

The new generation of milk formula

HiPP ORGANIC COMBIOTIC[®]

Important building blocks provide for a good start

The best food for infants¹

- 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



Unique composition

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

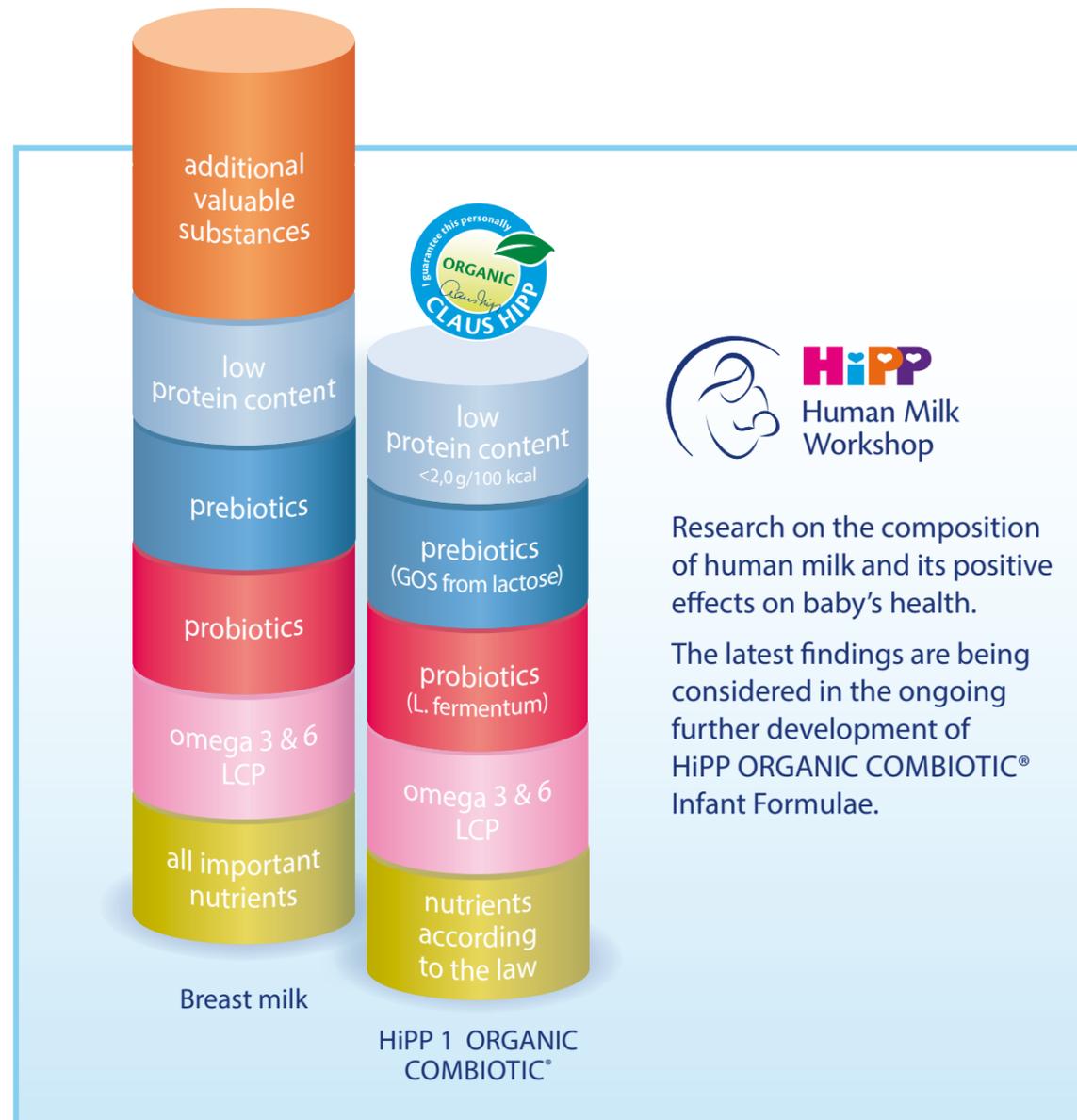
- all important nutrients** (yellow cylinder): Breast milk supplies all the important nutrients in exactly the right amounts.
- omega 3 & 6 LCP** (pink cylinder): Long-chain, polyunsaturated fatty acids (AA, DHA) boost the development of the brain, nerve cells and eyesight.²
- probiotics** (red cylinder): Breast milk contains living cultures that colonize the child's intestine resulting in beneficial effects.³⁻⁶

