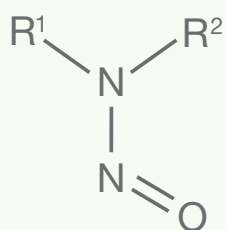




BASF Pharma Solutions – Helping Customers Evaluate their Nitrosamine Risk Level



What are nitrosamines?

Nitrosamines are chemical compounds that can be formed from secondary amines with a nitrosating agent. Those nitrosating agents can be nitrous acid, nitrites or NOX. Nitrosamines may be found in drinking water and foods. The International Agency for Research on Cancer (IARC) has classified these compounds as carcinogens. Recently, international agencies have been investigating the presence of nitrosamine impurities in various commercial drugs, particularly those with a high-risk API (e.g. Metformin) or where certain solvents/reagents are used in the API synthesis under specific reaction conditions (e.g. Valsartan).

Regulatory situation in market

International agencies have collaborated to set acceptable daily intake limits that will not increase the risk of cancer. These agencies have also requested that Marketing Authorization Holders (MAH) evaluate marketed products for the potential presence of nitrosamines. Evaluations must be conducted for finished drug products and APIs to determine the risk of nitrosamine formation/presence. As a result, dozens of drug products have been recalled from the market to undergo further testing and analysis.

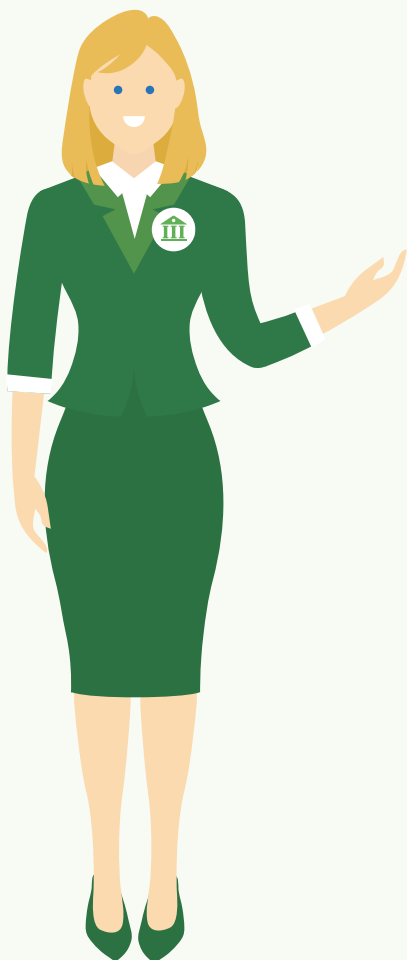
BASF Response:

APIs: BASF has been proactive in supporting our customers to evaluate the potential risk for Nitrosamine formation/presence. We have provided a detailed risk assessment on nitrosamines to all API customers based on the current requirements of EMA. BASF is in frequent contact with European and US associations to drive Nitrosamine risk evaluations forward.

Excipients: Even though excipient evaluation is currently not in scope of any regulation globally, BASF has also assessed the risk for Nitrosamine formation for its pharmaceutical excipients in accordance with current recommendations from relevant associations.


We create chemistry





Nitrosamines Risk Assessments for excipients available now in RegXcellence™

BASF now provides Nitrosamines Risk Assessments for its pharmaceutical excipients to support its customers in their own risk assessments. Nitrosamines Risk Assessments are available to all customers for instant download using RegXcellence™. These statements enable our customers to better understand their potential risk for Nitrosamine formation/presence by providing information regarding several key risk factors. These risk factors include:

- The use of sodium nitrite or any other nitrite or nitrosating agent in the manufacturing process
- Water quality assessment for water used for the manufacturing process
- The presence of secondary or tertiary amine during the manufacturing process
- The presence of any amide, primary amine or ammonium salt in any raw material, catalyst, intermediate, etc. used in the manufacturing process.
- The use of multipurpose equipment during the manufacturing process

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In case of regulatory or compliance questions, please contact Rainer.fendt@basf.com or Miriam.cremer@basf.com

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