

**nutriset** feeding children

preventing malnutrition

Undernutrition is defined as insufficient food intake combined with repeated occurrence of infectious diseases (UNICEF, 2007). According to a recent study<sup>a</sup>, based on the WHO's new growth standards, worldwide 112 million children under age five suffer from weight deficiency, and 178 million from low height-for-age. Nutriset has developed a range of nutritional solutions intended to fortify supplementary foods that are given in addition to breast milk. These products are designed to sustain the growth of young children, improve their motor and cognitive development and reduce the prevalence of malnutrition.

moderate acute malnutrition

Moderate acute malnutrition (MAM), which affects around 36 million children under age five<sup>a</sup>, corresponds to a state of thinness or 'emaciation' in the child (Z-score<sup>b</sup> for weight/height ratio between -2 and -3, in relation to the WHO's new growth curves). Nutriset has developed a variety of products for the treatment of moderate acute malnutrition in children from 6 months and up, as well as for other vulnerable populations (pregnant women, refugees or internally displaced persons, people living with HIV/AIDS, etc.).

severe acute malnutrition

Severe acute malnutrition (SAM) affects around 20 million children under age five in the world. It is characterised by severe emaciation or 'marasmus' (Z-score<sup>b</sup> for weight/height ratio less than -3, in relation to the WHO's new growth curves), or by the presence of bilateral nutrition-related oedemas (kwashiorkor). Another indicator used to detect the risk of mortality due to SAM in children between 6 and 59 months of age is a mid-upper arm circumference (MUAC) of less than 115 mm.

						
<b>ready-to-use</b>	✓	-	✓	✓	✓	✓
<b>packaging</b>	20 g sachet (108 kcal)	75 g pot / 900 g pot	92 g sachet (500 kcal)	325 g pot (1 820 kcal)	92 g sachet (500 kcal)	92 g sachet (500 kcal)
<b>product benefits</b>	<b>Supplementary food fortifier (RUSF/LNS*)</b> Promotes growth and correct development in infants.  (contains milk proteins)	<b>Vitamin and mineral food supplement (LNS*)</b> Prevents and treats nutritional deficiencies responsible for certain diseases (beri-beri, pellagra, scurvy...). Suitable for humanitarian emergency situations.	<b>Food for adults at risk of malnutrition, in particular those living with HIV/AIDS (RUSF*)</b> Enables macro- and micro-nutrient needs to be satisfied. Suitable for humanitarian emergency situations.  (contains soy protein)	<b>Nutritional supplement for growing children (RUSF/LNS*)</b> Reduces the incidence of acute malnutrition during at-risk periods (hunger-gap periods, for example). Suitable for humanitarian emergency situations.  (contains milk proteins)	<b>Nutritional supplement (RUSF/LNS*)</b> Treatment of moderate acute malnutrition.  (contains soy protein)	<b>High nutritional value Ready-to-use food (RUTF*)</b> For nutritional rehabilitation in cases of severe acute malnutrition.  (contains milk proteins)
<b>target beneficiaries</b>	Particularly suitable for children from 6 to 24 months old.	Suitable for all people from 1 year old.	Suitable for all people from 2 years old.	Particularly suitable for children from 6 to 36 months old.	Developed for children 6 months old and up, this product is also suitable for other groups of people suffering from moderate malnutrition (adolescents, pregnant women, nursing mothers, adults).	Suitable for all people from 6 months old.
	<b>20 g/day per child for 4 to 6 months</b>  Can be consumed as is or mixed in with the young child's usual food supplements.	<b>1.5 g/day per person for 14 days</b>  To be used as a condiment added to a family meal after it is cooked.	<b>2 sachets/day</b> will provide recommended daily allowance (RDA) of vitamins and minerals together with 1,000 kcal and 26g of proteins	<b>1 pot/week per infant for around 6 months**</b>  General distribution targeting children from 6 to 36 months (blanket feeding***).	<b>around 75 kcal/kg/day</b> for 2 months, or 1 sachet/day for a child weighing 5 kg, 2 sachets/day for a child weighing 10 kg  Targeted nutritional supplementation programmes or general supplementation for children from 6 to 59 months (blanket feeding***).	<b>1 to 2 sachets /day/person (MAM)</b>  Represents around 75 kcal/kg/day.
						<b>2 to 3 sachets /day/person (SAM)</b>  Represents around 200 kcal/kg/day until target weight is reached (6 to 10 weeks).