Frequency of lactobacilli and bifidobacteria in 160 breast milk samples (%)⁷



- prebiotics** (blue cylinder): Breast milk is rich in oligosaccharides with prebiotic effects that promote the growth of beneficial intestinal bacteria.^{8,9}
- low protein content** (light blue cylinder): Breast milk contains an appropriately low amount of high quality protein (approx. 1.7 g/100 kcal).¹⁰
- additional valuable substances** (orange cylinder): Breast milk contains further important substances which contribute to the child's healthy development.

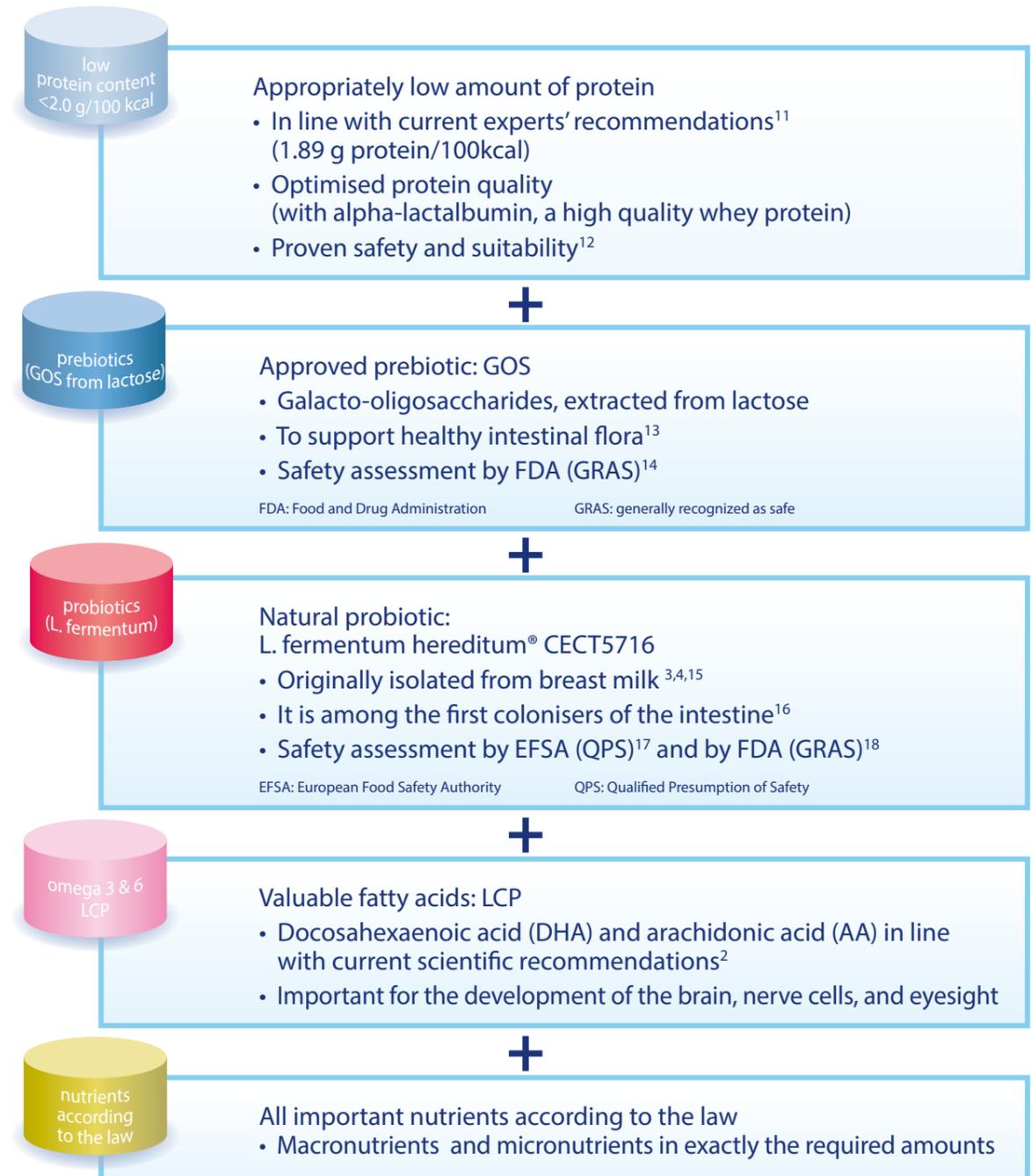
The new generation of milk formula with important building blocks for a good start to life



