HiPP ORGANIC COMBIOTIC®

Important building blocks provide for a good start

Information for health care professionals
The best food for infants

- Its composition is perfectly tailored to infants' requirements
- Supplies all the important nutrients for healthy development
- Provides the best possible protection for infants:
  - boosts the body's defences
  - protects against gastrointestinal infections
  - reduces the risk of illnesses later in life, e.g. obesity and allergies

Important building blocks as parts of the natural infant food

Breast milk has a wide variety of building blocks that promote an infant's healthy development in the best possible way.

Breast milk supplies all the important nutrients in exactly the right amounts.

Long-chain, polyunsaturated fatty acids (AA, DHA) boost the development of the brain, nerve cells and eyesight.

Breast milk contains living cultures that colonize the child's intestine resulting in beneficial effects.

Breast milk is rich in oligosaccharides with prebiotic effects that promote the growth of beneficial intestinal bacteria.

Breast milk contains an appropriately low amount of high quality protein (approx. 1.7 g/100 kcal).

Breast milk contains further important substances which contribute to the child's healthy development.
Research on the composition of human milk and its positive effects on baby’s health. The latest findings are being considered in the ongoing further development of HiPP ORGANIC COMBIOTIC® Infant Formulae.

HiPP 1 ORGANIC COMBIOTIC® inspired by nature:
- LCP content corresponds to consensus recommendations
- A low protein amount, exactly as much as needed by infants
- A unique combination of prebiotics and probiotics
- In HiPP’s supreme organic quality

The new generation of milk formula with important building blocks for a good start to life

Research Group on Human Milk

HiPP 1 ORGANIC COMBIOTIC®

Breast milk

The latest findings in breast milk research are consistently implemented

Appropriately low amount of protein
- In line with current experts’ recommendations (1.89 g protein/100 kcal)
- Optimised protein quality (with alpha-lactalbumin, a high quality whey protein)
- Proven safety and suitability

Approved prebiotic: GOS
- Galacto-oligosaccharides, extracted from lactose
- To support healthy intestinal flora
- Safety assessment by FDA (GRAS)

Human Milk Probiotic: L. fermentum hereditum® CECT5716
- Originally isolated from breast milk
- It is among the first colonisers of the intestine
- Safety assessment by EFSA (QPS) and by FDA (GRAS)

Valuable fatty acids: LCP
- Docosahexaenoic acid (DHA) and arachidonic acid (AA) in line with current scientific recommendations
- Important for the development of the brain, nerve cells, and eyesight

All important nutrients according to the law
- Macronutrients and micronutrients in exactly the required amounts

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HiPP 1 ORGANIC COMBIOTIC®

Low protein content (GOS from lactose)

Omega 3 & 6 LCP

Human Milk Probiotic

Prebiotics (GOS from lactose)

LCP content corresponds to consensus recommendations

A low protein amount, exactly as much as needed by infants

A unique combination of prebiotics and probiotics

In HiPP’s supreme organic quality

HiPP ORGANIC COMBIOTIC®
Breast milk is considered to be the Gold Standard also with respect to protein intake!

**Breast milk:** low protein content of 1.7 g/100 kcal\(^{10}\) with the highest protein quality ensures:
- Healthy growth
- Low metabolic stress
- Age-appropriate weight gain
- Favourable early metabolic programming with a positive influence on future weight gain\(^{10,11}\)

**Infant formulae:** higher protein content than breast milk
- A risk factor for becoming overweight?\(^{10,11}\)

**Experts recommend**
Lower protein intake, closer to physiological needs:

”Reducing infant protein intake by promoting breastfeeding and by reducing the protein content of infant formulae may effectively contribute to the prevention of childhood obesity.”\(^{19}\) (Weber et al. 2014)

”A protein content of infant formulae near 1.8 g/100 kcal is desirable.”\(^{11}\) (Koletzko et al. 2009)

**Goal for infant formulae:**
Reduced protein content and improved protein quality

**HiPP 1 ORGANIC COMBIOTIC\(^{®}\) –** Has a low protein content (1.89 g/100 kcal), but a high protein quality

- Protein amount in line with the latest experts’ recommendations\(^{11}\)
- Optimised protein quality
  (with alpha-lactalbumin, a high-quality whey protein)
- Clinical trial\(^*\) shows safety and suitability:\(^{12}\)
  - Growth appropriate to age – also confirmed from 4 years of age\(^{20}\)
  - Protein intake is closer to the protein intake of breastfed children
  - Positive influence on infant’s satiety
  - Improved energetic efficiency

The protein intake through breast milk was calculated according to the drinking amounts of both the intervention and the control group during the respective examination appointments; protein content of breast milk 1.7 g/100 ml corresponding to 1.7 g/100 kcal.\(^{10}\) Differences between protein-reduced and control formula are significant: \(^{**}\) P< 0.01; \(^{***}\) P< 0.001.

