Betapol®
CLOSER TO NATURE EVERY DAY

Let’s create together

BÜNGE
Loders Croklaan
Breastfeeding is an important bonding experience and provides babies with the best start in life. When breastfeeding is not an option, choosing the best infant formula is key for healthy growth and development. While mother’s milk fat contains only 3-4% fat, it makes up 50% of a baby’s energy intake. Betapol is the ideal choice for infant formula because it mimics the fat composition and unique OPO fat structure of mother’s milk.

The composition and structure of human milk fat is vital to the health and nutrition of babies. The fat in human breast milk is in the form of fork-shaped triglycerides. In human milk fat, palmitic acid is bound to the triglyceride’s SN-2 position. The SN-1 and SN-3 positions are occupied by oleic acid. This unique OPO fat structure allows babies to absorb more palmitic acid and calcium which contributes to significant nutritional benefits.

Enabling your brand
Betapol has established an extensive safety record in Europe and numerous scientific studies have substantiated its benefits. That is why it is widely trusted as the standard for OPO fats. And because we can support our products with solid scientific data, so can you.

THE SCIENCE OF OPO

**DIFFERENCE IN FAT STRUCTURE**

<table>
<thead>
<tr>
<th>POP</th>
<th>OPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetable blend</td>
<td>Human Milk Fat &amp; Betapol®</td>
</tr>
<tr>
<td>Palmitic acid C16:0</td>
<td>Palmitic acid C16:0</td>
</tr>
<tr>
<td>Oleic acid C18:1</td>
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</tr>
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</tbody>
</table>

**THE IMPORTANCE OF FAT**

25% of the composition of infant formula, delivers almost half of the energy

Composition of infant formula

Fat: 47%

Carbohydrate: 43%

Protein: 9%

Others: 10%

Composition of infant formula

Fat: 25%

Carbohydrate: 57%

Protein: 9%

Others: 1%
Bunge Loders Croklaan: impeccable service
We are eager to be a growth enabler for our customers. Our goal is the same as yours – providing mothers with the best possible alternative to breast milk. Our application and technical support team is always willing to help you to:

- Identify the right Betapol blend for you: Betapol offers formula producers the closest match to mother’s milk. This specialty structured lipid can be provided alone or as an ingredient in different blends, depending on your specific requirements.

- Build market successes: When you sell a product designed to improve human health, you are making big promises which all need to be clear, transparent and appropriate.
  - Our legal department is ready to help you navigate and comply with local and global regulations.
  - Our team of scientists will help you identify the most powerful market-specific claims for your product, to ensure market success.
  - You can rely on our sales and customer service teams to provide the best service and support in order to ensure an impeccable sales experience.

## INTRODUCING THE NEXT GENERATION OPO

The SN-2 fat structure of mother’s milk ranges from 60% to 75% of total lipids. Until now no supplier was able to provide an SN-2 level surpassing 45%. Today our next generation ready-to-use Betapol Plus blend offers 60%, and our Betapol Plus concentrate brings an SN-2 level of 70%! Surpassing existing offerings with 40%. Giving you the opportunity to provide mothers the best possible alternative.

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>% OF THE PALMITIC ACID IN THE MIDDLE POSITION (SN-2 LEVEL)</th>
<th>USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betapol® Plus Base 70 New!</td>
<td>~ 70%</td>
<td>Concentrated OPO</td>
</tr>
<tr>
<td>Betapol® Plus Blend 60 New!</td>
<td>~ 60%</td>
<td>Ready-to-use OPO blend</td>
</tr>
<tr>
<td>Betapol® Base 55</td>
<td>~ 55%</td>
<td>Concentrated OPO</td>
</tr>
<tr>
<td>Betapol® Blend 45</td>
<td>~ 45%</td>
<td>Ready-to-use OPO blend</td>
</tr>
<tr>
<td>Betapol® Blend 41</td>
<td>~ 41%</td>
<td>Ready-to-use OPO blend</td>
</tr>
</tbody>
</table>

Customized Betapol® blends or dry blends available. Kosher and Halal certified.
The OPO fat structure allows babies to absorb more palmitic acid and calcium.

Over 30 years ago we invented the process behind Betapol’s unique OPO structure.

In 2019 we launched Betapol Plus, revolutionizing the market again with the highest SN-2 level available.
Together with established infant nutrition authorities in Europe, we have committed to a major long-term research program to identify and substantiate new Betapol benefits. These studies have indicated that the high SN-2/OPO structure may also lead to a positive impact on brain functionality and a healthy weight as a result of improved fat distribution. These SN-2 fat innovations will enable us to extend the Betapol portfolio and further develop new OPO products and product combinations adding value to your brand.

**Proven by Science**

Carnielli

“It has been proven that infant formulas containing Betapol are much more easily absorbed by infants. Research also shows that Betapol protects infants from the pain and discomfort of constipation, while improving calcium intestinal absorption.”

Virgilio P. Carnielli, MD, PhD, Professor of Neonatal Pediatrics, Polytechnical University of Marche. Director of Neonatal Medicine, G. Salesi Hospital, Ancona, Italy.

**Dutch Heritage**

Betapol is developed by Bunge Loders Croklaan in the Netherlands. Since we invented the scientific process behind it, the process has been successfully duplicated in our other locations to cater to customers worldwide. With over 30 years of experience in infant nutrition, we know how sensitive the market is to food safety. Our reliable supply chain ensures continuous supply, while our unmatched control throughout the supply chain guarantees the highest quality standards.

- Steady supply of high quality OPO fat
- Global production
- Excellent food safety
- Produced without using chemicals
- High traceability
- Strict contaminants control
ABOUT THE INVENTOR

Bunge Loders Croklaan

Betapol® was developed by Bunge Loders Croklaan as the very first fat blend to mimic human milk fat for infant formula. Bunge Loders Croklaan is a leading producer and supplier of specialty oils and fats to food manufacturers around the world.

www.betapol.com
www.bungeloders.com