HiPP 1 ORGANIC COMBIOTIC® inspired by nature:

- LCP content corresponds to consensus recommendations²
- 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 latest findings in breast milk research are consistently implemented



HiPP 1 ORGANIC COMBIOTIC®



Breast milk is also considered to be the Gold Standard for protein intake!

Breast milk: low protein content of 1.7 g/100 kcal¹⁰ 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
- General development^{19,11}

Infant formulae: higher protein content than breast milk

- ▶ A risk factor for becoming overweight?^{19,11}

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

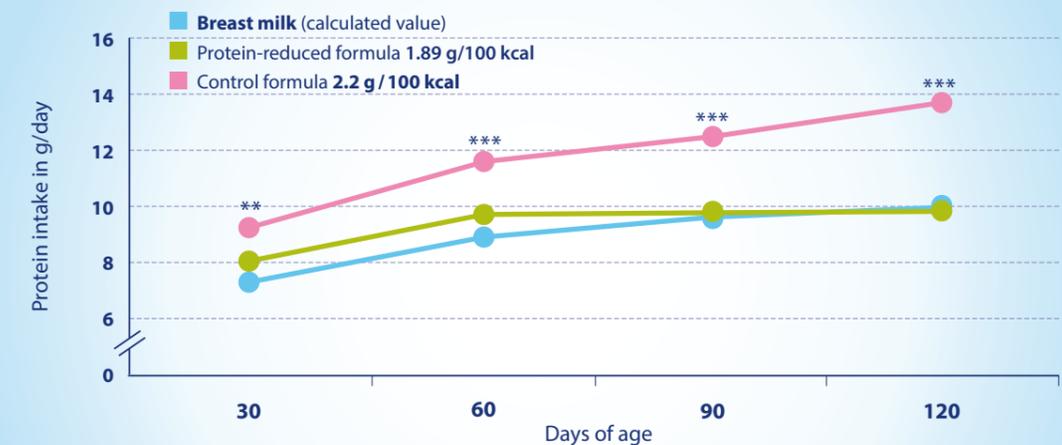
HiPP 1 ORGANIC COMBIOTIC® – Has a low protein content (1.89 g/100 kcal), but a high protein quality

- Protein amount in line with the latest experts' recommendations¹¹
- 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 age²⁰
 - ✓ Protein intake is closer to the protein intake of breastfed children
 - ✓ Positive influence on infant's satiety
 - ✓ Improved energetic efficiency



[#]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.

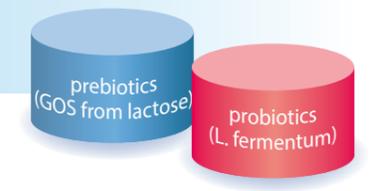
Comparison of protein intake from breast milk and infant formulae¹²



- ▶ 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

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 1.2 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.

