

Certificate of Analysis

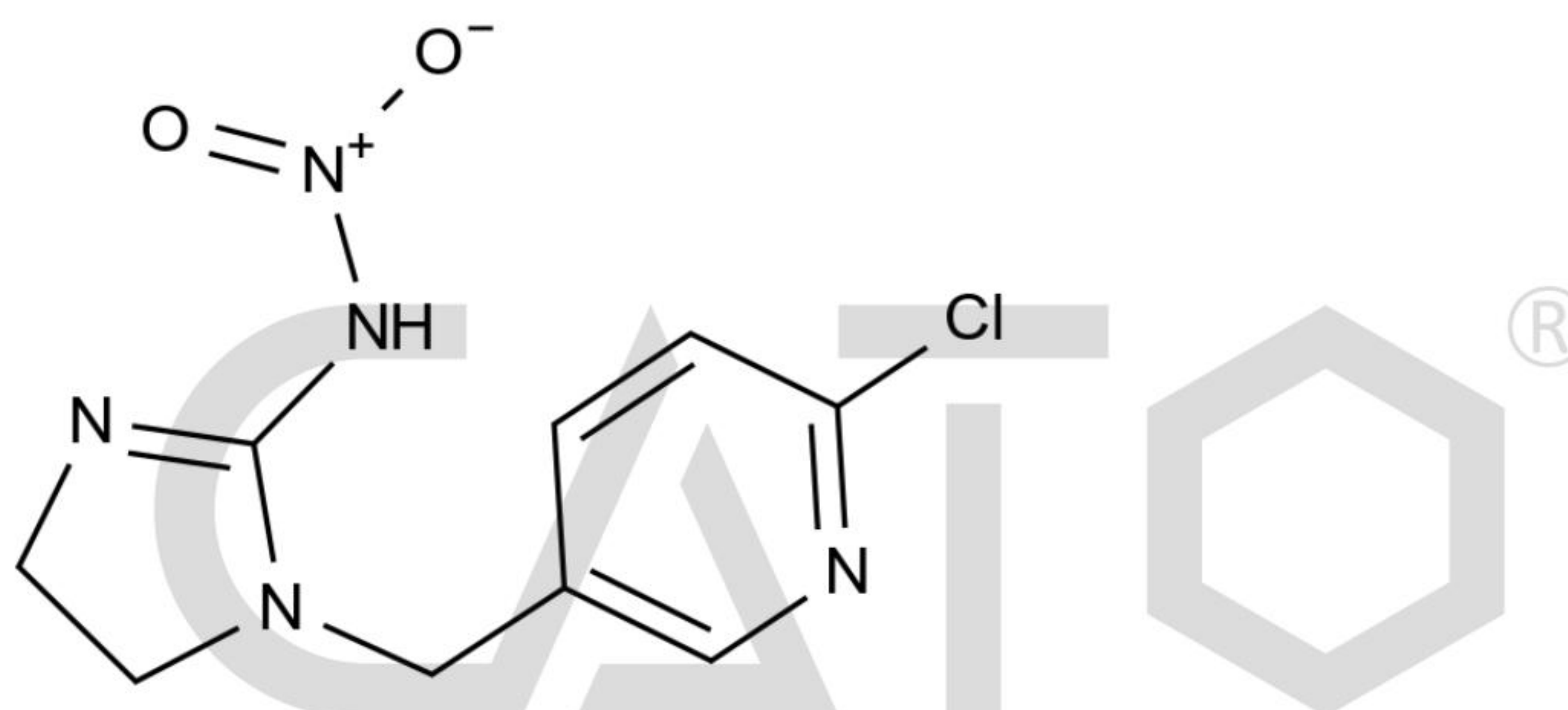
Reference Material & Standard

Product Name:	Imidacloprid	Catalogue Number:	CCPD100512
Synonyms:	N/A	Lot Number:	1220-RF-0106
CAS Number:	138261-41-3	Expiry Date:	Dec 19, 2028
Molecular Formula:	C ₉ H ₁₀ ClN ₅ O ₂	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	255.66	Shipping Condition:	Shipping at Room Temperature

Warning:



Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Off-White Solid
Identification	LCMS&HNMR	Confirmed
Purity	HPLC	99.331%
Residue on Ignition	TGA	0.2715%
Loss on Drying	TGA	0.0070%
Assay		99.1%
Uncertainty		±2.0%

Comment:

- The calculation of the mass balance method follows the formula (calculated on the non-dried basis):

$$\text{Assay (\%)} = (100\% - \text{Residue on Ignition} - \text{Loss on Drying}) * \text{Purity HPLC (\%)} / 100\%$$
Residue on Ignition and Loss on Drying are considered as absolute effect, HPLC purity is considered as relative effect.
- The uncertainty values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Signature:

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Date: Dec 20, 2024

Date: Dec 20, 2024

Date: Dec 20, 2024

