

# Noble.AI Buyer's Guide for AI-Enabled Chemical Formulation

There has been an increase in demand for product innovation at an accelerated pace. This pressure is being caused by a confluence of happenings in the market. Technological advancements are driving the pace of innovation at breakneck speed. Yet, at the same time, our customers are concerned about risk to the supply chain while balancing their corporate sustainability initiatives.

## Noble.AI's Physics Informed Neural Network (PINN)

By leveraging Noble.AI's Physics Informed Neural Network (PINN) approach, our customers accelerate their product's time to market as well as drive down cost and inefficiencies that can arise when developing chemical formulations in several ways:



### Compatibility of Ingredients

Noble.AI's platform can be used to analyze datasets of known chemical properties and predict the likelihood of ingredient compatibility and stability. This can help identify potential issues early on in the formulation process, saving time and resources.



### Shelf-Life

Noble.AI's platform can be trained to predict how a formulation will behave over time based upon its ingredients and environmental conditions. This can help identify potential stability issues and guide formulation adjustments for improvement.



### Rheology

Noble.AI's platform can be used to optimize the rheological properties of a formulation by predicting the effects of different ingredients and processing conditions.



### Safety

Noble.AI's platform can be trained to analyze datasets of chemical structures and predict the potential toxicities and environmental impacts of a formulation. This can help ensure the safety of a formulation for both the user and the environment.



### Efficacy

Noble.AI's platform can be used to optimize the performance of a formulation by predicting the effects of different ingredients and processing conditions on the final product's properties and performance.

## Noble.AI's Customers Partner With Us to Help Accelerate Products to Market By:

### Sustainable Design/ Redesigning of Formulations

Because Noble.AI's platform can be used to analyze datasets of known chemical properties and predict the likelihood of ingredient compatibility and stability, we can accelerate sustainable design/redesigns using "green chemistry" in the formulation process.

### Optimizing Formulation Development

Noble.AI's platform can be used to optimize the rheological properties of a formulation, as well as its safety and efficacy, by predicting the effects of different ingredients and processing conditions. This helps reduce the number of formulation iterations needed to achieve the desired properties and performance.

### Reducing the Need for Physical Testing

Noble.AI's platform can be trained to predict the behavior and properties of a formulation based upon its ingredients and environmental conditions. This can reduce the need for physical testing, which can save time and resources.

Connect with a Noble.AI specialist today to see how we can help you accelerate your R&D and innovation

[www.noble.ai](http://www.noble.ai)



Experience next-generation AI for innovation. Schedule a demo today to discover how Noble.AI can accelerate your R&D's time to value.



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