- ▶ **HiPP 1 ORGANIC COMBIOTIC® – promotes age-appropriate growth and, at the same time, has a low protein content according to infants' needs**



Prebiotics and probiotics – Effective support in the development of positive gut microbiota

Functions of the gut microbiota:

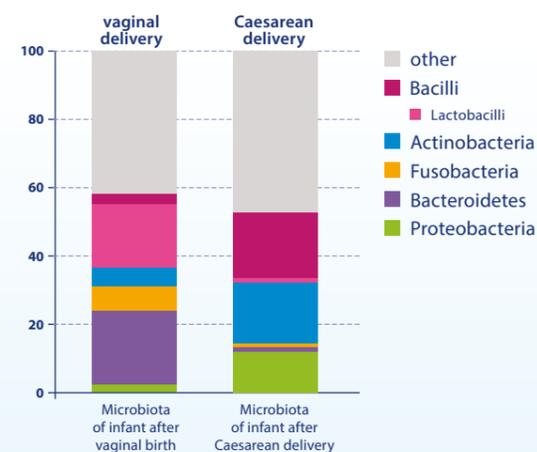
- Supports maturation of the not yet fully developed immune system^{21,22}
- Contributes to protecting against infections in the young infant²¹

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.²³

Graph modified from Dominguez-Bello, 2010²⁴



ESPGHAN* Position Paper 2011:²⁵

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

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

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

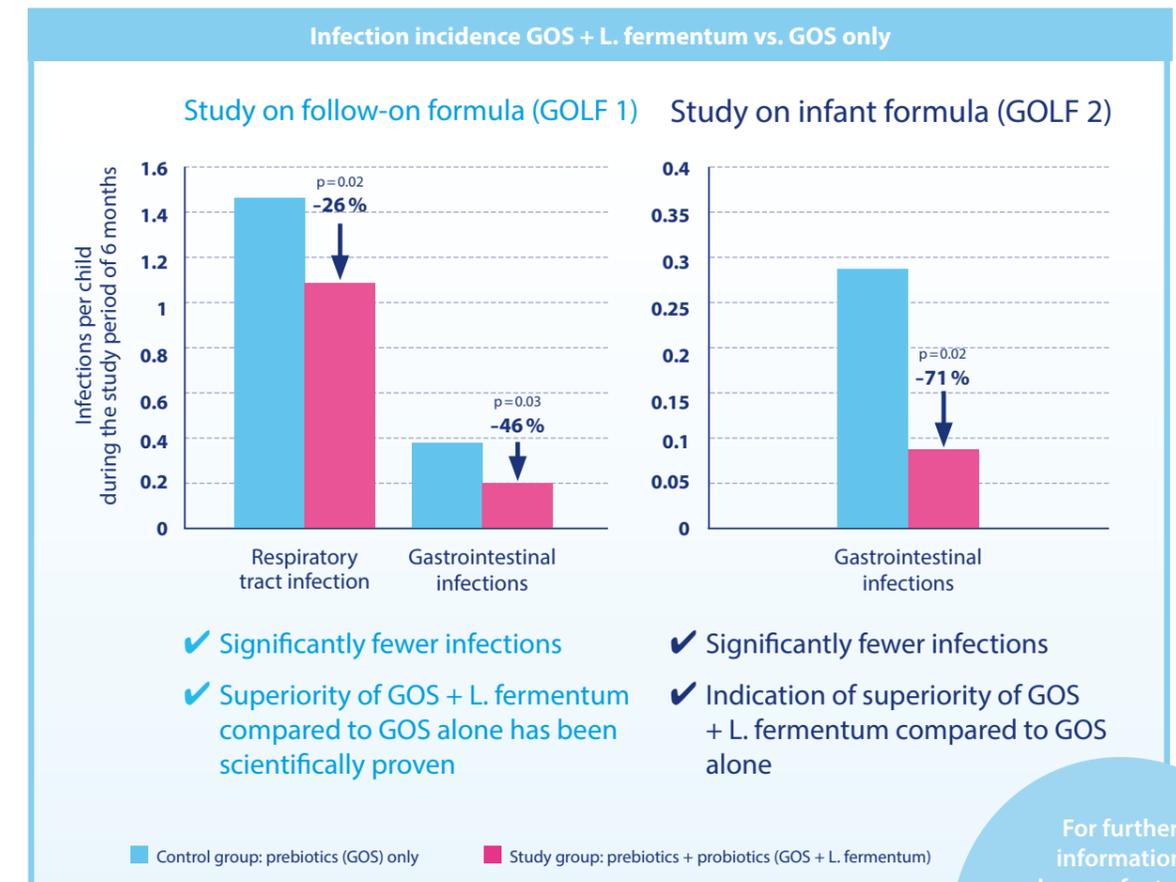
Clinical studies prove the safety and benefits of GOS* + L. fermentum** in infant formulae and follow-on formulae

