### Baby Formula Ingredients Cheat Sheet

Page 1

Macronutrients (First Major Ingredients) Continued			
Ingredient <u>Category</u>		Notes	
Coconut Oil	Fat	Common Fat, rich in medium chain triglycerides (which are very easily absorbed)	
Corn Maltodextrin Carbohydrate		This is a combination of different length chains of glucose. It is almost always made from corn sugar .	
Corn Syrup	Carbohydrate	A corn based sugar that is primarily glucose	
Corn Syrup Solids	Carbohydrate	Corn syrup that is reduced to 10% water so it is more solid, less liquid	
Enzymatically Hydrolyzed Soy Protein Isolate	Protein	Partially hydrolyzed soy protein	
Galactooligosaccharides	Designer Ingredient	Prebiotics generated from the sugar galactose - added as a substitute for lactose based oligosaccharides (prebiotics) found in human milk; Fructooligosaccharides are the other form of prebiotic that are occasionally added to baby formulas	
Glucose Syrup Solids	Carbohydrate	This is 100% glucose that is reduced to 10% water so its more solid. This is likely the same as corn syrup solids because most glucose syrup is generated from corn.	
High Oleic Safflower Oil	Fat	A commonly found fat in the fat blend.	
High Oleic Sunflower Oil	Fat	A commonly found fat in the fat blend.	
Lactose	Carbohydrate	The primary sugar in breast milk	
Maltodextrin Carbohydrate		This is a combination of different length chains of glucose. It is almost always made from corn sugar (seen on labels as Corn Maltodextrin)	

### Baby Formula Ingredients Cheat Sheet

Page 2

#### Macronutrients (First Major Ingredients) Continued

Ingredient	<u>Category</u>	Notes
Milk Protein Isolate	Protein	Just the protein portion of cow's milk. This will be roughly 80% cow casein and 20% cow whey protein.
Nonfat Milk	Mostly protein with some Carbohydrate	This is mostly cow's milk protein (which will be roughly 80% cow casein and 20% cow whey protein). It will also provide a small amount of lactose and vitamins and minerals
Palm Olein Oil	Fat	A commonly found fat in the fat blend - will slightly decrease the absorption of fat and calcium
Partially Hydrolized Nonfat milk and whey protein	Protein	The protein portion of cow's milk (roughly 80% cow casein and 20% cow whey protein) plus additional whey protein, partially hydrolyzed
Soy Oil	Fat	A commonly found fat in the fat blend.
Soy protein isolate	Protein	Soy protein
Sucrose	Carbohydrate	A carbohydrate source - this is table sugar
Sugar	Carbohydrate	A carbohydrate source, also called sucrose - this is table sugar
Whey Protein Concentrate	Protein	Just the whey portion of cow's milk protein
Whey Protein Concentrate (enzymatically hydrolyzed, reduced in minerals)	Protein	Just the whey portion of cow's milk protein, then partially hydrolyzed

### Baby Formula Ingredients Cheat Sheet

Page 3

Ingredient	Category	Notes
2-FL	Designer Ingredient	2-Fucosyl Lactose. This is a prebiotic (food for healthy bacteria). This one is different from other prebiotics because it is chemically identical to one of the major prebiotics in breast milk (which are called human milk oligosaccharides, or HMO's). 2FL helps healthy bacteria grow and may also help the baby's immune system develop properly in those early first months. Currently it's only available in Similac's "Pro" formulas.
Alpha-Tocopheryl Acetate	Vitamin	Also called Vitamin E acetate or d-alpha-tocopherol Acetate - A form of Vitamin E
Ascorbic Acid	Vitamin	another name for Vitamin C
Ascorbyl Palmitate	Vitamin	vitamin C, bound to a fatty acid
B. Lactis	Designer Ingredient	A probiotic (healthy bacteria) also called Bifidobacterium Lactis
Beta-Carotene	Vitamin	source of Vitamin A (also known as Vitamin H)
Bifidobacterium Lactis	Designer Ingredient	A probiotic (healthy bacteria) also called B. Lactis
Biotin	Vitamin	One of the B vitamins; only required to be added to non-milk based infant formulas
C. Cohnii Oil	Designer Ingredient	source of ARA; also called Crypthecodinium Cohnii Oil (An algal oil extracted using hexane)
calcium carbonate	Mineral	source of calcium

