



Meds & Food For Kids

# plumpy'Sup<sup>®</sup>

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*Plumpy'Sup<sup>®</sup> is part of a range of products patented by IRD / NUTRISET*

**Plumpy'Sup<sup>®</sup>** is a soy-based ready-to-use supplementary food, especially designed for the **treatment of moderate acute malnutrition**.

Plumpy'Sup<sup>®</sup> corresponds to the definition of “**RUSF**” (**Ready-to-Use Supplementary Food**) that can be found in scientific literature.

## Product concept and target population

### Target population

**Plumpy'Sup<sup>®</sup>** has been designed for the **treatment of moderate acute malnutrition (from 6 months of age)** in Supplementary Feeding Programmes.

Plumpy'Sup<sup>®</sup> is also adapted for children who finish therapeutic nutrition programs as a means of **preventing relapse into severe acute malnutrition**.

Plumpy'Sup<sup>®</sup> should not be given to people who are allergic to peanuts, cow milk, and soy.

### Use context

Plumpy'Sup<sup>®</sup> can be used in **targeted nutritional supplementation programmes or general supplementation (blanket feeding)**. (see references (1), (2) and (3) at the end of the document)

The decision to provide a nutritional supplement is usually based on a context of an abnormal raise of prevalence of acute malnutrition among children under five and the presence of aggravating factors such as poor food security and/or disease epidemic (see reference (1) at the end of the document).

During the first years of life, children living in developing countries are most at risk of undernutrition. Because this is an important period of growth and development, it is crucial to correct the nutritional status in these young age groups as soon as possible.

### Product benefit

People who fall under the cut-off for **moderate acute malnutrition** (using Mid Upper Arm Circumference, Weight/Height ratio, etc.) need to receive an **adapted diet that allows them to regain a normal nutritional status**. The diet particularly needs to account for elevated nutrient and energy requirements. (see reference (4) at the end of the document).

A lipid-based nutritional supplement with a high vitamin and mineral content, such as **Plumpy'Sup<sup>®</sup>**, is well-adapted to the needs of **moderate acute malnourished people**. Results that can be achieved with Plumpy'Sup<sup>®</sup> have shown to be superior to those attained with fortified blended flours (see reference (5) at the end of the document).

Plumpy'Sup<sup>®</sup> can be safely used and stored outside the health center, enabling home treatment. (see the "Storage" paragraph page 4)

### Preparation

Plumpy'Sup<sup>®</sup> can be used directly, as is, without prior preparation.

### Use



Plumpy'Sup<sup>®</sup> can be consumed directly from the sachet without prior cooking or dilution with water. The product can easily be opened by tearing off one corner of the sachet.

Plumpy'Sup<sup>®</sup> can be eaten by a child on his/her own, without having to be helped by his/her mother or anyone else.

It is recommended to have water suitable for drinking always available for the child when Plumpy'Sup<sup>®</sup> is used.

After opening, the sachet can be used through the day.



Plumpy'Sup<sup>®</sup> is a supplement to the usual diet and should not replace any locally available food that is commonly consumed nor breastfeeding.

### Recommended dosage

	From 6 months of age Moderate acute malnutrition
Dosage	
Equivalent kcal / kg body weight /day:	75 kcal / kg body weight / day until the targeted weight is reached <i>That is about 1 sachet per day for a moderate acute malnourished child weighing 7 kg</i>

**Plumpy'Sup<sup>®</sup> is not adapted for well-nourished children nor adults.**

**Plumpy'Sup<sup>®</sup> does not replace breastfeeding or a varied and nutritious diet.**



[www.breastfeedingsymbol.org](http://www.breastfeedingsymbol.org)

**Breastfeeding is recommended for at least 24 months, and exclusively for the first 6 months of age.**

## Ingredients

Non-hydrogenated vegetable fat (palm, soy), sugar, soy flour, peanuts, whey powder, vitamin and mineral complex, cocoa, stabilizer: hydrogenated vegetable fat, emulsifier: mono and diglycerides. May contain traces of milk.