▶ GOS + L. fermentum are safe

Study on follow-on formula (GOLF*** 1)²⁶ and infant formula (GOLF 2)²⁷:

- ✓ 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 safety²⁸

▶ GOS + L. fermentum have a practical benefit



- ✓ Significantly fewer infections
- ✓ Superiority of GOS + L. fermentum compared to GOS alone has been scientifically proven

- ✓ Significantly fewer infections
- ✓ Indication of superiority of GOS + L. fermentum compared to GOS alone

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

**Lactobacillus fermentum hereditum® CECT5716 – probiotic lactic acid culture, isolated from breast milk

***GOLF = Abbreviation GOS + L. fermentum



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



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

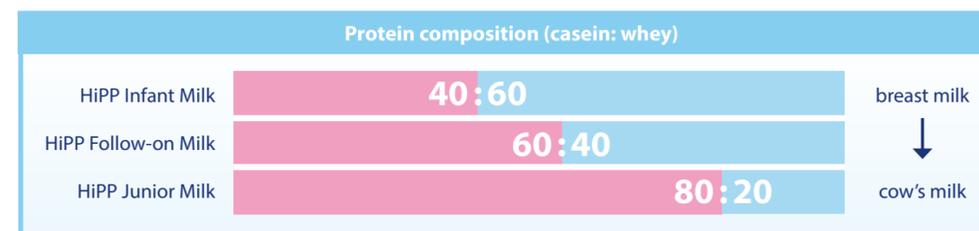
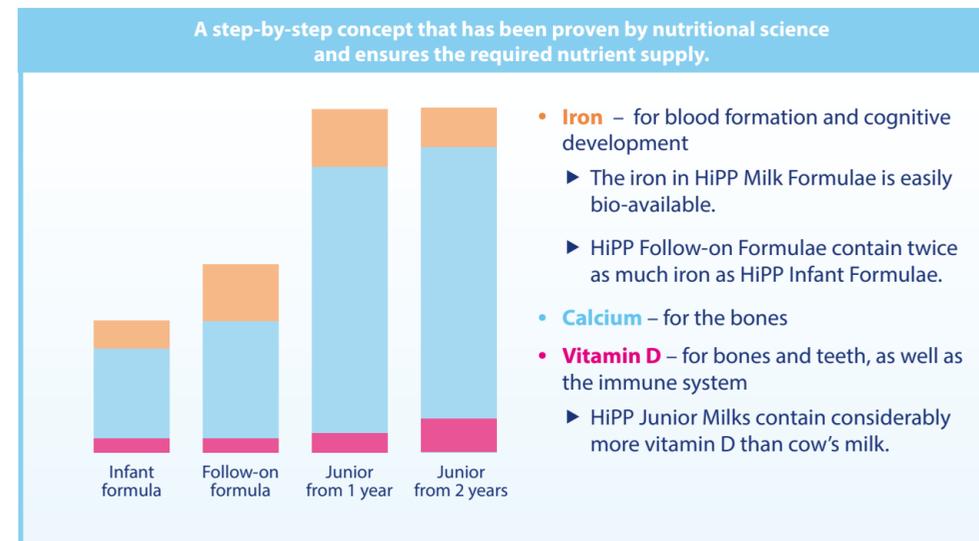
► All HiPP infant formulae contain LCP according to the agreed recommendations.²



