

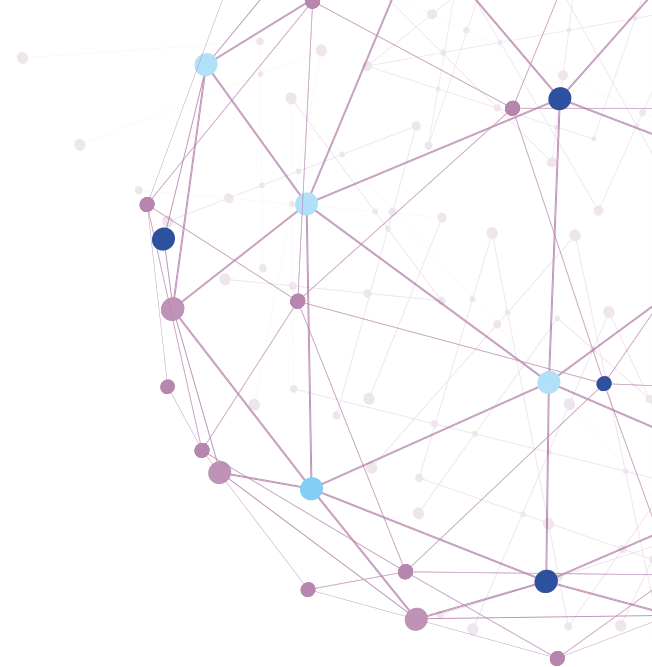
**LACTALIS
INGREDIENTS
PHARMA**

**LOW
NITRITES**

Trust our pharmaceutical lactose



LACTALIS



Your French trusted pharmaceutical lactose partner

Lactalis Group, world's leader of the dairy industry

Lactalis Ingredients Pharma arises from the rich history of Lactalis Group, starting from its birth in Laval, France, in 1933. Since then, the vocation of the Group has been to **transform milk in all its forms** to offer healthy and tasty products to the broadest range of consumers.

Dedicated to **valorizing every milk component** through dairy ingredients powders, Lactalis Ingredients is recognized for its technical, industrial and market expertise. Lactose, as one of the most important nutrients in milk and whey, has always been at the heart of Lactalis Ingredient's attention. Lactalis Ingredients has been **producing lactose for more than 50 years**, while enriching its expertise over the decades through the merge and purchase of industrial facilities.

Lactalis Ingredients Pharma shares Lactalis Group's vision of delivering the best to our customers. Benefiting from the experience and technology of decades of commitment and passion, **we are able today to enter the excipients' market as a trusted pharmaceutical lactose supplier with our first range of excipients: Lactalpha.**

— ● EXPERTISE

— ● QUALITY

— ● RELIABILITY

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At Lactalis Ingredients Pharma, we are driven by the wish of valorizing every crystal of lactose to its purest, most wholesome state, to simply deliver excellence.

Lactalis Ingredients, a historical and renowned lactose supplier



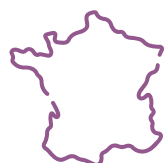
Over 50 years of **lactose production**



Shipping lactose to **more than 100 countries**



2017: Inauguration of our state-of-the-art facility



Located in **France**



Trusted by the most demanding markets such as **infantor clinical applications**



High **technical** and **industrial expertise**



Located in western **France**, our Retiers plant is at the heart of the French milk production, and conveniently situated close to our whey collection area. Thanks to the proximity of our raw materials, we can guarantee a **safe and consistent pharmaceutical grade lactose** supply everywhere and at any time. It is in our roots to be able to continuously manufacture and supply our customers with a reliable quality of lactose. Through our strong values, we participate actively to **secure the drug supply chain.**



Our state-of-the-art lactose production site

Efficient, reliable and certified production installations

The quality of our excipients is supported by the environment in which they are **produced in France**. The collaborators are involved in setting the best stage for our lactose to be produced and are provided with the optimum environment and equipment to do so.



