

Fast Acting Ibuprofen

Racemic Ibuprofen Lysinate

Ibuprofen Sodium Dihydrate

Commercial Presentation – EXTERNAL

June 2022



What is fast acting ibuprofen?

1961

Ibuprofen was discovered by Stewart Adams and John Nicholson.

\$8.1 billion

The 2022 global market of ibuprofen is valued at \$8.1 billion



While taken by billions of people worldwide, improvements can still be made to this API. Its **low solubility in water** impacts drug absorption, leading to **delayed pain relief**.



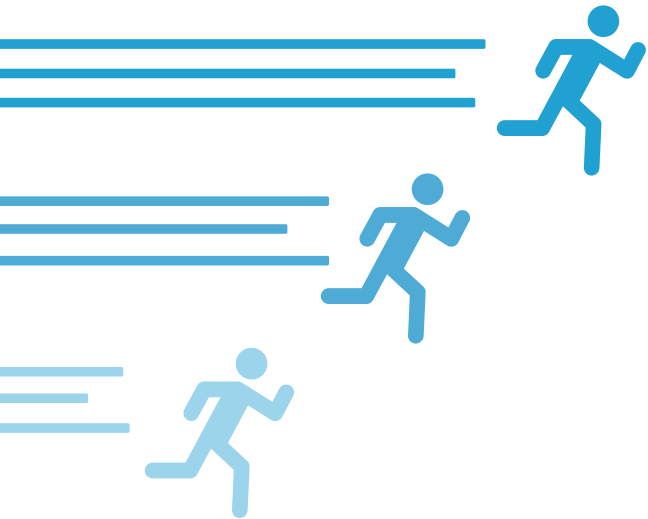
Salt forms of ibuprofen are **significantly more soluble** in water and can be **absorbed faster** in the gastrointestinal tract¹. Therefore, they **offer faster pain relief** than traditional ibuprofen².

¹Sörgel, F., Fuhr, U., Minic, M., Siegmund, M., Mares, J., Jetter, A., Kinzig-Schippers, M., Tomalik-Scharte, D., Szymanski, J., Goeser, T., Toex, U., Scheidel, B., & Lehmacher, W. (2005). International journal of clinical pharmacology and therapeutics, 43(3), 140–149.

²Dewland, P. M., Reader, S., & Berry, P. (2009). BMC clinical pharmacology, 9, 19.



Key Benefits of Fast Acting Ibuprofen



Racemic Ibuprofen Lysinate (RIBL)

- **Ibuprofen salt that is paired with lysine** (an essential amino acid)
- **Superior solubility** in water¹
- Quicker and **less variable absorption** when used in pediatric suspensions²
- Excellent option for softgels and gummies

Ibuprofen Sodium Dihydrate

- Fast-acting **sodium ibuprofen salt**
- **Rapid dissolution** and absorption compared to regular powder grades³, providing **faster pain relief**⁴
- **Comparable tolerability and safety** profile to regular ibuprofen
- Can be processed with traditional granulation techniques

¹Ibuprofen, Rainsford, K.D., Taylor & Francis Ltd. London, UK. 1999

²Int J Clin Pharmacol Ther. 2015 Nov; 53(11): 972-9.

³Sörgel, F., Fuhr, U., Minic, M., Siegmund, M., Maares, J., Jetter, A., Kinzig-Schippers, M., Tomalik-Scharte, D., Szymanski, J., Goeser, T., Toex, U., Scheidel, B., & Lehmacher, W. (2005). International journal of clinical pharmacology and therapeutics, 43(3), 140–149.

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Intermediates manufactured at BASF's Bishop, Texas Site

1945

Bishop site founded by Celanese

1992

First ibuprofen produced at Bishop

1997

Ibuprofen under 100% BASF ownership

2010-2013

BASF invests in site optimization

2019-2021

BASF has major turnarounds to replace equipment and improve performance

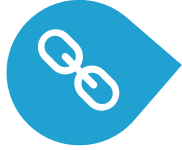


- ✓ **25 years** of ibuprofen manufacturing experience
- ✓ Made via a **sustainable manufacturing process**
- ✓ Digitally advanced and offers **virtual audits**
- ✓ **Knowledgeable and committed team** of technical experts

Want to learn more about our Bishop site? Find out more [here](#).

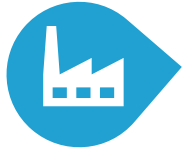


Key Benefits



Supply reliability

- Global distribution network from Western manufacturing sites



Manufacturing

- Manufactured from ibuprofen intermediates sourced from BASF's plant in Bishop, Texas
- Continuous investment and improvements to the Bishop site to optimize and increase process efficiency



Sustainability

- Eco-friendly ibuprofen intermediate manufacturing process
 - ✓ Catalyst/solvent recovery and recycling
 - ✓ No metal-containing aqueous waste



BASF Virtual Pharma Assistants

- Regulatory documentation available upon request in [RegXcellence®](#)
- Product details available via [MyProductWorld](#)
- Virtual formulation assistance available via [ZoomLab™](#)
- Full pharma regulatory documentation and submission support





Racemic Ibuprofen Lysinate

Product article #	56477527
Commercial size	25 kg
Sample article #	51287979
Sample size	100 g



Ibuprofen Sodium Dihydrate

Product article #	51224063
Commercial size	50 kg
Sample article #	51217385
Sample size	500 g



More questions? Contact us at pharma-solutions@basf.com





We create chemistry