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



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



Safety you can trust

Quality Assurance

- Where and when 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
 - Exclusively from sustainable sources
 - From environmentally friendly and socially responsible cultivation, among others from plantations certified by The Rainforest Alliance

Ecologically packed in our Eco Comfort Pack



Reduction of CO₂ emissions*



All components can be disposed of separately



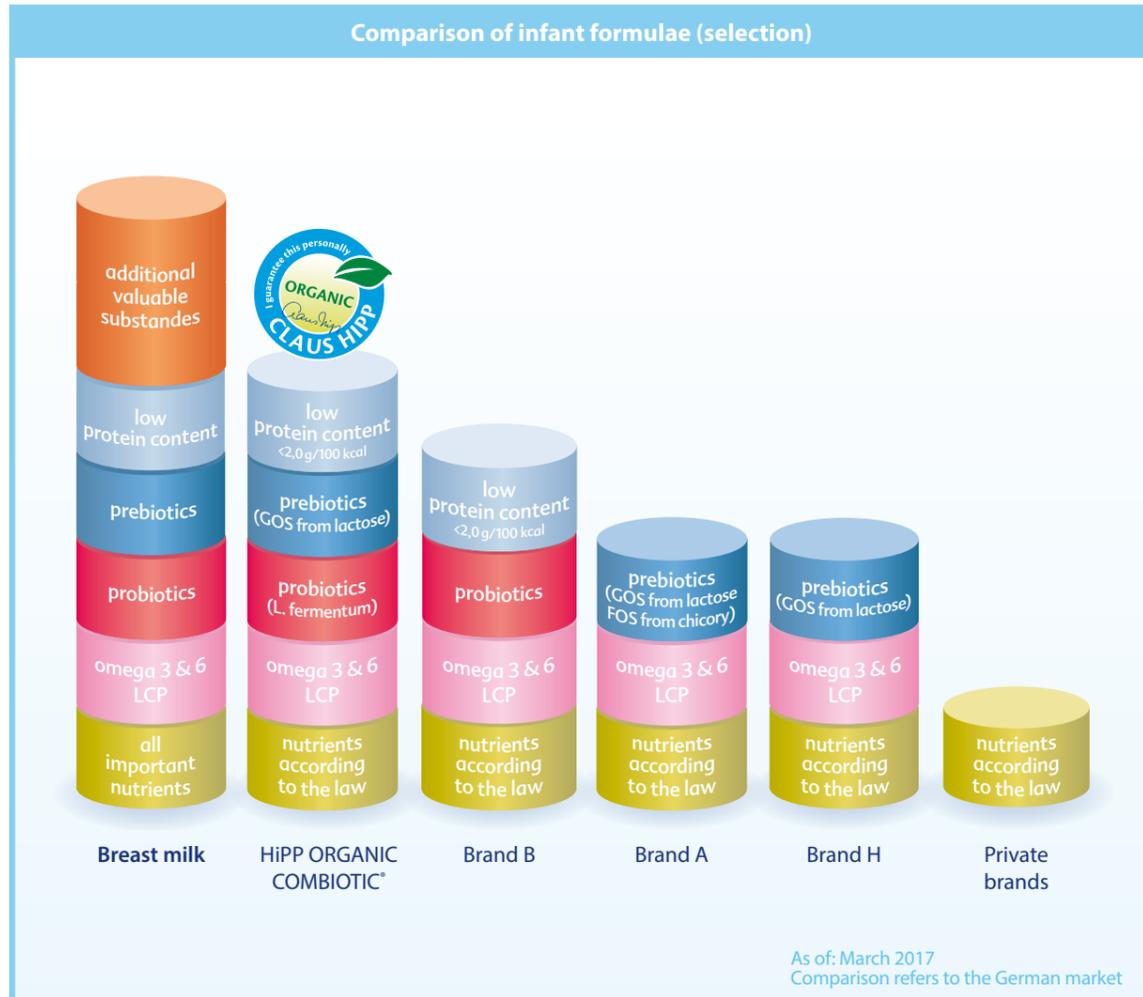
Printing inks are vegetable oil based and free from mineral oil