\* RUTF: Ready-to-Use Therapeutic Food, with high nutritional value [equivalent to F-100 milk], recommended by the joint statement on «Community-based management of severe acute malnutrition» (OMS/PAM/SCN/UNICEF, 2007).  
RUSF: Ready-to-Use Supplementary Food.  
LNS: Lipid-based Nutrient Supplement, enriched with vitamins and minerals. Lipids come from vegetable oils with high essential fatty acid content.  
<sup>a</sup>Black RE, Allen LH, Bhutta ZA, Caulfield LE, de OM, Ezzati M et al. Maternal and Child undernutrition: global and regional exposures and health consequences. Lancet 2008; 371:243-60.  
<sup>b</sup>The Z-score represents a measurement of the difference between the weight/height ratio of any given child in relation to the median value of this ratio within the reference population (in this case, children of the same size)

\*\* Reference doc.: Defourny I, Minetti A, Harczi G, Doyon S, Shepherd S et al. (2009) A Large-Scale Distribution of Milk-Based Fortified Spreads: Evidence for a New Approach in Regions with High Burden of Acute Malnutrition. PLoS ONE 4(5): e5455. doi: 10.1371/journal.pone.0005455

\*\*\* Reference doc.: Sight and Life, Ten Minutes to Learn About Nutrition programming, Communication du PAM, Magazine Issue n° 3/2008 • Supplement



**ZinCfant® 20 mg** is a dispersible, scored Zinc sulphate tablet.

ZinCfant® is recommended in cases of **severe acute diarrhoea in young children.**

ZinCfant® **reduces the severity and the duration of diarrhoea episodes, replenishes the reserves of zinc in the body and prevents recurrence of diarrhoea** over a period of 3 months<sup>1,2,3</sup>.

ZinCfant® is used in association with **WHO standard oral rehydration salts (ORS).**

ZinCfant® is rapidly dispersible in a small quantity of water or breast milk, and is suitable for young children from 2 months old (see dosage below).

The use of zinc sulphate in cases of acute severe diarrhoea has been jointly recommended by UNICEF and the WHO since 2004<sup>2</sup>. Since 2005, zinc sulphate has been included in the World Health Organisation's Model List of Essential Medicines.

**1 tablet/day for 10 to 14 days** for children over 6 months of age (between 2 and 6 months, ½ tablet/day)

<sup>1</sup> Systematic reviews of zinc intervention strategies, Food and Nutrition Bulletin, volume 30, Number 1, March 2009 [Kenneth H. Brown and Sonja Y. Hess, guest editors]

<sup>2</sup> WHO-UNICEF joint statement for the clinical management of acute diarrhoea / Déclaration commune OMS-UNICEF sur la prise en charge clinique de la diarrhée aiguë, 2004

<sup>3</sup> Paediatric Zinc as Treatment of Diarrhoea, POJUN (USAID), and Qualitative Research for a Zinc Treatment Program in Nepal: Finding & Recommendations, POJUN (USAID), Oct. 2006

				
<b>Plumpy'Nut®</b> ✓	<b>F-75 milk</b>	<b>F-100 milk</b>	<b>ReSoMal</b>	<b>Therapeutic CMV</b>
To be reconstituted: 1 sachet to 500 ml of drinking water	To be reconstituted: 1 sachet to 500 ml of drinking water	To be reconstituted: 1 sachet to 500 ml of drinking water	To be reconstituted: 1 sachet to 2 litres of drinking water	-
92 g sachet (500 kcal)	102,5 g sachet (75 kcal / 100ml)	114 g sachet (100 kcal / 100ml)	84 g sachet (2 litres of solution)	800 g tin
<b>High nutritional value Ready-to-use food (RUTF*)</b>	<b>Phase 1 milk</b> as per the WHO protocol**	<b>Phase 2 milk</b> as per the WHO protocol**	<b>Oral rehydration solution</b>	<b>Vitamin and mineral complex</b>
For nutritional rehabilitation in cases of severe acute malnutrition.	Stabilisation phase. Medical management. Aids in re-establishing the metabolism of children suffering from severe acute malnutrition.	Nutritional rehabilitation of severe acute malnutrition phase.	Intended for the treatment of dehydration. Exclusively used with people suffering from severe acute malnutrition.	Designed to be used with other ingredients, in the reconstitution of therapeutic milks and oral rehydration solution for children suffering from severe acute malnutrition.
[contains milk proteins]				

For adults and children from 6 months old.

\*\*Reference document: 'Management of severe malnutrition : A manual for physicians and other senior health workers', WHO protocol, 1999

**1 to 2 sachets /day/person (MAM)**

Represents around 75 kcal/kg/day.