### Baby Formula ... Expert

### Baby Formula Ingredients Cheat Sheet

Page 4

Ingredient	Category	Notes
calcium chloride	Mineral & Additive	source of calcium and salty taste, and as a firming agent (similar to calcium citrate)
calcium citrate	Mineral & Additive	source of calcium and also used as a preservative (similar to calcium chloride)
Calcium Pantothenate	Vitamin	Also called Pantothenic Acid - Vitamin B5
calcium phosphate	Mineral	More calcium! This is the form that's found in your bones
carageenen	Additive	added for texture and thick texture - slightly controversial in some circles
cholecalciferol	Vitamin	Vitamin D3
Choline Bitartrate	Vitamin	Choline (it's a vitamin); only required to be added to non-milk based infant formulas
Choline Chloride	Vitamin	Choline (it's a vitamin); only required to be added to non-milk based infant formulas
copper sulfate	Vitamin	also called cupric sulfate - it's copper
Crypthecodinium Cohnii Oil	Designer Ingredient	source of ARA; also called C. Cohnii Oil
copper sulfate	mineral	also called cupric sulfate - it's copper
cupric sulfate	Mineral	also called copper sulfate - it's copper
Cyanocobalamin	Vitamin	Vitamin B12

### Baby Formula Ingredients Cheat Sheet Page 5

Ingredient	Category	Notes
d-Alpha-Tocopherol Acetate	Vitamin	Also called Vitamin E acetate or Alpha-tocopherol Acetate - A form of Vitamin E
Ferrous Sulfate	Mineral	Iron
Folic Acid	Vitamin	Also called Folate
Fructo- oligosaccharides	Designer Ingredient	Prebiotics generated from the sugar fructose - added as a substitute for lactose based oligosaccharides (prebiotics) found in human milk; this indegestible carbohydrate helps healthy bacteria grow in baby's intestines.
Galacto- oligosaccharides	Designer Ingredient	Prebiotics generated from the sugar galactose - added as a substitute for lactose based oligosaccharides (prebiotics) found in human milk; this indegestible carbohydrate helps healthy bacteria grow in baby's intestines.
Inositol	Required Supplement	Also called m-inositol; Not a vitamin or mineral but found in many plants and synthesized by humans. It's a required additive to non- milk based infant formulas because there are large amounts in breast milk
L. Reuteri	Designer Ingredient	A probiotic (healthy bacteria) also called Lactobacillus Reuteri
Lactobacillus Reuteri	Designer Ingredient	A probiotic (healthty bacteria) also called L. Reuteri

### Baby Formula Ingredients Cheat Sheet Page 6

	Ingredient	Category	Notes
	Lactoferrin	Designer Ingredient	This is a big protein that is found in large amounts in breast milk where it helps protect infants from infection and develop their immune system. In formula, we use lactoferrin from cow's milk. It reduces infection in babies.
	L-Carnitine Supplement		This molecule (not technically a vitamin or mineral) is used in countless biological processes and added to almost all formulas
	L-Methionine	Required Supplement	An amino acid required in soy formulas
	Lutein	Designer Ingredient	not technically a vitamin and not required by FDA
	Lycopene	Designer Ingredient	not technically a vitamin and not required by FDA
	M. Alpina Oil or Martierella Alpina Oil	Designer Ingredient	source of DHA (A fungal oil that is extracted using hexane)
	Magnesium Phosphate	Mineral	Source of magnesium
	manganese sulfate	Mineral	Manganese - It's a Vitamin
A	Mangesium Chloride	Mineral	Source of magnesium

