

Successful infant formula begins with starch



From birth and as they grow, optimal nutrition is essential to a baby's development. Experts agree that breastfeeding remains the gold standard in infant nutrition, but medical or lifestyle factors often lead mothers to opt for the next best option – infant milk formula.

Parents are understandably discerning when it comes to choosing which formula to feed their baby. Safety is a prerequisite. And for busy parents, quick, easy preparation is essential. A smooth texture and natural appearance are also important characteristics. The challenge for infant formula manufacturers is to meet all these requirements simultaneously.



Ingredion[™]

A winning formula

Want to create infant milk formula that delivers safety, nutrition and an appealing texture? Ingredion has the formulation expertise and specialist products to help.

With more than 10 years' experience in the infant nutrition industry, we sell a comprehensive range of pregelatinised native starches specifically developed for infant formula, follow-on formula or toddler's milk in powder form. The portfolio also includes emulsifying starches for foods for special medical purposes, such as formulae for infants with allergies.

Texture matters

To give children the best start in life, manufacturers must develop safe and effective infant milk formula. Of course, nutrition is a top priority for parents and infant formula is typically fortified to aid growth and development.

Often underestimated as a tool to differentiate an infant formula brand, texture can also be used to position infant milk formula as premium:

- A rich, creamy texture can be seen and is easily communicated to consumers.
- Products with a more grainy consistency or visible specs in the bottle are not as popular with parents.
- As babies get older, past experiences of texture can impact on whether a child enjoys eating certain foods.



Safety first

Keeping their baby safe is a natural instinct for parents and, to protect infants, the market is governed by stringent regulations. In 2005, the potentially harmful bacteria, *Enterobacter sakazakii* – now known as Cronobacter – was detected in infant formula. Today, infant milk formula must meet the strictest microbiological standards¹.

1. Regulation (EC) 1441/2007 of Commission amending Regulation (EC) 2073/2005 on microbiological criteria for foodstuffs

Parents know their babies best

To gain a better understanding of the factors that brands should take into consideration when marketing infant milk formula, we asked a selection of mums to describe what they look for when choosing baby milk:



Digestion

During a baby's first few months of life, 'spitting up' or regurgitation is very common. For babies who bring back feeds, research has shown that starch can be added to infant formula to counteract regurgitation and help to prevent the loss of energy and nutrients².

2. Chao HC, Vandenplas Y, (2007) Comparison of the effect of a cornstarch thickened formula and strengthened regular formula on regurgitation, gastric emptying and weight gain in infantile regurgitation, *Diseases of the Esophagus* 20, 155-160

Sensitive babies

Babies are all sensitive, but some even more so than others. One of the most common intolerances in babies is to cows' milk protein and there is scientific evidence to suggest that hypoallergenic infant formula can cause fewer allergies in babies than standard products. In hypoallergenic formula, long protein chains are hydrolysed or 'broken down' to be easier for infants to digest. Starch emulsifies fats and oils in hypoallergenic formula to make sure that essential fatty acids are evenly distributed.

Consumer-winning infant milk formula

Whether working with marketers, R&D or purchasing, we care for the needs of our customers – as well as those of your most delicate consumers.

After lactose, starch may often be recommended as the preferred additional carbohydrate for babies. Whether you are looking to position baby milk as an anti-regurgitation or hypoallergenic, we have the right texturiser to help your brand stand out on the shelves:

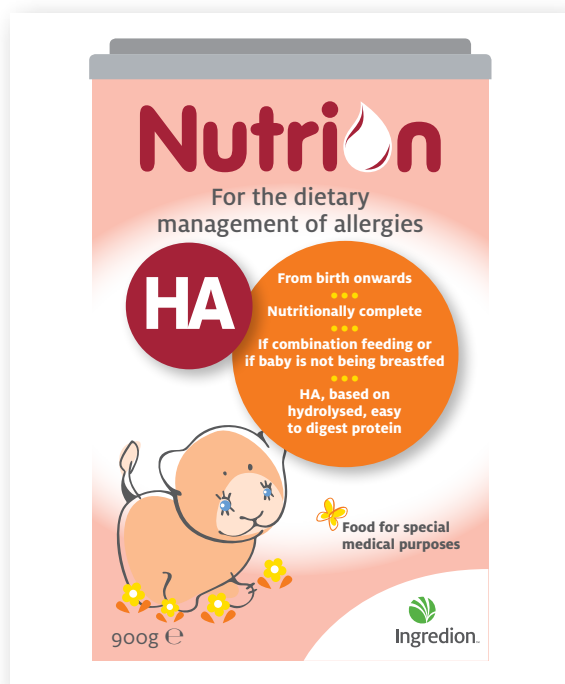
Stage 1 formula



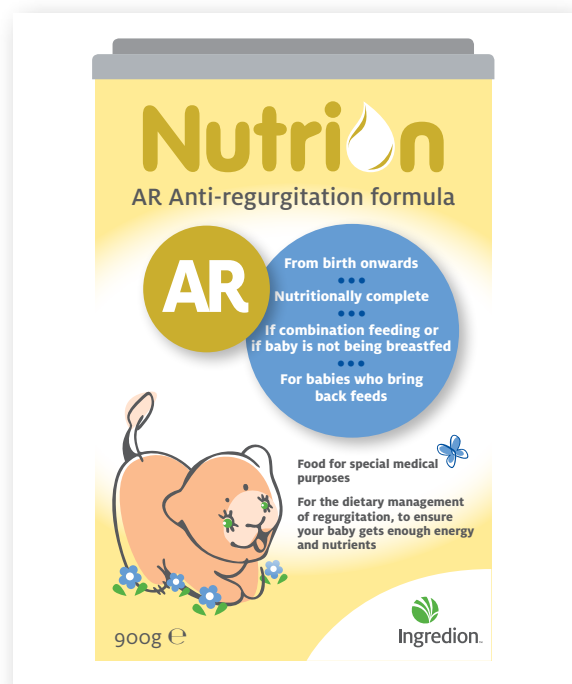
Stage 2 formula



Hydrolysed formula



Anti-regurgitation formula



Our products

UNI-PURE[®] IMF

At Ingredion, we have the understanding, capabilities and portfolio to meet the needs of infant milk formula manufacturers. Recently extended, our trusted UNI-PURE[®] IMF portfolio includes starch-based texturisers that can be used across all matrices:

- Casein dominant
- Whey protein dominant
- Based on hydrolysed proteins

Formulated specifically to provide viscosity, texture and safety in infant formula, we deliver desirable textures that satisfy babies and are popular with parents.

For infant nutrition ingredients that add real value, choose Ingredion:

- Excellent dispersion for quick and easy preparation
- Effective texturisers for milky look and feel
- Deliver smooth and creamy consistency
- Support anti-regurgitation effect
- Reliable supply with batch-to-batch consistency

Our dedicated range of specialty starches for infant formula applications includes:

- **UNI-PURE[®] IMF 2551**, a new spray-dried, maize-based starch that is manufactured to the highest microbiological standards and delivers very high viscosity.
- **UNI-PURE[®] IMF 8561**, a rice-based starch that delivers viscosity when dry blended into applications like follow-on formula.
- **UNI-PURE[®] IMF 2332** starch emulsifies fats and oils in hydrolysed or milk-protein-free infant formulae, opening up the market to manufacturers of products for infants with specialised dietary requirements.
- **ULTRA-SPERSE[™] IMF**, our trusted spray-dried and agglomerated, maize-based starch that supports the anti-regurgitation effect and delivers a smooth texture.

Reassuringly safe

Produced under the most stringent conditions, the UNI-PURE[®] IMF portfolio is manufactured to the highest microbiological standards – designed to meet the highest standards of quality, safety and reliability in delicate infant formula applications.

Setting standards

With more than 100 years of food industry experience, Ingredion Incorporated is renowned for developing high quality, user-friendly ingredients that respond to the latest food demands.

Combining the best of National Starch and Corn Products International, Ingredion is a leading nutritional ingredient supplier and works with manufacturers to bring to market infant formulae that meet the demands of today's consumers.



Find out more
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Delivering solutions.

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