

## ESPGHAN and ESPEN Guidelines Paediatric Parenteral Nutrition – Annex: List of Products

### Annex

To the Guidelines on Paediatric Parenteral Nutrition of the European Society of Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) and the European Society for Clinical Nutrition and Metabolism (ESPEN), supported by the European Society of Paediatric Research.

### List of Products Commonly Used for Paediatric Parenteral Nutrition in Europe

This list is intended to provide an overview of commonly available products, but does not attempt to provide a complete list of all products that may be available in different European countries. While efforts have been made to provide accurate information, no responsibility can be taken for accuracy of the data presented.

#### Amino acid solutions

Brand name	Manufacturer	Total AA (g/l)	Ess AA in % <sup>1</sup>	Cysteine (g/l) <sup>2</sup>	Tyrosine (g/l)	Taurine (g/l)	Theoret. Osmolality/Osmolarity	pH
Aminopäd 10%	Fresenius Kabi/ in Germany: Baxter	100	42	0.5 <sup>3</sup>	1.1 <sup>7</sup>	0.3	790 mosmol/l	6.1
Aminoplasmal B. Braun 10%*	B. Braun	100	42	**	0.4	—	864 mosmol/l	5.7–6.3
Aminoven infant 10%	Fresenius Kabi	100	51	0.5 <sup>3</sup>	4.2 <sup>5</sup>	0.4	885 mosmol/l	5.5–6.0
Pädamin	Fresenius Kabi	74	38	1.1 <sup>4</sup>	2.65 <sup>6</sup>	0.75	590 mosmol/l	5.0–6.0
Primene 10%	Baxter	100	47.6	1.89	0.45	0.6	780 mosmol/l	5.5
Vamin 9 Glucose <sup>8</sup>	Fresenius Kabi	70	41	1.4 <sup>9</sup>	0.5	—	1350 mosmol/kg H <sub>2</sub> O	5.2
Vaminolact	Fresenius Kabi	65	44	1.0 <sup>2</sup>	0.5	0.3	510 mosmol/kg H <sub>2</sub> O	5.2

<sup>1</sup>Included: 8 ess. AA.

<sup>2</sup>As Cysteine/Cystine.

<sup>3</sup>Included as 0.7 g ac-cys.

<sup>4</sup>Included as 1.5 g ac-cys.

<sup>5</sup>Included as 5.2 g ac-tyr.

<sup>6</sup>Included as 3.26 g ac-tyr.

<sup>7</sup>Included as 1.3 g ac-tyr.

<sup>8</sup>Contains glucose: 100 g/L.

<sup>9</sup>As Cysteine/Cystine; included as cysteine-HCl.

\*For children older than 2 years. Also available in 5% with electrolytes, 10% with electrolytes, 16%.

\*\*200 mg acetyl-cysteine as excipient.

For dosage mode of administration recommendation, please refer to the package insert.

## Lipid emulsions

Composition	Manufacturer	TG (g/L)	Soybean oil (g/l)	Olive oil (g/l)	MCT (g/L)			
<b>20% emulsions</b>								
ClinOleic 20%	80% Olive oil/20% soybean oil	Baxter	200	40	160			
Intralipid 20%	Soybean oil emulsion	Fresenius Kabi#	200	200	—			
Ivelip 20%	Soybean oil emulsion	Baxter	200	200	—			
Lipofundin MCT/LCT 20%	50% Soybean/50% coconut (MCT) oil	B. Braun	200	100	— 100			
Lipofundin N 20%	Soybean oil emulsion	B. Braun	200	200	—			
Lipovenoes 20%	Soybean oil emulsion	Fresenius Kabi	200	200	—			
<b>10% emulsions</b>								
Intralipid 10%	Soybean oil emulsion	Fresenius Kabi#	100	100	—			
Lipofundin MCT/LCT 10%	50% Soybean/50% coconut (MCT) oil	B. Braun	100	50	— 50			
Lipofundin N 10%	Soybean oil emulsion	B. Braun	100	100	—			
Lipovenoes 10% PLR*	Soybean oil emulsion	Fresenius Kabi	100	100	—			
% of total fatty acids								
	C8:0	C10:0	C12:0	C16:0	C18:0	C18:1 (n-9)	C18:2 (n-6)	C18:3 (n-3)
<b>20% emulsions</b>								
ClinOleic 20%				13.5	2.9	59.5	18.5	2.0
Intralipid 20%				11.0	4.0	24.0	53.0	8.0
Ivelip 20%				11.0	4.0	20.0	52.0	8.5
Lipofundin MCT/LCT 20%	27.0	21.0	1.5	5.0	2.0	12.0	27.0	4.0
Lipofundin N 20%				12.0	4.5	24.0	50.0	7.0
Lipovenoes 20%				10.0	4.0	24.0	54.0	8.0
<b>10% emulsions</b>								
Intralipid 10%				11.0	4.0	24.0	53.0	8.0
Lipofundin MCT/LCT 10%	27.0	21.0	1.5	5.0	2.0	12.0	27.0	4.0
Lipofundin N 10%				12.0	4.5	24.0	50.0	7.0
Lipovenoes 10% PLR*				10.0	4.0	24.0	54.0	8.0