Cardboard is from responsible sources

*Fewer CO₂ emissions than the previous packaging comprising two inner sachets

HiPP ORGANIC COMBIOTIC® – The new generation of milk formula



The new generation of milk formula Inspired by nature: HiPP ORGANIC COMBIOTIC®



Literature

- 1 Prell C, Koletzko B. Dtsch Arztebl Int 2016; 113(25):435-444
- 2 Koletzko B et al. J Perinat Med 2008; 36(1):5-14
- 3 Martin R et al. J Pediatr 2003; 143(6):754-758
- 4 Martin R et al. J Hum Lact 2005; 21(1):8-17
- 5 Gueimonde M et al. Neonatol 2007; 92(1):64-66
- 6 Heikkilä MP, Saris PEJ. J Appl Microbiol 2003; 95(3):471-47
- 7 Soto A et al. J Pediatr Gastroenterol Nutr. 2014; 59(1):78-88
- 8 Kunz C et al. Annu Rev Nutr. 2000; 20:699-722
- 9 Gibson GR, Roberfroid MB. J Nutr 1995; 125(6):1401-1412
- 10 Nommsen LA et al. Am J Clin Nutr 1991; 53(2):457-465
- 11 Koletzko B et al. Am J Clin Nutr 2009; 89(6):1836-1845
- 12 Fleddermann M et al. Clin Nutr 2014; 33(4): 588-595
- 13 Ben XM et al. World J Gastroenterol 2008; 14(42):6564-6568
- 14 FDA. 2007; http://www.ibrarian.net/navon/paper/E_N_V_J_R_O_N_October_18_2007.pdf?paperid=22000826 (retrieved 07.02.2018)
- 15 Lara-Villoslada F et al. Br J Nutr 2007; 98(suppl 1):96-100
- 16 Blaut M & Loh G in: Bischoff SC: Probiotika, Präbiotika und Synbiotika; Thieme 2009; 2-23
- 17 EFSA: The EFSA-Journal 2007; 587:1-16
- 18 FDA. 2015; HYPERLINK www.accessdata.fda.gov/scripts/fdcc/?set=GRASNotices&id=531&sort=GRN_No&order=DESC&startrow=1&type=advanced&search=%C2%A49%C2%A4Lactobacillus%20fermentum%20CECT5716%C2%A4 (as of: 31.12.2017; retrieved 01.02.2018)
- 19 Weber M et al. Am J Clin Nutr 2014; 99(5):1041-1051
- 20 Fleddermann M et al. Abstracts booklet 49th ESPGHAN Annual Meeting 2016; 62(suppl 1):680
- 21 Houghteling PD et al. JPGN 2015; 60(3):294-307
- 22 Gensollen T et al. Science 2016; 352(6285):539-544
- 23 Grönlund MM et al. Gut Microbes 2011; 2(4):227-233
- 24 Dominguez-Bello MG et al. Proc Natl Acad Sci USA 2010; 107(26):11971-11975
- 25 Braegger C et al. J Pediatr Gastroenterol Nutr 2011; 52(2):238-250
- 26 Maldonado J et al. J Pediatr Gastroenterol Nutr 2012; 54(1):55-61
- 27 Gil-Campos M et al. Pharmacol Res 2012; 65(2):231-238
- 28 Maldonado-Lobón JA et al. Pharmacol Res 2015; 95-96:12-19

Further ingredients

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