**Comparison of protein intake from breast milk and infant formulae\(^{12}\)**

- With control formula, significantly higher protein intake than with protein-reduced formula
- Children fed with protein-reduced formula had a similar protein intake as breastfed children

\(^*\)Intervention period: birth to 4 months; intervention group with protein-reduced infant formula (protein 1.89 g/100 kcal), n=82; control group with standard infant formula (protein 2.2 g/100 kcal), n=82; reference group with breastfed infants, n=92. The children were examined and anthropometrically measured after 30, 60, 90 and 120 days of life.
Prebiotics and probiotics – Effective support in the development of positive gut microbiota

Functions of the gut microbiota:

- Supports maturation of the not yet fully developed immune system
- Contributes to protecting against infections in the young infant

Influential factors are for example:

- Diet (prebiotics, probiotics)
- Mode of delivery (vaginal delivery vs. caesarean section)

Prebiotics and probiotics are particularly important for infants born by caesarean section as their gut microbiota is profoundly different from those in infants who were born by vaginal delivery.

ESPGHAN* Position Paper 2011: Supplementation of infant formulae with prebiotics and/or probiotics

- No safety concerns for healthy children
- ESPGHAN demands:
  - Proof of the safety and benefit of each prebiotic and probiotic and of each of their combination
  - Long-term data of the supply with probiotics in early childhood and their influence on future health

HiPP formulae meet ESPGHAN’s requirements

HiPP ORGANIC COMBIOTIC® – The unique combination of prebiotics and probiotics

Clinical studies prove the safety and benefits of GOS* + L. fermentum** in infant formulae and follow-on formulae

- GOS + L. fermentum are safe
- Study on follow-on formula (GOLF*** 1) and infant formula (GOLF 2):
  - Adequate growth and thriving in both study and control group
  - Formulae are well tolerated
  - Infant formulae with GOS and L. fermentum also provide long-term safety

- GOS + L. fermentum have a practical benefit

Graph modified from Dominguez-Bello, 2010

ESPGHAN* - European Society for Pediatric Gastroenterology, Hepatology and Nutrition

For further information please refer to the scientific dossier "L. fermentum CECT5716 and Galacto-Oligosaccharides in HiPP ORGANIC COMBIOTIC® formulae".

*GOS = Galacto-oligosaccharides, obtained from lactose
**Human Milk Probiotic L. fermentum CECT5716 – originally isolated from breast milk
***GOLF = Abbreviation GOS + L. fermentum
All important nutrients according to the law

- The composition of milk formulae is strictly regulated by the law.
- The law defines all minimum and maximum limit values.
- Milk formulae supply all important macro nutrients and micro nutrients for healthy growth.

HiPP Milk Formulae – formulae that follow your child’s growth

A step-by-step concept that has been proven by nutritional science and ensures the required nutrient supply.

<table>
<thead>
<tr>
<th>Iron</th>
<th>for blood formation and cognitive development</th>
</tr>
</thead>
<tbody>
<tr>
<td>The iron in HiPP Milk Formulae is easily bio-available.</td>
<td></td>
</tr>
<tr>
<td>HiPP Follow-on Formulae contain twice as much iron as HiPP Infant Formulae.</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>for the bones</td>
</tr>
<tr>
<td>Vitamin D</td>
<td>for bones and teeth, as well as the immune system</td>
</tr>
<tr>
<td>HiPP Junior Milks contain considerably more vitamin D than cow’s milk.</td>
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Protein composition (casein : whey)

- HiPP Infant Milk: modelled on breast milk
- HiPP Follow-on Milk: 60:40
- HiPP Junior Milk: 80:20

Safety you can trust

Quality Assurance
- Where and whenever possible, we apply stricter quality guidelines than required by the law
- The HiPP Lab: capable of analysing more than 1,200 residues
- More than 500 checks per production batch

Milk Quality
- From organic production
- 100% free from GMO
- Milk is exclusively from European provenance

Fat Quality
- Using a mix of various vegetable oils to achieve a fatty acid spectrum inspired by nature
- Organic palm oil – Certified according to European Organic Regulation
- From sustainable sources
- From environmentally friendly and socially responsible cultivation

Ecologically packed in our Eco Comfort Pack

- Reduction of CO2 emissions*
- All components can be disposed of separately
- Printing inks are vegetable oil based and free from mineral oil
- Cardboard is from responsible sources

Further ingredients

HiPP Quality

- LCP (omega 3 & 6) in HiPP Infant Formulae
- Scientifically proven and recommended²
  - Breastfed infants receive valuable, long-chain polyunsaturates (LCP) through breast milk
  - Docosahexaenoic acid (DHA, omega-3 fatty acid) and arachidonic acid (AA, omega-6 fatty acid): important LCP fatty acids in infant nutrition
  - LCP (omega 3 & 6): Important for cognitive development as well as development of eyesight

- HiPP Milk Formulae are exactly tailored to your baby’s nutritional requirements at each respective age.

International experts are in favour of enriching formulae with LCP so that non-breastfed infants are similarly well supplied and not disadvantaged in comparison to breast-fed infants.²

- All HiPP infant formulae contain LCP according to the agreed recommendations.²
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3. Further ingredients HiPP Quality

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HiPP ORGANIC COMBIOTIC® –
The new generation of milk formula

Inspired by nature:
HiPP ORGANIC COMBIOTIC®

Important information:
Breastfeeding is the best nutrition for a baby. Infant formula should only be used upon the advice of a paediatrician.

hipp.com/hcp