Renowned certifications



ISO 9001
EXCiPACT (GMP)

Beyond our engineering performance, we also bear an **ongoing commitment to pharmaceutical quality**, thus providing our customers with full **transparency** and an unparalleled **satisfaction guarantee** through a constant risk evaluation and control of the change. Test and product analysis profit from controls managed by our partners in **trusted laboratories**.



Our teams are trained to follow the strict certifications required by the pharmaceutical market

A Responsible Partner for a Sustainable Future

Lactalis Ingredients Pharma supports the Lactalis Group strategy in its **Corporate Social Responsibility** journey. Lactalis is committed to reducing its environmental impact and actively promotes the **sustainable transition of the dairy sector** by pursuing climate objectives validated by the Science Based Targets initiative (SBTi).

As part of its **decarbonization strategy**, Lactalis Ingredients Pharma aims to reduce the carbon footprint of its pharmaceutical lactose across its entire value chain. At the Retiers facility, we have implemented initiatives to improve energy efficiency and to continuously reduce greenhouse gas emissions from our operations.

Preserving **water** resources is also a key pillar of our commitment. Through a strategy based on the principles of **Reduce, Reuse, and Recycle**, the Retiers factory optimises water consumption, recovers process water, and develops water reuse solutions that help reduce **water withdrawals** from natural resources. These initiatives contribute to a **more sustainable pharmaceutical lactose** while maintaining the highest standards of quality, safety, and consistency.

To ensure transparency and accountability, The Lactalis group publishes each year a CSR report, highlighting its progress, achievements, and sustainability initiatives across environmental, social, and governance dimensions. This reflects our ongoing dedication to **responsibility and transparency**.

In light of the climate challenges, we are convinced that focusing on sustainability through achievable and measurable commitments will allow us to be a **trusted partner for the future**.

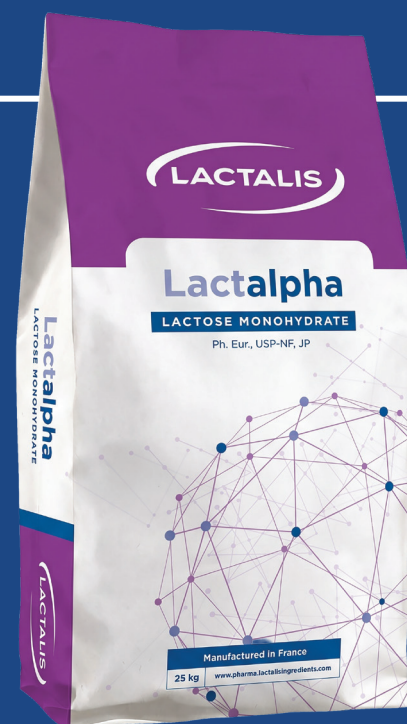


Our pharmaceutical grade lactose has been developed by our teams surrounded by experts so that our excipients are fitted to your needs and the market's requirements.

Lactalpa

Milled & sieved lactose monohydrate

Lactalis Ingredients Pharma presents Lactalpa, a range of pharmaceutical grade milled and sieved lactose conforming with the lactose monohydrate monographs of the **current Pharmacopoeias (Ph. Eur., USP-NF and JP)**. Milled or sieved with various particle size distributions, Lactalpa can easily be used for your OSD applications, in **tablets from wet or dry granulation, capsules and sachets**.



Moreover, we rely on **renowned external experts** to guarantee the reliability of Lactalpa. Our team works closely with trusted partners in universities, analytical laboratories and development centers to **qualify Lactalpa's adequacy in different OSD applications**.