Note: trans fatty acids < 3% of total fatty acids.

Plumpy'Sup<sup>®</sup> does not contain any ingredients of animal origin, except dairy products.

## Mean nutritional value

	For 100g of Plumpy'Sup <sup>®</sup>		For 92 g (serving size)		For 100g of Plumpy'Sup <sup>®</sup>		For 92 g (serving size)
	Min	Max			Min	Max	
Energy	520 kcal	550 kcal	500 kcal	Vitamin A	850 µg	1050 µg	840 µg
Proteins	12.6 g	15.4 g	13 g	Vitamin D	16 µg	23 µg	15 µg
Lipids	31.5 g	38.6 g	30.5 g	Vitamin E	20 mg	30 mg	18.4 mg
Calcium	300 mg	350 mg	276 mg	Vitamin C	53 mg	132 mg	49 mg
Phosphorus	300 mg	350 mg	276 mg	Vitamin B1	0.6 mg	1.3 mg	0.6 mg
Potassium	980 mg	1210 mg	1007 mg	Vitamin B2	1.6 mg	2.2 mg	1.7 mg
Magnesium	80 mg	100 mg	83 mg	Vitamin B6	0.6 mg	0.8 mg	0.6 mg
Zinc	12 mg	15 mg	13 mg	Vitamin B12	1.8 µg	2.2 µg	1.7 µg
Copper	1.6 mg	2 mg	1.6 mg	Vitamin K	21 µg	29 µg	19.3 µg
Iron	10 mg	13 mg	11 mg	Biotin	60 µg	85 µg	60 µg
Iodine	85 µg	115 µg	92 µg	Folic acid	210 µg	254 µg	193 µg
Selenium	25 µg	37 µg	28 µg	Pantothenic acid	3 mg	4.5 mg	2.9mg
Sodium	-	290 mg	< 267 mg	Niacin	5.3 mg	6.4 mg	4.9 mg

Plumpy'Sup<sup>®</sup> complies with the "Guidelines for Formulated Supplementary Foods for Older Infants and Young Children" of the *Codex Alimentarius* CAC/GL 08-1991.

All added mineral salts and vitamins included in Plumpy'Sup<sup>®</sup> are on the "Advisory List of Nutrient Compounds for Use in Foods for Special Dietary Uses intended for Infants and Young Children" of the *Codex Alimentarius* Standard CAC/GL 10-1979 (amended 1983, 1991, 2009).

All raw materials are "food grade" in compliance with general recommendations of *Codex Alimentarius* (STAN 200-1995, STAN 207-1999, STAN 212-1999).

Plumpy'Sup<sup>®</sup> is packaged under protective atmosphere in order to optimize the product's shelf life, and sachets are air and humidity tight.

Packaging material of the sachet is suitable for food contact according to European Regulation 1935/2004, 27th October 2004.

### Best Before date

Best before date (« BB ») is **24 months** from the manufacturing date stated on each sachet.

After opening, the sachet can be used through the day.

### Storage

It is recommended to keep the product in a dry and cool place, at a temperature below 30°C (86°F).

Plumpy'Sup<sup>®</sup> is a ready-to-use paste that does not need to be mixed with water, and that doesn't allow bacterial proliferation because of its low water activity ( $a_w$ ). Plumpy'Sup<sup>®</sup> can therefore be safely used and stored outside the rehabilitation center, enabling home treatment.

It is recommended not to stack the pallets.

The shipping cartons are designed to withstand long transport times. Their size was chosen to optimize the various possible kinds of shipment.

