

Joint venture of AAK & IFF
**ADVANCED
LIPIDS**



INFAT[®]

The Way Nature Intended



A unique *sn-2* palmitate ingredient with 7 benefits

Human milk is the best nutrition for infants

Human milk provides the optimal nutrition for infants. It offers perfectly balanced nutrition, naturally meeting the needs of growing infants in the first months of life [1, 2]. In human milk, the fat provides about 50% of the energy newborns require for proper growth and development [3].

sn-2 palmitate - a unique feature of human milk

Human milk research has revealed a unique structure where palmitic acid, one of the most abundant fatty acids found in human milk, is usually attached (70-80% of the time) to the middle position in the glycerol back-bone. This typical structure is found in human milk of women irrespective to country of origin, suggesting that it may serve an important function [4,5].

INFAT®OPO - Enhances *sn-2* palmitate level

In most infant formula produced today, the fat component is based on vegetable oils, where majority of the palmitic acid is positioned on *sn-1* or *sn-3*, and not on *sn-2*. INFAT®, a specially structured vegetable oil with palmitic acid bound to the middle position of the triglyceride (TG), also known as *sn-2* position, was developed for infant formula to elevate its *sn-2* palmitate level, so it is closer to human milk fat structure.



INFAT® benefits for babies:

Multiple human clinical trials show that formula with at least 40% *sn*-2 palmitate, may exert benefits to young infants



Calcium absorption

Calcium is a crucial mineral and is obtained only through the diet. It is found mainly in bones and the primary need for dietary calcium during early infancy and childhood, is to support growth and enhance bone mineral deposition. Calcium soaps can be formed when a baby is fed with a formula with low *sn*-2 palmitate. A clinical study on healthy term newborns demonstrated that formulas containing INFAT® providing approximately 40% of the palmitic acid in the *sn*-2 position may support calcium intake by reducing the level of fecal saponified fatty acids compared to a standard formula [6].



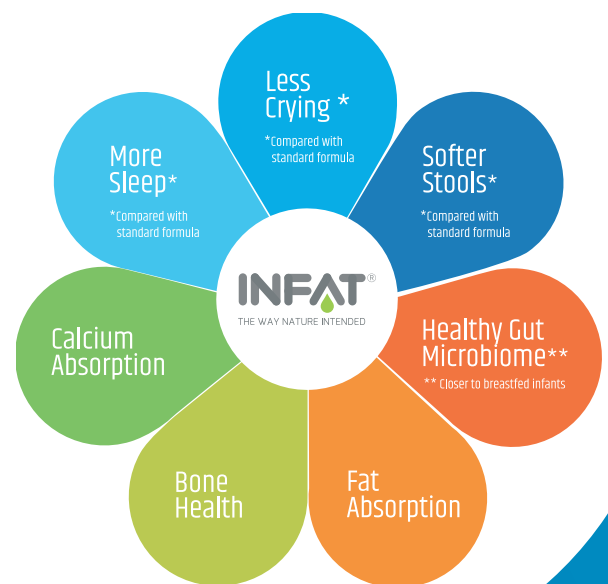
Bone health

Providing optimal nutrition during childhood may be essential for reaching the highest possible peak bone mass. A clinical study on term newborns demonstrated that the bone strength parameters (expressed as speed of sound) in newborns fed for 12 weeks with infant formula containing INFAT® to provide a minimum of 40% *sn*-2 palmitate, were significantly higher compared to the control formula and closer to that of breast-fed infants [7]. Thus, INFAT® when providing at least 40% *sn*-2 palmitate may have a beneficial effect on bone development during early life.



Fat absorption

Typically, babies triple their weight and increase their height by ~50% during their first year. Such rapid growth requires a high-fat diet and efficient fat and calcium absorption. A clinical study on healthy term newborns demonstrated that INFAT® affects fatty acid absorption. Formulas containing INFAT® that provide at least 40% *sn*-2 palmitate were shown to reduce total excreted fatty acid and the level of fecal saponified fatty acids compared to standard formula, suggesting that it supports both fatty acid and calcium absorption by decreasing excretion [6].





Softer stools

While a healthy, breastfed baby's stool is typically frequent, with a very runny consistency, a formula fed baby's stool is usually less frequent and firmer, leading to pain and discomfort. Formulas containing INFAT® which provide a minimum of 40% *sn-2* palmitate as compared to standard formula may contribute to softer stools [8]. A study demonstrated infants fed a formula with INFAT® to provide 40% *sn-2* palmitate had softer stools as compared to infants fed standard infant formula during the first 2 months of life [9]. This data suggests that INFAT® may have a beneficial effect on the comfort of formula-fed infants.



Less crying

Crying is a basic, instinctive response in babies. However, sometimes crying may be related to abdominal discomfort, and feeding choices may impact a baby's comfort. Two clinical studies demonstrated that INFAT® affects the infant crying pattern during the first weeks of life. INFAT® in a formula to provide 40% *sn-2* palmitate was shown to reduce overall crying duration and frequency, in comparison to control formula [8, 10]. These study results suggest that INFAT® has a beneficial effect on the well-being of formula-fed infants



More sleep

Sleep is a natural activity of the brain and is especially important during early development. A clinical study conducted in China demonstrated that infants fed with INFAT® containing formula to provide a minimum of 40% *sn-2* palmitate had longer sleep duration compared with the control fed infants [10].



Healthy gut microbiome

A clinical study on healthy term newborns demonstrated that INFAT® when providing a minimum of 40% *sn-2* palmitate has a positive effect on the intestinal microbiota composition during the first weeks of life by increasing the abundance of Lactobacillus and Bifidobacteria in the stool similar to that of a breast fed infant after 6 weeks [11,12].

References

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