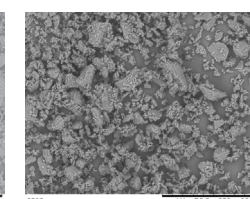
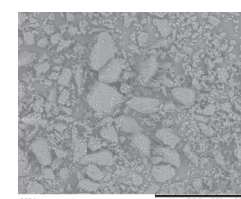
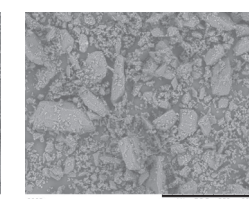
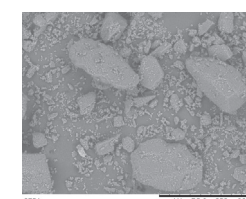
Discover our Lactalpa references

Lactalpa 50
50 mesh
sieved lactose

Lactalpa 100
100 mesh
milled lactose

Lactalpa 150
150 mesh
milled lactose

Lactalpa 200
200 mesh
milled lactose



LOW
NITRITES
≤ 0.1 ppm

Process	Dry blending	Dry blending	Wet and dry granulation	Wet and dry granulation
Galenic applications				
Lactose properties	Diluent / Good flowability	Diluent / Good flowability	Tablet blinder / Diluent / Good Mixing	Tablet blinder / Diluent / Good Mixing
Bulk density	870g/L	700g/L	610g/L	590g/L
Tapped density	1050g/L	970g/L	910g/L	860g/L
Hausner ratio	121	139	150	146
Carr's index	17%	28%	33%	31%
PSD Laser diffraction	D10: 50 µm D50: 330 µm D90: 720 µm	D10: 10 µm D50: 110 µm D90: 290 µm	D10: 7 µm D50: 65 µm D90: 190 µm	D10: 5 µm D50: 40 µm D90: 110 µm



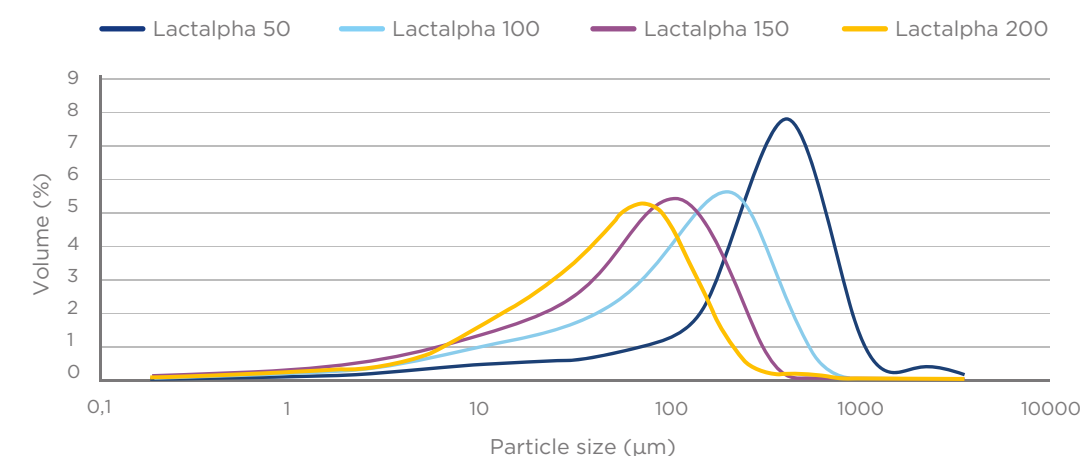
Low nitrites

Safety at the heart of your formulations

At Lactalis Ingredients Pharma, we offer a range of lactose monohydrate with a **guaranteed nitrite content of ≤ 0.1 ppm**, to support the pharmaceutical industry in addressing the growing challenges associated with **nitrosamines**.

Nitrite testing is performed on **every batch** produced, and the **detailed value** are included **on each CoA**.

PSD by laser diffraction (indicative values)



Trust our Pharmaceutical lactose



We would be pleased to know
you and your needs.

**Contact us for any specific need
or to receive a sample.**

For more information on our products
www.pharma.lactalisingredients.com

To contact us
lactalisingredientspharma@fr.lactalis.com



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