Contents of docosahexaenoic and arachidonic acids, respectively, each <0.5% of fat in all emulsions. The routine use of 10% emulsions with high phospholipid/triglyceride ratios is not recommended by these guidelines (cf. chapter lipids).

#Distributor for Germany: Baxter.

\*PLR = Phospholipid reduced, similar phospholipid/triglyceride ratio as found in 20% emulsions.

For dosage and mode of administration recommendations of the manufacturers, please refer to the package insert.

## Vitamin preparations

Brand name	Manufacturer	Concentration	Vit A	Vit D	Vit E	Vit K			
Cernevit†	Baxter	per vial	3500 IU/1.06 mg	220 IU/5.5 µg	11.2 IU/10.2 mg	—			
Soluvit N	Fresenius Kabi*	per vial							
Vitalipid adult†	Fresenius Kabi*	per 10 mL	3300 IU/990 µg	200 IU/5 µg	10 IU/9.1 mg	150 µg			
Vitalipid infant	Fresenius Kabi*	per 10 mL	2300 IU/690 µg	400 IU/10 µg	7.0 IU/6.4 mg	200 µg			
Brand Name	Vit B1	Vit B2 (Riboflavine)	Vit B6	Vit B12	Vit C	Niacin	Pantothenic acid	Biotin	Folic acid
Cernevit†	3.51 mg	4.14 mg	4.53 mg	6 µg	125 mg	46 mg	17.25 mg	69 µg	0.41 mg
Soluvit N	2.5 mg	3.6 mg	4 mg	5 µg	100 mg	40 mg	15 mg	60 µg	0.4 mg
Vitalipid adult†									
Vitalipid infant									

\*Distributor for Germany: Baxter.

†for children >11 years.

For dosage and mode of administration recommendations of the manufacturers, please refer to the package insert.

*Trace elements*

Brand Name	Manufacturer	Concentration	Magnesium	Zinc	Copper	Manganese
Addel N/Addamel N <sup>1</sup>	Fresenius Kabi*	per 10 mL		6.5 mg/100 µmol	1.3 mg/20 µmol	270 µg/5 µmol
Inzolen-Infantibus sine NaK	Köhler	per 10 mL	2.5 mmol	0.97 mg/14.9 µmol	0.32 mg/5 µmol	0.27 mg/5 µmol
Oligo-éléments pédiatrique	Aguettant	per 10 mL		1 mg	0,3 mg	0,1 mg
Peditrace	Fresenius Kabi*	per 10 mL		2.5 mg/38.2 µmol	0.2 mg/3.15 µmol	10 µg/0.182 µmol

  

Brand Name	Chromium	Selenium	Iodide	Iron	Cobalt	Fluoride	Molybdenum
Addel N/Addamel N <sup>1</sup>	10 µg/0.2 µmol	32 µg/0.4 µmol	130 µg/1 µmol	1.1 mg/20 µmol	—	0.95 mg/50 µmol	19 µg/0.2 µmol
Inzolen-Infantibus sine NaK	0.08 mg/1.6 µmol	—		0.91 mg/16.3 µmol	0.14 mg/2.4 µmol		
Oligo-éléments pédiatrique	0.02 mg	0.05 mg	0.05 mg	0.5 mg	0.015 mg	0.5 mg	0.05 mg
Peditrace	—	20 µg/0.253 µmol	10 µg/0.078 µmol	—	—	0.57 mg/30 µmol	—

<sup>1</sup>For children weighing 15 kg or more.

For dosage mode of administration recommendation, please refer to the package insert.

\*Distributor for Germany: Baxter.