### Serving size unit

92g sachet providing 500kcal

## Loading plan

	CARTONS
Unit	150 sachets of 92 g
Net Weight / unit	13,8 kg
Estimated Gross Weight / unit	14,7 kg
Dimensions / unit	38,5 x 29 x 20,8 cm

## Sea transport

	Pallet	Loaded 20' container	Loaded 40' container
Unit	64 cartons	11 pallets (704 cartons)	25 pallets (1700 cartons)
Net Weight / unit	883,2 kg	9 715,2 kg	23 460 kg
Estimated Gross Weight / unit (with pallet)	960,8 kg	10 568,8 kg	25 490 kg
Dimensions / unit	80 x 120 x 183 cm	19,156 m <sup>3</sup>	45,858 m <sup>3</sup>

## Air transport

	Pallet	Loaded lorry
Unit	48 cartons	33 pallets (1 584 cartons)
Net Weight / unit	662,4 kg	21 859,2 kg
Estimated Gross Weight / unit (with pallet)	725,6 kg	23 944,8 kg
Dimensions / unit	80 x 120 x 141 cm	44,289 m <sup>3</sup>

## Programming information

A carton of Plumpy'Sup<sup>®</sup> can treat 4 moderately acutely malnourished children (weighting 7kg each one) for about 1 month.\*

*\* This estimation is only meant to provide guidance for stock management. It is not intended to be used for ration calculation and does not take into account appetite or other criteria that are linked to the individual.*

Since 2005, Nutriset has developed a worldwide network of local producers (the PlumpyField network) in order to facilitate access and availability of quality-controlled nutritional products in areas with a high prevalence of malnutrition. These partners produce products of the Nutriset range and apply the same quality assurance system to ensure that the products produced locally meet the same quality standards and nutritional specifications.

Plumpy'Sup<sup>®</sup> is available from the following PlumpyField partners:

- In the **USA** by **EDESIA**, based in Providence  
[info@edesiallc.org](mailto:info@edesiallc.org), Mrs. Navyn SALEM
- In **Ethiopia** by **Hilina Enriched Foods, P.L.C**, based in Addis Abeba  
[hbelete@hilinafoods.com](mailto:hbelete@hilinafoods.com), Mrs Hilina BELETE.
- In **Haiti** by **Meds & Food For Kids**, based in Cap-Haïtien  
[pwoff@mfkhaiti.org](mailto:pwoff@mfkhaiti.org), Mrs. Patricia WOLFF  
(available from the second trimester of 2012)
- In **India** by **NutriVita Foods**, based in Pune  
[hemantp@nutrivita.in](mailto:hemantp@nutrivita.in), Mr. Hemant PHATAK.
- In **Madagascar** by **JB / Tanjaka Food**, based in Antananarivo  
[rivo.rajaonarison@basan.mg](mailto:rivo.rajaonarison@basan.mg), Mr. Andriamiarinarivo RAJAONARISON.  
(available from the second half-year of 2012)
- In **Sudan** by **SAMIL**, based in Khartoum  
[hishamyagoub@usa.net](mailto:hishamyagoub@usa.net), Mr. Hisham S. YAGOUB  
(available from the second half-year of 2012)

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## References

- (1) UNHCR, WFP. *Guidelines for selective feeding - The management of malnutrition in emergencies*. May 2009
- (2) *Sight and Life, Ten Minutes to Learn About Nutrition programming*, Communication du PAM, Magazine Issue n°3/2008 - Sup plement
- (3) Webb, P., B. Rogers, I. Rosenberg, N. Schlossman, C. Wanke, J. Bagriansky, K. Sadler, Q. Johnson, J. Tilahun, A. Reese Masterson, A. Narayan. 2011. *Delivering Improved Nutrition: Recommendations for Changes to U.S. Food Aid Products and Programs*. Boston, MA: Tufts University
- (4) Michael H. Golden. *Proposed recommended nutrient densities for moderately malnourished children*. FNB, Nov. 2009
- (5) Matilsky D K, Maleta K, Castleman T, Manary M J. *Supplementary feeding with milk/peanut and soy/peanut fortified spreads results in higher recovery rates than feeding with corn/ soy blend in moderately malnourished Malawian children*. JN, Volume 139, Number 4, April 2009