**2 to 3 sachets /day/person (SAM)**

Represents around 200 kcal/kg/day until target weight is reached (6 to 10 weeks).

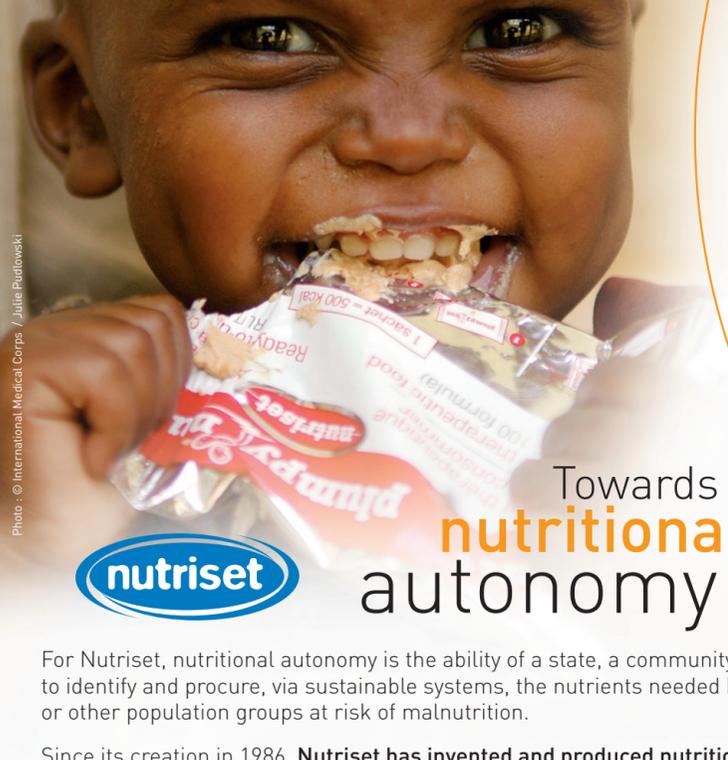
**80 to 100 kcal /kg/day**  
spread over 8 to 12 meals per day over 3 to 7 days

**100 to 200 kcal /kg/day**  
until the target weight is reached (around 3 to 4 weeks)

**5 to 15 ml /kg/hour**

**to be used with Nutriset measuring scoops**  
(follow instructions for use)

Most of the products featured in this document are covered by intellectual property rights.



## Towards nutritional autonomy

For Nutriset, nutritional autonomy is the ability of a state, a community or an individual to identify and procure, via sustainable systems, the nutrients needed by young children or other population groups at risk of malnutrition.

Since its creation in 1986, **Nutriset has invented and produced nutritional solutions** for the **treatment and prevention of malnutrition** adapted to the needs of the most vulnerable populations in the developing world. The heart of the mandate Nutriset set for itself has always been to make these products more **accessible** and more **available** to those in need.

In order to achieve this, **Nutriset has adopted a sustainable development approach**, manifested in a number of concrete commitments: the application of international standards and norms for quality assurance, respect for partners and employees, responsible and ethical commercial practices, priority given to innovation. This strategy, shared with the members of the PlumpyField network in developing countries, has led to the emergence of economically viable production capacities.

## Dynamic research activity

In order to convert the nutritional recommendations made by scientific researchers into products adapted to the practices of humanitarian organisations or individual enterprises in developing countries, Nutriset invests heavily in R&D (6% of turnover in 2008). A number of partnerships are ongoing with reputed universities (in the United States, Finland, Denmark), research institutes (Institute of Health Science Research, Burkina Faso; College of Medicine, Malawi) and humanitarian organisations.

## plumpyfield with nutriset

## zincfield with nutriset

The PlumpyField network was set up in 2005 and now includes more than ten producers of ready-to-use nutritional products (in Niger, Ethiopia, Malawi, etc.). Nutriset has also launched ZincField® for the production of ZinCfant® (zinc sulphate tablets). These partnerships enable technology for the development of high quality production to be shared with developing countries.

## Access Strategy

Alongside the nutritional products destined for humanitarian programmes, Nutriset, in collaboration with its partners in the PlumpyField network, produces specific nutritional supplements for the prevention of malnutrition in children. Nutriset's approach is inspired by the principle of social marketing - using traditional marketing techniques in order to promote a social purpose and meet a public health need. This strategy was first piloted in Niger with the product Grandibien® manufactured in partnership with the Niger company STA\*. Other projects are being studied (Tanzania, Ethiopia, etc.).

\*Field exchange, Emergency Nutrition Network, March 2009, issue 35, p27-28

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 feeding children