345	Solubility	: Methanol
Description	: Light Yellow Liquid	Mass	: Confirm
HPLC Purity	: 99.83 %	IR	: Confirm
Weight Loss By TGA	: 1.97 %	<sup>1</sup> H NMR	: Confirm
% Potency	: 97.86 %		

### Additional Information

Long Term Storage : Store at 2-8 deg. C for long term storage  
Shipping Condition : Product is stable to be Shipped at Room Temperature  
% Potency = [100 - 1.97(Weight Loss By TGA)] x [99.83(HPLC Purity)]/100 = 97.86 %  
Recommendation : Released

	Department	Name	Signature	Date
Prepared By	Analytical	Jignesh Patel		21/08/2024
Reviewed & Approved By	Quality Control	Jatin Patel		21/08/2024

Attachments : COA, HPLC, MASS, <sup>1</sup>H NMR, IR and TGA