



# Using the Gansons Nauta™ Mixer to Formulate Perfumed Talcum Powder

## Objective

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To achieve uniform blending of perfumed oil and talcum powder without lump formation.

## Background

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Talcum powder, a popular personal care product, absorbs moisture and prevents rashes on the skin surface. One of the most critical steps in its formulation involves uniform distribution of perfume without any agglomerated particles. The Gansons Nauta™ Mixer was employed for this critical operation.

## Challenge

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One of our fast-moving consumer goods (FMCG) clients was using a ribbon blender for mixing talcum powders that led to lump formation and material losses. The final product adhered to the bottom of the vessel owing to non-uniform mixing. For this client, the primary challenges involved selecting an appropriate mixer, optimizing mixing time and preventing lumps.

## Gansons Solution

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The Gansons Nauta™ Mixer is designed to successfully achieve complete mixing of powders in a short time. In this machine, the unique screw flight agitator rotates on its own axis and it orbits the periphery of the conical tank, setting up three distinct synchronous intermixing currents in the batch. Lumps were absent in the final product due to spraying liquid during the three-dimensional motion and thorough intermixing of ingredients.

## Results

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Efficient mixing of perfumed oil and talcum powder was achieved in the Gansons Nauta™ Mixer (DBXE 300 R) for a batch size of 150 kilograms. The low intensity mixing pattern in the Gansons Nauta™ Mixer prevented formation of lumps and led to uniform perfume distribution. In addition, a significant reduction in processing time was observed using the current method (65 minutes) compared to the former (process time for the ribbon blender was found to be approximately 4 hours). Parameters such as arm and screw rpm (1 and 60 respectively) were optimized to arrive at the desired product.

## Conclusion

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Formulation of perfumed talcum powder was achieved in minimal time, with lowest possible powder loss and high efficiency.

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