### Baby Formula Ingredients Cheat Sheet Page 7

Ingredient	Category	Notes
MFGM	Designer Ingredient	Milk Fat Globule Membrane (MFGM). These are the proteins and lipids that surround globs of fat in cow's milk. In breast milk, these have immunoprotective properties that help infant development. When we use the proteins/lipids from cow's milk, they have been shown to slightly improve cognitive development and reduce illness. Currently this is only available in Enfamil Enspire Formula.
m-inositol	Required Supplement	Also called Inositol; Not a vitamin or mineral but found in many plants and synthesized by humans. It's a required additive to non-milk based infant formulas because there are large amounts in breast milk
Mixed Tocopherols	Vitamin	This is Vitamin E
Mono and Diglycerides	Additive	manufactured fats - added for texture/emulsifier; slightly controversial in some circles
Monoglycerides	Additive	manufactured fat - added for texture/emulsifier; slightly controversial in some circles
Niacinamide	Vitamin	Niacin

### Baby Formula Ingredients Cheat Sheet

Page 8

Ingredient	Category	Notes
Nucleotides (Adenosine 5'- Monophosphate, Cytidine 5'- Monophosphate, Disodium Guanosine 5'-Monophosphate, Disodium Uridine 5'- Monophosphate)	Designer Ingredient	These are nucleotides which are found in breast milk. These are not required by the FDA and are not added to every formula.
Phylloquinone	Vitamin	Also called Vitamin K1. This is vitamin K
phytonadione	Vitamin	
Polydextrose	Designer Ingredient	This is a Prebiotic used in some of Enfamil's formulas. It is an indigestible carbohydrate that helps healthy bacteria grow in baby's intestines. It is added to attempt to mimic the affect of the prebiotics found in breast milk.
Potassium Chloride	Mineral & Additive	source of potassium and balances pH
Potassium Citrate	Mineral	source of potassium
Potassium Hydroxide	Mineral	More potassium; also an electrolyte
potassium iodide	Mineral	Source of Iodine (mineral)
potassium phosphate	Mineral	More potassium
Pyridoxine Hydrochloride	Vitamin	Also called Vitamin B6 Hydrochloride; This is Vitamin B6
Riboflavin	Vitamin	This is Vitamin B2
Salt	Additive	Added for taste and a source of chloride

### Baby Formula Ingredients Cheat Sheet

Page 9

Ingredient	Category	Notes
Sodium Ascorbate	Vitamin	A sodium salt of vitamin C
sodium citrate	Additive	Regulates acidity and serves as an emulsifier
Sodium Hydroxide	Additive	Added to increase the pH of the formula
sodium selenite	Mineral	Source of selenium (mineral)
Soy Lecithin	Additive	Emulsifier (improves texture)
Taurine	Supplement	Not technically a vitamin - biomolecule used in physiology. Added because found in breast milk, but is not required by the FDA.
Thiamin Hydrochloride	Vitamin	Also called just Thiamin Chloride Hydrochloride - Its Thiamin (also known as Vitamin B1)
Thiamine Chloride Hydrochloride	Vitamin	Also called just Thiamin Hydrochloride - Its Thiamin (also known as Vitamin B1)
Thiamine Mononitrate	Vitamin	Nitrate salt of thiamine, which is Vitamin B1
Vitamin E Acetate	Vitamin	Also called alpha-tocopherol acetate, or d-alpha- tocopherol acetate - A form of Vitamin E
Vitamin A Palmitate	Vitamin	A form of Vitamin A
Vitamin B12	Vitamin	Also called Cyanocobalamin
Vitamin B6 Hydrochloride	Vitamin	Also called Pyridoxine Hydrochloride; This is Vitamin B6
Vitamin D3	Vitamin	Also called Cholecalciferol - It's Vitamin D
Vitamin K1	Vitamin	Also called phylloquinone. This is vitamin K
Zinc sulfate	Mineral	Zinc